HISTORY OF SEVENTH-DAY ADVENTIST WORK WITH SOYFOODS, VEGETARIANISM, MEAT ALTERNATIVES, WHEAT GLUTEN, DIETARY FIBER AND PEANUT BUTTER (1863-2013):

EXTENSIVELY ANNOTATED BIBLIOGRAPHY AND SOURCEBOOK

Compiled

by

William Shurtleff & Akiko Aoyagi

2014

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History of Sovex Natural Foods (Collegedale, TN)
History of Worthington Foods, Inc. (Worthington, OH)

* = Owned by the SDA General Conference/Church

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DEDICATION AND ACKNOWLEDGMENTS

This book is dedicated to Ellen G, White, John Harvey Kellogg, E.A. Southerland, Harry W. Miller, and T.A. Van Gundy.

Part of the enjoyment of writing a book lies in meeting people from around the world who share a common interest, and in learning from them what is often the knowledge or skills acquired during a lifetime of devoted research or practice. We wish to give deepest thanks...

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■ Finally our deepest thanks to Tony Cooper of San Ramon, California, who has kept our computers up and running since Sept. 1983. Without Tony, this series of books on the Web would not have been possible.

This book, no doubt and alas, has its share of errors. These, of course, are solely the responsibility of William Shurtleff.

■ This bibliography and sourcebook was written with the hope that someone will write a detailed and well-documented history of this subject. And that it will be of practical use to entrepreneurs.

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INTRODUCTION

Brief chronology of Seventh-day Adventist work with soyfoods, vegetarianism, meat alternatives, wheat gluten, dietary fiber and peanut butter.

No other organization or group of people has played a more important role than Seventh-day Adventists in introducing soyfoods, vegetarianism, meat alternatives, wheat gluten, dietary fiber or peanut butter to the Western world.

There are two basic types of Seventh-day Adventist (SDA) organizations: (1) Those owned by the SDA church / denomination (officially General Conference of Seventh-day Adventists) – such as Sanitarium Foods (Australia), Loma Linda Foods (from 1905 to about 1989), Nutana (Denmark). (2) Those owned by practicing Seventh-day Adventists – such as Worthington Foods, La Sierra Industries (owned by T.A. Van Gundy), etc. For details, see the copyright page.

Soyfoods: Worldwide, Seventh-day Adventists (SDAs) first became familiar with soybeans in about…

1883 April – An article in that issue of *Good Health* (Battle Creek, Michigan) titled "Food of the Japanese," states: "More than forty varieties of peas and beans are cultivated. The richly nutritive soy bean properly supplements the rice, which plays so large a part in the national diet."

1892 – *Science in the Kitchen*, by Ella E.E. Kellogg (wife of the famous Dr. John Harvey Kellogg), in a long chapter on "Legumes," states (p. 217-18): "The nitrogenous matter of legumes is termed *legumin*, or vegetable casein, and its resemblance to the animal casein of milk is very marked. The Chinese make use of this fact, and manufacture cheese [clearly tofu] from peas and beans."

1896 May – In an editorial titled "Bean Cheese," in his periodical *Modern Medicine and Bacteriological Review* (Battle Creek, Michigan), Dr. John Harvey Kellogg gives a detailed description (p. 112) of how tofu and frozen tofu are made.

1899 – The *Deutsche Verein für Gesundheitspflege* (German Society for Good Health) is founded in an old mill at Friedensau, near Magdeburg, Germany to make whole, healthy foods. It is later renamed DE-VAU GE Gesundkostwerk Deutschland GmbH. A new plant was built at Hamburg in 1912 – shortly before World War I. During World War II ownership of the factory was transferred to four trustees, who continued to operate it as a private company. In 1966 a new building was constructed in North Hamburg at Brodermannsweg 17. Many soy products were developed and growth was rapid. In about 1976 the factory started operations at an enlarged site in Lüneberg (Neufeld 19765, p. 389-90). The company owned and used the brand GranoVita from at least 1958 until 1991. After that the story becomes complicated as the company was broken up and restructured (Drosihn 2010).

1900 April - The International Health Association (SDA) now has a sanitarium and a food factory in Redhill, Surrey, England. "The foods from now on are to be sold in this country under the name of 'Life and Health Foods.'" Previously the foods were imported from Battle Creek, Michigan, and sold by the London Food Co. (*Vegetarian Messenger*, p. 117-18). Granose Flakes was on the market by 1898, Toasted Wheat Flakes by Oct. 1901. In 1900 a fire burned the Redhill factory to the ground. By 1902 an IHA factory was making Adventist health foods on Legge Street, in Birmingham. "In 1907 all SDA institutions in England, including the food factory, were centralized at Stanborough Park, Watford." In 1926 the food company was renamed Granose Foods Ltd. (Neufeld 1966, p. 527-28). In 1940 their first soy product, Granose Protose, containing soy flour, was launched.

1905 – The forerunner of Loma Linda Foods was the Loma Linda Sanitarium bakery, situated on Anderson Street in Loma Linda, California; it began operation in 1905. On 6 Feb. 1933 the name "Loma Linda Food Co." was adopted, and on 1 July 1935 the first articles of incorporation were adopted for a nonprofit organization. A new and enlarged factory began operation on 16 July 1938 on a nine-acre site at Arlington (Riverside), California (Neufeld 1976, p. 797-98).

1915 Nov. – Kellogg Toasted Corn Flake Co. (owned by Will Keith Kellogg) applies for a patent for soynut butter (regular and powdered); it is issued in June 1916.

1919 Feb. 26 – *The Madison Survey*, printed by the Madison College Printing Dept., begins weekly publication. It contains many articles about Madison's work with vegetarianism and soyfoods.

1921 – La Sierra Industries (Arlington, California), founded by Theodore A. Van Gundy, launches La Sierra Smoein – A bacon-flavored smoked soy powder seasoning. This is America's first commercial soy-based meat alternative.

1922 March – Soy Bean Meat, America's 2nd soy-based meat alternative, is introduced by Madison Foods in Madison, Tennessee. This is also the earliest known commercial soy

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product made in Tennessee. Also in 1922 Madison Foods launched Soy Beans (Plain, Canned) and Savory Meat (Meatless).

1929 – Theodore A. Van Gundy, founder of La Sierra Industries in southern California, becomes the first Caucasian in the Western world to manufacture commercial tofu, filtered soymilk, soynuts (named B-Nuts), soynut butter (named B-Nut Butter), or a commercial okara-based food product (named Soy Spread).

1936 – Dr. Harry W. Miller, an Adventist medical missionary in China, introduces Vetose Soya Milk (natural or chocolate), Soy Ice Cream, and Vetose Acidophilus (cultured soymilk) made by his Vetose Nutritional Laboratories in Shanghai.

1938 spring – *Madison Health Messenger*, which focuses on the work of Madison Foods (at Madison College, Tenessee) begins irregular publication, with Edwin M. Bisalski as editor. Most issues contained 4-6 pages, each 8½ by 11 inches, and were filled with information about and photos of canned vegetarian foods, including many soyfoods. It continues until 1949.

1939 fall – Dr. Harry Miller starts making and canning Miller's Soya Lac (soymilk fortified with vitamins and minerals, renamed Soyalac by Sept. 1941) and Soy-A-Malt (malted soymilk) at his International Nutrition Laboratory in Mt. Vernon Ohio. Soyalac was America's first widely successful soymilk. For decades it remained on the market as an infant formula.

1939 – Worthington Foods begins operations in Worthington, Ohio, under the name Special Foods. In Dec. 1945 the company is incorporated under the name Worthington Foods, Inc.

1950 June – Dr. Harry Miller of International Nutrition Laboratories (Mt. Vernon, Ohio), sells the meat alternatives part of his business (gluten meats, nut loaves, frankfurters) to Worthington Foods (Worthington, Ohio). They bought the patents, recipes and formulas, equipment, technology, and good will that went with Miller's meat alternatives business. Most of these products contained no soy. Worthington kept the brand name "Miller's" for several years thereafter as they sold Miller's Cutlets, Miller's Burger, Miller's Stew, Vege-Links, and the like.

1951 Jan. 1 – Dr. Harry Miller sold the rest of his business at a very low price (book value) to Loma Linda Food Co. of Riverside, California. This sale included the Mt. Vernon land, buildings, equipment, technology, and recipes and formulas for soymilk, canned fresh green soybeans, Vege-Cheese (a canned tofu cottage cheese) and related products. Dr. Miller had always believed that the *process* for making soymilk was not his to sell; it had been a gift to him from a higher power. So he gave the process to the SDA church.

1960 – Worthington Foods of Ohio introduces Fry-Chik, a meatless drumstick that is the world's first meatlike product (meat alternative) based on spun soy protein fibers – developed and patented by Robert Boyer, initially of the Ford Motor Co.

1960 – Africa Basic Foods, black Africa's first soyfoods company, is started in Uganda by Dr. D.W. Harrison, a black American Seventh-day Adventist medical missionary.

1960 – Worthington Foods acquires the rights to manufacture and market Battle Creek Food Company products.

1964 – Worthington Foods acquires the rights to manufacture and market Madison Foods' products.

1970 – Worthington Foods merges with Miles Laboratories.

1974 – Miles Laboratories/Worthington Foods introduces the Morningstar Farms line of meatlike products based on spun soy protein fibers. The first of a new generation of meatlike entrees, they are soon sold nationally in U.S. supermarkets – and are still thriving today. Since the mid-1970s, Worthington has been the world's largest manufacturer of meatlike vegetarian products – most based on soy proteins and gluten.

1987 late – Loma Linda Foods shuts down its plant in Mount Vernon, Ohio, and moves its production to Riverside, California.

1988 – Granose Foods Ltd. moves from Stanborough Park into new facilities at Newport Park, England.

1989 – Loma Linda Foods (Riverside, California) is sold to Nutricia, a Dutch maker of infant formulas. But two disastrous infant formula recalls hurt the parent company.

1990 Jan. – La Loma Foods' (formerly Loma Linda Foods) meat alternatives and Soyagen business (11503 Pierce St., Riverside, California) is sold to Worthington Foods (Ohio) (Fehlberg 1991).

1991 Jan. 1 – Granose Foods Ltd. (Newport Pagnell, England) is sold to the Haldane Foods Group and British Arkady Ltd. (*Adventist Review*, 1991; Fehlberg 1991).

1991 Oct. 1 – Kellogg Co. (famous maker of Breakfast cereals, Battle Creek, Michigan) buys Worthington Foods

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(Worthington, Ohio) for $342 million. With this sale, no more SDA companies making soyfoods or meat alternatives are left in the United States.

1991 – A major breakup and restructuring takes place at DE-VAU-GE in Germany. They no longer sell under their GranoVita brand (Drosihn 2010).

2014 Jan. – The DE-VAU-GE website states that since June 1976 the company headquarters has been in Lüneburg. There they focus on the production of "crispy breakfast cereals, different kinds of muesli, and fruit bars. In 1998 another plant opened in Tangermünde near Stendal housing the very latest production facilities for breakfast cereals and muesli-bars." Today DE-VAU-GE has more than 500 employees at the two locations. The products are made for the "private label sector." Neither soyfoods nor meat alternatives are mentioned.

Vegetarianism: The organized vegetarian movement in America traces its origins to two Christian groups in the mid-1800s. The Bible-Christian Church in Philadelphia, under the leadership of Rev. William Metcalfe, started the American Vegetarian Society – America's first such society – in May 1850. The following November, *The American Vegetarian and Health Journal* began publication, with Metcalfe as editor. Famous early vegetarians such as Sylvester Graham and Dr. William A. Alcott were deeply influenced by Metcalfe and this Society. But this society's influence was short-lived, especially after Metcalfe's death.

The second group, the Seventh-day Adventist church, became actively involved in vegetarianism in 1863, following a vision received by Ellen G. White in Otsego, Michigan. Over the years the Adventist influence on vegetarianism in grew steadily, initially through the influence of Dr. John Harvey Kellogg and the Battle Creek Sanitarium in Michigan, the writings and teachings of Ellen G. White and other Adventists on the benefits of a meatless diet, vegetarian cookbooks and other publications, and commercial vegetarian products – especially meatlike products based on nuts, soya, and/or gluten.

But the greatest impact began in the 1960s when Adventist health professionals began the first real scientific research on the health benefits of a vegetarian diet. The centerpiece of this research was the first two Adventist health studies, initiated at Loma Linda University. These were the first large-scale, long-term epidemiological studies on vegetarians, and they showed convincingly and dramatically that Adventists (roughly half of whom were vegetarians) have much lower rates of heart disease, cancer, diabetes, stroke, and several other major degenerative diseases. Based on these studies, researchers have published some 200 articles in scientific journals. We believe that this vast body of original research constitutes the single most important development in the field of vegetarianism since World War II.

Moreover, in 1987 the Loma Linda University Medical Center and affiliated groups organized the First International Congress on Vegetarian Nutrition. Subsequent meetings took place every five years, with the sixth taking place in 2013.

This pioneering scientific health research and these congresses have played a leading role in changing the attitudes of health care professionals (physicians, nutritionists, dietitians etc.) toward a vegetarian diet.

In the 1960s, vegetarian diets were generally considered risky. But by the 1990s they were (if balanced) widely considered healthier than the standard American diet.

Meat Alternatives: Formerly called "meat substitutes." By definition, these are meatless, meatlike products. The category of commercial meat alternatives was invented by Dr. John Harvey Kellogg, the world-famous head of the Battle Creek Sanitarium. His first two meat alternatives were Nuttose (1896) and Protose (1899) – both based on ground peanuts.

In the USA, this category was both pioneered (starting in the early 1940s) and developed by Worthington Foods and Loma Linda Foods.

Most of the meat alternatives made by Seventh-day Adventist companies have been vegan – they contain no animal products (such as eggs or dairy products).

Wheat Gluten: Seventh-day Adventists – and especially Dr. John Harvey Kellogg – were among the pioneers in introducing wheat gluten and foods based on wheat gluten to America. As early as 1882 the Food Department of the Battle Creek Sanitarium, supervised by Dr. Kellogg, was selling Gluten Wafers, Gluten Food, and Diabetic Food. All were probably used in diabetic diets. In 1907 Dr. Kellogg was issued U.S. Patent 869,371 for a meat substitute whose two main ingredients were gluten and casein (milk protein). And by 1912 the Kellogg Food Co. in Battle Creek, Michigan, was selling at least 7 food products based on wheat gluten, including 3 types of biscuits and a breakfast toast. Protose, launched in 1899, was Dr. Kellogg's second earliest commercial meatlike product – after Nuttose. Originally made from nuts, at some early unknown date Protose came to include gluten.

Following Dr. Kellogg's lead, other Adventist companies soon began to launch commercial meatlike products based on gluten. In 1929 La Sierra Soy Gluten was introduced by La Sierra Industries in Arlington, California. In 1932 Vigorost was launched by Madison Foods in Madison, Tennessee.

But the company that has been most successful in introducing gluten-based meatlike products to America is

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Worthington Foods in Worthington, Ohio. Their first such product was Proast, launched in 1939, followed by Choplets (Oct. 1941). In 1968-70 with Prosage (a meatless sausage) Worthington invented a unique and proprietary process for combining gluten and textured soy proteins to give improved texture, flavor, and nutritional value – leading to a host of new meatlike products by the early 1980s.

By 1992 Seventh-day Adventist food companies had introduced at least 166 commercial food products containing gluten as a major ingredient; of these at least 55 were made by Worthington Foods. Moreover, of Worthington's 180 products, approximately 90% contained at least some wheat gluten.

Dietary Fiber: Here, too, Dr. John Harvey Kellogg was the pioneer. He was so credited in at least four publications by Denis P. Burkitt and Hugh Trowell – who established the "fiber hypothesis" of disease causation. For example, in 1978 in "The Development of the Concept of Dietary Fiber in Human Nutrition" published in the *American Journal of Clinical Nutrition* (October, Supplement, p. S3-S11) Trowell wrote: "When Dr. John Harvey Kellogg, an American cereal manufacturer, advocated the use of bran in 1923 in *The New Dietetics*, he stimulated much research.

Note: As early as 1909, Dr. Kellogg's company, Battle Creek Foods in Battle Creek, Michigan, was selling and advertising "Sterilized bran (a gentle laxative)."

Peanut Butter: The forerunner of peanut butter (called "Peanut paste") was invented and patented in the USA in Oct. 1884 by Marcellus Gilmore Edson of Montreal, Quebec, Canada. The patent (U.S. Patent No. 306,727) was titled "Manufacture of peanut-candy." The term "peanut butter" does not appear in the patent. We call this peanut paste a "forerunner" because it was not sold as peanut butter (or as a nut butter or as peanut paste), but rather as an ingredient – in peanut-candy. We have been unable to find any evidence that the peanut-candy described in this patent was ever manufactured or sold commercially, or that Edson was a Seventh-day Adventist.

1895 Oct. 10 – Dr. John Harvey Kellogg, in a letter to Ellen G. White in Australia, writes: "We make very little use of cream or milk in our family, and use no butter whatever for seasoning, but use nuts instead. I have recently succeeded in making some very excellent preparations from nuts which take the place of butter entirely and are sweeter, more palatable, and more digestible. I find this plan is working very successfully both with the patients and with the helpers at the Dormitory." He is probably referring to peanut butter as we shall soon see.

1895 Nov. 4 – Thee months later, Dr. Kellogg applies for a U.S. patent (No. 567,901) for a "nut-butter" made from peanuts or almonds.

1896 Nov. – Dr. Kellogg's peanut butter is now sold commercially – but is not yet named "peanut butter." Sanitas Nut Food Co., in an ad titled "New Nut Products" in the *Chicago Vegetarian* (p. 8) advertises the following: 3. Nut Butter. "A substitute for ordinary butter, presenting fat in the form of a perfect emulsion; combined with water, forms a delicious cream. Used for shortening of all kinds. A pure product of nuts; can be eaten by those who cannot eat ordinary butter." Note: This may well be peanut butter.

4. Nut Cream. "A delicate, delicious nut preparation, which, properly diluted, furnishes a delicately-flavored cream or milk. It resembles milk in appearance." Note: It is probably made from peanuts and/or almonds.

1897 July 2 – The term "peanut butter" first appears in an English-language document. In an article titled "For a trust in peanuts," the *Chicago Daily Tribune* writes (p. 10): "Economic uses for peanuts: The active brains of American inventors have found new economic uses for the peanut. A peanut butter, first designed for invalids, but now sold with other food products, is made simply by crushing the nuts into a paste and adding water."

1897 – Large-scale production of peanut butter begins in the United States in Kokomo, Indiana – but unrelated to Seventh-day Adventists. It is made by Lane Bros. Health Food Co. at 11 McCann St. See: *Kokomo Daily Tribune*. 1897. "The Latest in Butter: Kokomo has a New Industry Making Butter from Peanuts." Nov. 16. p. 4, col. 3.

1898 – In Australia, Edward Halsey, a baker at Sanitarium Health Food Co. (Seventh-day Adventist) introduces Sanitarium Peanut Butter – Australia's first.

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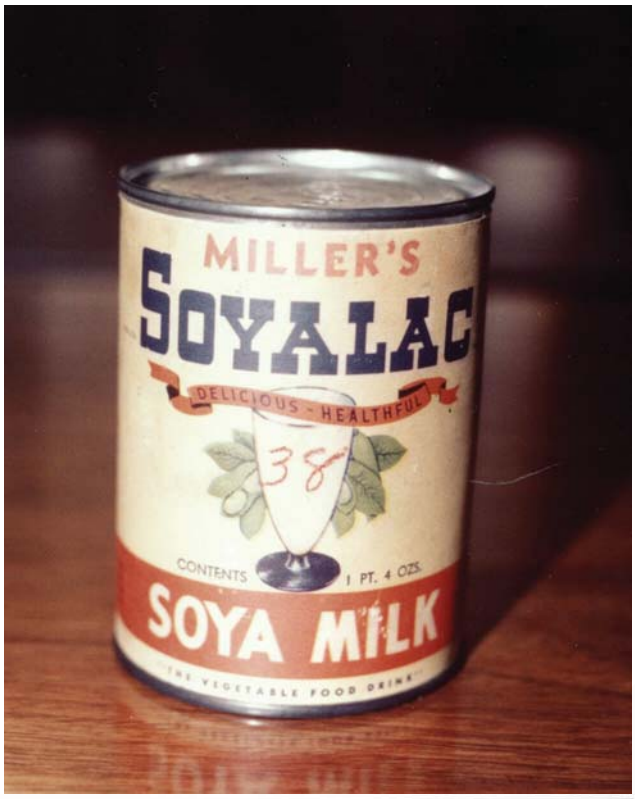

ABOUT THIS BOOK

This is the most comprehensive book ever published about the history of Seventh-day Adventist work with soyfoods, vegetarianism, wheat gluten or dietary fiber. It has been compiled, one record at a time over a period of 35 years, in an attempt to document the history of these interesting subjects. It is also the single most current and useful source of information on this subject.

This is one of more than 100 books compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyinfo Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features detailed information on:

- 80 different document types, both published and unpublished.
- 2530 published documents - extensively annotated bibliography. Every known publication on the subject in every language.
- 498 unpublished archival documents.
- 427 original Soyinfo Center interviews and overviews never before published, except perhaps in our books.
- 755 commercial soy products.

Thus, it is a powerful tool for understanding the development of this subject from its earliest beginnings to the present.

Each bibliographic record in this book contains (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English language publications together with an English translation of the title, month and issue of publication, and the first author's first name (if given). For most books, we state if it is illustrated, whether or not it has an index, and the height in centimeters.

All of the graphics (labels, ads, leaflets, etc) displayed in this book are on file, organized by subject, chronologically, in the Soyinfo Center's Graphics Collection.

For commercial soy products (CSP), each record includes (if possible) the product name, date of introduction, manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as advertisements, articles, patents, etc.) are also given.
A complete subject/geographical index is also included.

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ABBREVIATIONS USED IN THIS BOOK

A&M = Agricultural and Mechanical
Agric. = Agricultural or Agriculture
Agric. Exp. Station = Agricultural Experiment Station
ARS = Agricultural Research Service
ASA = American Soybean Association
Assoc. = Association, Associate
Asst. = Assistant
Aug. = August
Ave. = Avenue
Blvd. = Boulevard
bu = bushel(s)
ca. = about (circa)
cc = cubic centimeter(s)
Chap. = Chapter
cm = centimeter(s)
Co. = company
Corp. = Corporation
Dec. = December
Dep. or Dept. = Department
Depts. = Departments
Div. = Division
Dr. = Drive
E. = East
ed. = edition or editor
e.g. = for example
Exp. = Experiment
Feb. = February
fl oz = fluid ounce(s)
ft = foot or feet
gm = gram(s)
ha = hectare(s)
i.e. = in other words
Inc. = Incorporated
incl. = including
Illust. = Illustrated or Illustration(s)
Inst. = Institute
J. = Journal
J. of the American Oil Chemists' Soc. = Journal of the American Oil Chemists' Society
Jan. = January
kg = kilogram(s)
km = kilometer(s)
Lab. = Laboratory
Labs. = Laboratories
lb = pound(s)
Ltd. = Limited
mcg = microgram(s)
mg = milligram(s)
ml = milliliter(s)
mm = millimeter(s)
N. = North
No. = number or North
Nov. = November
Oct. = October
oz = ounce(s)
p. = page(s)
photo(s) = photograph(s)
P.O. Box = Post Office Box
Prof. = Professor
psi = pounds per square inch
R&D = Research and Development
Rd. = Road
Rev. = Revised
RPM = revolutions per minute
S. = South
SANA = Soyfoods Association of North America
Sept. = September
St. = Street
tonnes = metric tons
trans. = translator(s)
Univ. = University
USB = United Soybean Board
USDA = United States Department of Agriculture
Vol. = volume
V.P. = Vice President
vs. = versus
W. = West
°C = degrees Celsius (Centigrade)
°F = degrees Fahrenheit
> = greater than, more than
< = less than

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Type in your search term, such as Madison or Jethro Kloss.
You will be told how many times this term appears, then the first one will be highlighted.
To go to the next occurrence, click the down arrow, etc.

For those using a Mac without Acrobat Reader: Safari is often the default browser. Click "Edit" in the toolbar at top. In the dropdown click "Find," then click "Find..." again. A search bar will open across top of screen with a search box at right. In this box type a word or phrase you would like to search, such as Madison or Jethro Kloss. Click "Done" then scroll through the various matches in the book.

Chronological Order: The publications and products in this book are listed with the earliest first and the most recent last. Within each year, references are sorted alphabetically by author. If you are interested in only current information, start reading at the back, just before the indexes.

A Reference Book: Like an encyclopedia or any other reference book, this work is meant to be searched first - to find exactly the information you are looking for - and then to be read.

How to Use the Index: A subject and country index is located at the back of this book. It will help you to go directly to the specific information that interests you. Browse through it briefly to familiarize yourself with its contents and format.

Each record in the book has been assigned a sequential number, starting with 1 for the first/earliest reference. It is this number, not the page number, to which the indexes refer. A publication will typically be listed in each index in more than one place, and major documents may have 30-40 subject index entries. Thus a publication about the nutritional value of tofu and soymilk in India would be indexed under at least four headings in the subject and country index: Nutrition, Tofu, Soymilk, and Asia, South: India.

Note the extensive use of cross references to help you: e.g. "Bean curd. See Tofu."

Countries and States/Provinces: Every record contains a country keyword. Most USA and Canadian records also contain a state or province keyword, indexed at "U.S. States" or "Canadian Provinces and Territories" respectively. All countries are indexed under their region or continent. Thus for Egypt, look under Africa: Egypt, and not under Egypt. For Brazil, see the entry at Latin America, South America: Brazil. For India, see Asia, South: India. For Australia see Oceania: Australia.

Most Important Documents: Look in the Index under "Important Documents -."

Organizations: Many of the larger, more innovative, or pioneering soy-related companies appear in the subject index – companies like ADM / Archer Daniels Midland Co., AGP, Cargill, DuPont, Kikkoman, Monsanto, Tofutti, etc. Worldwide, we index many major soybean crushers, tofu makers, soymilk and soymilk equipment manufacturers, soyfoods companies with various products, Seventh-day Adventist food companies, soy protein makers (including pioneers), soy sauce manufacturers, soy ice cream, tempeh, soynut, soy flour companies, etc.

Other key organizations include Society for Acclimatization (from 1855 in France), American Soybean Association, National Oilseed/Soybean Processors Association, Research & Development Centers (Peoria, Cornell), Meals for Millions Foundation, and International Soybean Programs (INTSOY, AVRDC, IITA, International Inst. of Agriculture, and United Nations). Pioneer soy protein companies include Borden, Drackett, Glidden, Griffith Labs., Gunther, Laucks, Protein Technologies International, and Rich Products.

Soyfoods: Look under the most common name: Tofu, Miso, Soymilk, Soy Ice Cream, Soy Cheese, Soy Yogurt, Soy Flour, Green Vegetable Soybeans, or Whole Dry Soybeans. But note: Soy Proteins: Isolates, Soy Proteins: Textured Products, etc.

Industrial (Non-Food) Uses of Soybeans: Look under "Industrial Uses ..." for more than 17 subject headings.

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Pioneers - Individuals: Laszlo Berczeller, Henry Ford, Friedrich Haberlandt, Artemy A. Horvath, Englebert Kaempfer, Mildred Lager, William J. Morse, etc. Soy-Related Movements: Soyfoods Movement, Vegetarianism, Health and Dietary Reform Movements (esp. 1830-1930s), Health Foods Movement (1920s-1960s), Animal Welfare/ Rights. These are indexed under the person's last name or movement name.

Nutrition: All subjects related to soybean nutrition (protein quality, minerals, antinutritional factors, etc.) are indexed under Nutrition, in one of more than 70 subcategories.

Soybean Production: All subjects related to growing, marketing, and trading soybeans are indexed under Soybean Production, e.g., Soybean Production: Nitrogen Fixation, or Soybean Production: Plant Protection, or Soybean Production: Variety Development.

Other Special Index Headings: Browsing through the subject index will show you many more interesting subject headings, such as Industry and Market Statistics, Information (incl. computers, databases, libraries), Standards, Bibliographies (works containing more than 50 references), and History (soy-related).

Commercial Soy Products (CSP): See "About This Book."

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HISTORY OF SEVENTH-DAY ADVENTIST WORK WITH SOYFOODS, VEGETARIANISM, MEAT ALTERNATIVES, WHEAT GLUTEN, DIETARY FIBER, AND PEANUT BUTTER

1. Graham, Sylvester. 1837. A treatise on bread, and bread-making. Boston, Massachusetts: Light and Stearns. viii + 131 p. 16 cm.

• ***Summary:*** The author urges Americans to return to using whole wheat flour, instead of refined white flour, when making bread. The ancients realized that wheat flour suffered in nutritive value when the coarse bran was removed, and their wrestlers "ate only the coarse wheaten bread to preserve them in their strength of limbs." Hippocrates, the father of medicine, who flourished over two thousand years ago, recommended the unbolted wheat meal bread "for its salutary effects on the bowel."

In the preface, the author notes: "While the various preparations of animal food constitute so important a portion of human aliment, the quality of bread will be greatly disregarded and neglected, and people will continue almost universally to be cursed with poor bread."

Chapter 1, titled "History of Bread," begins: "In the English version of the sacred scriptures [the Bible], the term Bread is frequently used to signify vegetable food in general. Thus in Genesis iii, 19, the Lord says to Adam–'In the sweat of thy face shalt thou eat bread (or food) till thou return to the ground.'" Graham promoted specific foods which he believed were necessary for good health. These foods were largely coarse, whole meal breads, which at that time were not considered to be of dietary importance. He attributed the health-giving properties of these breads to their content of "innutritious substance," a term he used of the modern term "dietary fiber." In attempting to prove the need for this dietary component, he notes: "We know that dogs fed on sugar and water, gum and water, fine flour bread and water or any other kind of concentrated aliment will soon languish and droop and emaciate and die, but if a due proportion of proper innutritious substance be mixed with these concentrated forms of aliment, the dogs will subsist on them and remain healthy. So if horses, cows, deer, sheep and other grass eating animals be fed on grain alone, they will soon lose their appetite and will shortly perish, but if a due proportion of straw and shavings of wood be given to them with their grain, they will continue to do well. Man is affected in the same manner. He cannot long subsist on purely nutritious substances and the reason is not because these substances have no azote or nitrogen in them nor because many necessarily require a variety of alimentary substances, but simply and exclusively because the anatomical construction and vital powers of the alimentary organs are constitutionally adapted to the alimentary substances which consist of both nutritious and innutritious matter."

Note 1. One of Sylvester Graham's most lasting legacies was Graham Bread, which he considered to be an ideal food. By the late 1980s, as the importance of dietary fiber came to be recognized by doctors and nutritionists, Sylvester Graham came to be seen as the pioneer in America advocating more fiber in the diet (Burkitt & Spiller 1986). Graham Bread was made from unbolted wheat flour (later widely known as "Graham Flour") and allowed to sit for 24 hours before being consumed. Many of America's early health reformers, during the 1850s and 1860s, advocated Graham Bread as part of a vegetarian diet, and refused to serve white-flour bread. These included James Caleb Jackson (proprietor of Our Home on the Hillside, a famous water cure spa at Dansville, New York) and Ellen G. White (the Seventh-day Adventist leader, though she initially had trouble digesting the relatively coarse bread). The SDA magazines *Review and Herald* and *Health Reformer* provided readers with hints on "How to Use Graham Flour." In Britain, Graham bread became a household name after Queen Victoria took to eating brown bread in 1847, at a time when it was still a poor man's food.

Note 2. Daphne Roe (1986) argues convincingly that Sylvester Graham was closely indebted for his ideas on dietary fiber to the physiologist William Beaumont; four years before the appearance of Graham's book on bread, Beaumont's book titled *Experiments and Observations on the Gastric Juice and the Physiology of Digestion* had been published. Section 1 contains ideas quite similar to those of Graham, who was familiar with Beaumont's ideas and actually wrote a review of them.

Note 3. McCance & Widdowson (1956, p. 49) write: "It is somewhat disillusioning to realise that Graham appears to have obtained most of his information about milling, baking and early diets from Rees' Cyclopaedia which was published in 1819, but it is difficult to over-estimate the influence of a man whose bread became a household word for over 100 years. Graham bread, or its imitations, must have been extensively eaten by people who were health minded." Address: Northampton, Massachusetts.

2. Ellen G. White's first health reform vision on the dangers of tobacco, tea and coffee (Early event). 1848. Autumn.

• ***Summary:*** James White mentioned this vision and stated that the health vision was a progressive one. Source: *Review and Herald,* Nov. 8, 1870.

Some church members were not easily convinced

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regarding tobacco. In an 1851 letter Ellen White responded to the question as to whether she had seen "in vision" that it was wrong to use tobacco: "I have seen in vision that tobacco was a filthy weed, and that it must be laid aside or given up." She wrote encouraging letters to those who struggled to break the tobacco habit.

Tobacco was tolerated for some time among Sabbath-keeping Adventists. The church paper published various articles with both scientific and scriptural arguments against tobacco in the 1850s. The first disfellowshipping of tobacco users occurred in Morristown, Vermont, in 1855. Source: Robinson, D.E. 1965. *The Story of Our Health Message,* pp. 65-70.

"In the autumn of 1848 her angel instructed here that tea, coffee, and tobacco were injurious, even life threatening." Source: Coon, Roger W. 1992. *The Great Visions of Ellen G. White,* Vol. 1. p. 92 + footnote 9.

3. *Present Truth* (*The*). 1849. Serial/periodical. Middletown, Connecticut. Publishing Committee, incl. James White. *
• ***Summary:*** Talk with Colleen Duran, Head Librarian, Heritage Room, Del E. Webb Memorial Library, Loma Linda University, Loma Linda California. 2000. July 18. This was the first periodical published by James White and his close associates. *The Present Truth* began in July 1849, in Middletown, Connecticut, and continued with that title until No. 11 (Nov. 1850, Paris Maine). The title then changed to the *Second Advent Review and Sabbath Herald.*

Note: This is the earliest document seen (Oct. 2004) concerning Seventh-Day Adventists.

4. Coles, Larkin B. 1849. The philosophy of health: or, Health without medicine. A treatise on the laws of the human system. 8th ed. Boston, Massachusetts: William D. Ticknor & Co. vi + 120 p. 16 cm. *
• ***Summary:*** One of Coles' main themes was the proposition that "it is as truly a sin against Heaven, to violate a law of life, as to break one of the ten commandments." He argued, like many other health reformers of the time, for fresh air, exercise, a vegetarian diet, the nonuse of stimulants, reform in dress, sexual purity, and drugless medicine.

This book was remarkably successful, selling 35,000 copies during its first 5 years and another 9,000 before Coles' death. "When the twenty-sixth edition appeared in 1851, one medical journal joked that it seemed 'as though the friends of reform not only read, but eat the books'" (R. Numbers 1982, p. 60).

Three early America health reformers whose writings later had a noticeable influence on the thinking of Ellen G. White (leader of the Seventh-day Adventist church) were Horace Mann, Dio (Dioclesian) Lewis, and Larkin B. Coles. Although never as prominent a reformer as Mann or Lewis, Coles is of special interest because of his background as a Millerite preacher and physician. Born in New Hampshire, he graduated from Castleton Medical College in 1825 during that institution's heyday as New England's most popular medical school. He is also said to have been trained as a minister. As early as 1836 he seems to have been associated with William Miller, and at the height of the Millerite movement he was actively distributing Miller's books and writing theological articles for the *Signs of the Times.* Shortly after the Great Disappointment of 1844 (when Jesus Christ failed to appear) he settled in Boston and joined both the Boston Medical Association and the Massachusetts Medical Society as an orthodox physician in good and regular standing. He loved to travel and preach. He died in January, 1856, while visiting Louisville, Kentucky (Ronald Numbers 1982, p. 59-60). Address: M.D. and minister of the Gospel, Fellow of the Massachusetts Medical Society, Member of the Boston Medical Association.

5. *Second Advent Review and Sabbath Herald.* 1850. Serial/periodical. Paris, Maine. Publishing Committee, incl. James White. *
• ***Summary:*** R.L. Numbers (1976, p. viii) lists this as one of the most important Seventh-day Adventist periodicals. He notes that by 1851 the Whites had launched a succession of periodicals culminating in the *Advent Review and Sabbath Herald.*

Talk with Colleen Duran, Head Librarian, Heritage Room, Del E. Webb Memorial Library, Loma Linda University, Loma Linda California. 2000. July 18. In Nov. 1850 the title of *The Present Truth* changed to the *Second Advent Review and Sabbath Herald,* in Paris, Maine. The last issue was 9 June 1851. On 9 June 1851 the title was changed to *Advent Review and Sabbath Herald* (Saratoga, New York). On 30 Oct. 1855 it began publication in Rochester, New York, then on 4 Dec. 1855 it was moved to Battle Creek, Michigan. This title continued until 20 Dec. 1870. The next issue was titled *Advent Review and Herald of the Sabbath*– still in Battle Creek.

Note: This is the second earliest document seen (Oct. 2004) concerning Seventh-Day Adventists.

6. Coles, Larkin B. 1851. Philosophy of health: Natural principles of health and cure: or, Health and cure without drugs: also, The moral bearings of erroneous appetites. Boston, Massachusetts: Ticknor, Reed, & Fields. 260 p. 19 cm.
• ***Summary:*** One of Coles' main themes was the proposition that "it is as truly a sin against Heaven, to violate a law of life, as to break one of the ten commandments." He argued, like many other health reformers of the time, for fresh air, exercise, a vegetarian diet, the nonuse of stimulants, reform in dress, sexual purity, and drugless medicine.

Larkin generally used the word "flesh" to refer to meat; the word "flesh" appears on 31 pages of this book. For example, in the chapter on "Quality of food" a section

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titled "Flesh-eating and vegetable eating" (p. 57) states: To consider man anatomically, he is decidedly a vegetable-eating animal. He is constructed like no flesh-eating animal, but like all vegetable-eating animals. He has not claws, like the lion, the tiger, or the cat; but his teeth are short and smooth, like those of the horse, the cow, and the fruit-eating animals; and his hand is evidently intended to pluck the fruit, not seize his fellow-animals. What animals does man most resemble in every respect? The ape tribes: frugivorous animals.

Because they were viewed as stimulants, Coles also opposed the use of coffee, tea, alcohol, opium and tobacco. The word "coffee" appeared on 29 pages in this book. For example, pages 78-79: "It needs only to be added, that, in the estimation of the writer of this little work,–after having used it for several years, and since having abstained from it for some fifteen years,–coffee, in all cases, and under all circumstances, is bad; that its stimulating qualities are decidedly injurious to the system, and ought never to be used, except when required as an antidote to poison, or for some other medicinal purpose. And, what makes it to be dreaded more than many other injurious things is, its evil working is so unseen and delusive. While it does not show itself like alcohol, yet its evil work is more certainly undermining the nervous system; and while it tempts us to believe that it strengthens and supports, because it excites, yet it slowly enervates. It affects the whole system, and especially the nervous system, by its effects on the stomach. But, besides this, it creates a morbid action of the liver, especially where there is a tendency to bilious affections. It affects the circulation of the blood, and the quality of the blood itself, so that a great coffee-drinker can generally be known by his complexion; it gives to the skin a dead, dull, sallow appearance."

This book was remarkably successful, selling 35,000 copies during its first 5 years and another 9,000 before Coles' death. "When the twenty-sixth edition appeared in 1851, one medical journal joked that it seemed 'as though the friends of reform not only read, but eat the books'" (R. Numbers 1982, p. 60).

Three early America health reformers whose writings later had a noticeable influence on the thinking of Ellen G. White (leader of the Seventh-day Adventist church) were Horace Mann, Dio (Dioclesian) Lewis, and Larkin B. Coles. Although never as prominent a reformer as Mann or Lewis, Coles is of special interest because of his background as a Millerite preacher and physician. Born in New Hampshire, he graduated from Castleton Medical College in 1825 during that institution's heyday as New England's most popular medical school. He is also said to have been trained as a minister. As early as 1836 he seems to have been associated with William Miller, and at the height of the Millerite movement he was actively distributing Miller's books and writing theological articles for the *Signs of the Times.* Shortly after the Great Disappointment of 1844 (when Jesus Christ failed to appear) he settled in Boston and joined both the Boston Medical Association and the Massachusetts Medical Society as an orthodox physician in good and regular standing. He loved to travel and preach. He died in January, 1856, while visiting Louisville, Kentucky (Ronald Numbers 1982, p. 59-60). Address: Fellow, Massachusetts Medical Society; member, Boston Medical Assoc.

7. Ellen G. White's second health reform vision in regarding cleanliness and rich / refined foods (Early event). 1854. Feb. 5.

• ***Summary:*** This vision took place in Brookfield, New York. In 1854, at a time when modern conveniences were not even thought of, she called for cleanliness among those professing Christianity: "I saw that the houses of the saints should be kept tidy and neat, free from dirt and filth and all uncleanness." Turning to maintaining health, especially in dietary matters, she wrote that we must "take special care of the health that God has given us... Deny the unhealthy appetite, eat less fine food, eat coarse food free from grease. Then as you sit at the table to eat you can from the heart ask God's blessing upon the food and can derive strength from coarse, wholesome food."

Source: Manuscript 3, 1854, cited in *Selected Messages*, book. 3, p. 274. Careful examination of Ellen White's writings indicates that by "grease" she meant animal fat, such as lard and suet, very common cooking ingredients in her day.

"And on February 12, 1854, she was told that (1) adultery was a serious problem in her church, (2) there was a physically dangerous lack of bodily cleanliness among Sabbathkeepers, and (3) control of appetite was sorely needed among them. Source: Coon, Roger W. 1992. *The Great Visions of Ellen G. White*, Vol. 1. p. 92 + footnote 10.

Note: Fine food means "refined food." Coarse food refers to unrefined, whole food.

8. *Laws of Life* (*The*) (*Journal of the Dansville Sanitorium*). 1858? Serial/periodical. Dansville, New York. Published and edited by James Caleb Jackson.

• ***Summary:*** Continues: *Letter Box.* In 1866 this "Original monthly health journal of 16 quarto pages" was edited by Miss Harriet N. Austin, M.D., James C. Jackson, M.D., and F.W. Hurd, M.S. Published in Dansville by F. Wilson Hurd & Co. Its "primary object is to teach people how to live so as to avoid sickness" [i.e., preventive medicine].

James Caleb Jackson, born on 28 March 1811, was head of "Our Home on the Hillside," one of the most popular and prosperous water cure (hydropathy) establishments in the USA. He began his career in 1834, lecturing on temperance and slavery. By 1847 his weak constitution failed him, but he recovered his health through hydropathy in New York. Soon he opened a water cure at Glen Haven, where only

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vegetarian meals were served and only reform dresses were worn. In 1858 Glen Haven was destroyed by a fire, so Jackson and his co-worker Dr. Harriet N. Austin, purchased a defunct water cure 50 miles south of Rochester outside the town of Dansville, and on 1 Oct. 1858 they opened "Our Home on the Hillside" for patients. Two vegetarian meals a day (at 8 AM and 2:30 PM) were served. The "food, plentiful but plain, consisted principally of a variety of 'Graham' dishes, vegetables, and piles of fresh fruit. Meat, butter, white-flour bread, tea and coffee were positively not allowed on the premises" (R.L. Numbers 1976, p. 74-75). Nor were drugs or medicine ever administered. Jackson's medical faith rested on ten natural remedies: Air, food, water, sunlight, dress, exercise, sleep, rest, social influence, and mental and moral forces. His most popular book was titled *How to Treat the Sick without Medicine.* In early 1863 Dr. J.C. Jackson of Dansville wrote a letter to the editor of the *Yates County Chronicle* (Penn Yan, New York) giving directions for the treatment of diphtheria. Published on 15 Jan. 1863, the letter was read by Ellen G. White, who took her two sons to Dr. Jackson, whom she believed cured them of diphtheria using simple water treatments. "The grateful mother at once began sharing her discovery with others and thus embarked upon a lifelong career as a prophetess of health reform" (Numbers 1976, p. 76).

Note: Volume 28 (1885), published by The Sanatorium Publishing Co. (Dansville, NY) and volume 30 (1887) are available in full view on the Web on HathiTrust. In Volume 28 (p. 12-13) we read that when Dr. Jackson began his mission 37 years ago, the words "hygiene" or "hygienic" were "not known, outside of a little circle of literary men, and by them was not known to have any practical meaning. Physicians themselves knew little or nothing about healthy methods of living. Their thoughts ran entirely along lines of consideration for persons who were sick or ailing. All diseases with Christians were thought or supposed to have their origin in and through the will of God;..."

"When then, almost single handed and alone, I set going the thought that life had its laws and these operated in the direction of the preservation and maintenance of human life, there was no general faith that these laws did exist and that to obey them would insure persons from sickness and prevent death. I was laughed at by all classes of men just as far as my ideas found circulation." Address: Dansville, New York.

9. Ellen G. White's great health reform vision at Otsego, Michigan (Early event). 1863. June 5 or 6.

• ***Summary:*** Prof. Ronald Numbers (1976, p. x, 81-83) notes that on the evening of 5 June 1863, Ellen White and a dozen Seventh-day Adventist friends were kneeling in prayer at the home of the Aaron Hilliards, just outside the village of Otsego, Michigan. Ellen received a vision concerning the preservation and restoration of health. She was told that it was a religious duty for God's people to care for their health and not violate the laws of life. The Lord wanted them "to come out against intemperance of every kind,–intemperance in working, in eating, in drinking, and in drugging." For several weeks following her vision, Ellen White seemed reluctant to say much about its contents. She first revealed some of the contents to Horatio S. Lay, a self-styled Adventist physician. When he noted that certain "wise and eminent physicians" were currently teaching exactly what she had been shown, she went on to condemn the use of all stimulants and narcotics, to caution against meat eating, and to emphasize "the remedial value of water treatments, pure air, and sunshine." Ellen White's first published account of her June 5 vision, a short 32-page sketch tucked into her fourth volume of *Spiritual Gifts,* did not appear until 15 months after the event.

"In her essay 'Health,' which reads in places like L.B. Coles, she recited the established principles of health reform, attributing them to her recent vision. Willful violations of the laws of health–particularly 'Intemperance in eating and drinking, and the indulgence of passions'–caused the greatest human degeneracy. Tobacco, tea, and coffee depraved the appetite, prostrated the system, and blunted the spiritual sensibilities. Meat-eating led to untold diseases; swine's flesh alone produced 'scrofula, leprosy and cancerous humors.' Living in low-lying areas exposed one to fever-producing 'poisonous miasma.'

"Her strongest language, however, was reserved for the medical profession... The Lord specifically and graphically forbade the use of opium, mercury, calomel, quinine, and strychnine... Of all the medical sects, only drugless hydropathy received divine sanction. Since medicines were so dangerous and had 'no power to cure,' the only safe course was to rely on the natural remedies recommended by the health reformers: pure soft water, sunshine, fresh air, and simple food–preferably eaten only twice a day."

Dr. Richard W. Schwarz (1970, p. 17-18) states: "Some early Adventist leaders such as [Joseph] Bates had conscientiously practiced certain principles of healthful living for years. Since 1848 Ellen White, wife of denominational leader James White, had progressively spoken out against certain unhealthful practices. The Adventists looked to Mrs. White as divinely inspired. They believed that God communicated to them through her. One such communication, taking place at Otsego, Michigan, in June 1863, directed the infant Church's attention to the Christian's moral duty to study and observe basic health laws. A variety of reasons prevented Mrs. White from publishing any extensive material on healthful living until Volume 4 of her series of books *Spiritual Gifts* came out in August 1864. Volume 4 contained a 32-page article entitled 'Health,' in which she discussed the relationship of diet and disease, pointed out the dangers of tea, coffee, drugs, and meat eating, and called attention to the importance of cleanliness, sunlight, fresh air, the rational use of water, and

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the value of willpower in combating poor health.

"As soon as Mrs. White began to speak and write extensively on healthful living, many persons commented on the similarity of her teachings to those of earlier health reformers... When Ellen White began to get questions concerning the relationship of her health teachings to those of men like Drs. J.C. Jackson and R.T. Trall, she was naturally curious, but she resolved not to read any health reform writings until she had first written out in detail the principles she had begun presenting at Otsego. When she had finished, she read the writings of the earlier reformers and was astonished to note the extent to which the ideas they taught agreed with what God had communicated to her."

For a good discussion of this vision, including the events leading up to it, its context, and what Ellen G. White did in response to it, see: Coon, Roger W. 1992. *The Great Visions of Ellen G. White,* Vol. 1. Chap. 7 (p. 90-107). He notes (p. 92-93) that the vision took place on the evening of Friday, June 5, 1863, yet Mrs. White "dated her vision June 6, since it came after the beginning of the Sabbath at sunset. She apparently preferred to emphasize sacred rather than civil time." Martha Amadon gave an eyewitness account of what happened (footnote 15): "'Friday evening we found ourselves all assembled at Brother Hilliard's for family worship, about a dozen being present. A chapter was read and Sister White led in prayer, Brother White kneeling across the corner from her. Her burden in prayer was for him, and as she prayed, while still on her knees, she moved over to his side, laid her hands on his shoulders, and prayed until she was taken in vision. This lasted for about three quarters of an hour.

"'At this time she was given the light on the health reform, Brother White was also greatly blessed and encouraged, and he was relieved of the burden of discouragement ["burnout, from constant and excessive labor"] that he had been carrying.'

"An initial, partial account of the specific content of this significant vision was written down by Ellen shortly after it was received. About two thirds of the document was counsel given specifically to alleviate James White's deteriorated state of health; the remaining third consisted of general counsels for the church.

"In the summer of 1864, however, Ellen White wrote a more complete account of the instruction given her (this time generally omitting personal family counsels). In print it fills some 30 pages in chapter 39 ('Health'), of *Spiritual Gifts*, book 4. Some 10 categories of counsel are covered in this comprehensive account of this vision."

"1. Care of health is a religious duty. 'The body, which God calls His temple, should be preserved in as healthy a condition as possible.'"

"2. The cause of disease is a violation of health laws.

"3. She attacked intemperance on many fronts" (stimulating drinks / alcohol, tobacco, highly spiced foods and rich foods, overwork, indulgence of base passions).

"4. Vegetarianism was, for the first time, revealed to Ellen as the ideal diet, being the original diet of Adam and Eve in Eden..."

5. Control of appetite–eating too often or too much.

"6. Control of the mind."

"7. Natural remedies in healing. 'Nature alone is the effectual restorer.' 'Nature alone possesses curative powers.'

8. Personal cleanliness.

9. Environmental concerns.

"Health education by the church."

Note: This is the earliest event seen (Jan. 2012) concerning Seventh-day Adventist work with vegetarianism.

10. White, Ellen G. 1864. Health. In: Ellen G. White. 1864. Spiritual Gifts: Important Facts of Faith, Laws of Health, and Testimonies. Vol. 4. Battle Creek, Michigan: Seventh-day Adventist Publishing Association. 160 p. See p. 120-51. Chap. 39. No index. 18 cm.

• ***Summary:*** This is Ellen G. White's first published account of her first major health vision of 6 June 1863 (14 months earlier), outside the village of Otsego, Michigan. It was destined to change the health habits of the entire Seventh-day Adventist (SDA) church and of Ellen G. White herself.

At sunset, on Friday, a the home of Aaron Hilliard, the Whites, Hilliards, and a few friends knelt in prayer. Ellen's prayer burden was James' health. She prayed and moved closer to him, placing her hand gently on his shoulder. She was taken off in vision for 45 minutes.

She was shown (among other things): (1) Care of personal health is a Christian duty. (2) Much disease results from violation of the laws of health. (3) It is the duty of each person to try to avoid all forms of intemperance. (4) God's natural remedies include pure water and air. (5) Physical health depends upon successful control of the mind. (6) Vegetarianism, advocated to SDAs for the first time, is ideal for health and pork is especially detrimental. Meat-eating leads to untold diseases. "Subsisting mostly on highly seasoned animal food produces a feverish state of the system, especially if pork is used freely. The blood becomes impure, the circulation is not equalized" (p. 126).

(7) Human effort is to be combined with divine power. (8) "The endless variety of medicines in the market... kill hundreds where they benefit one" (p. 140).

Note 1. This is the earliest document seen (Nov. 2004) concerning Ellen G. White and her interest in vegetarianism or health reform.

Note 2. This is the earliest document seen (Nov. 2004) concerning the work of Seventh-day Adventists with vegetarianism. Address: Battle Creek, Michigan.

11. White family portrait, Battle Creek, Michigan (Photograph). 1865?

• ***Summary:*** Image courtesy of the Ellen G. White Estate.

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Ellen G. White, her husband, and their two sons. Sometime in 1845 Ellen met her future husband, James Springer White, also a Millerite. A year later, on 30 August 1846, they were married by a justice of the peace in Portland, Maine. The elder son is James Edson White. The younger son is William Clarence ("Willie") White.

At the age of nine, Ellen was struck with a rock thrown by a fellow student. The injury severely disfigured her nose, and left her in a coma for three weeks.

When Ellen Harmon had her first "conversion experience," at age 12, she would later write:

"This misfortune, which for a time seemed so bitter and was so hard to bear, has proved to be a blessing in disguise. The cruel blow which blighted the joys of earth, was the means of turning my eyes to heaven. I might never had known Jesus, had not the sorrow that clouded my early years led me to seek comfort in him" (*Review and Herald,* 25 Nov. 1884).

In 1840, at age 12, her family became involved with the Millerite movement. As she attended William Miller's lectures, Ellen felt guilty for her sins, and she was filled with terror about being eternally lost. She describes herself as spending nights in tears and prayer, and being in this condition for several months. She was baptized by John Hobart in Casco Bay in Portland, Maine, and eagerly awaited Jesus to come again. In her later years, she referred to this as the happiest time of her life.

12. *Health Reformer* (*The*) (*Battle Creek, Michigan*). 1866-1878. Serial/periodical. Battle Creek, Michigan. Vol. 1 No. 1. Aug. 1866. *

• ***Summary:*** Continued by *Good Health* with vol. 14 in Jan. 1879. According to Richard W. Schwarz's book *John Harvey Kellogg, M.D.* (1970), in June 1863, in Otsego, Michigan, Ellen G. White had had a vision in which God had directed the infant Seventh-day Adventist church's attention to the Christian's moral duty to study and observe basic health laws. "After Ellen White had written out all of the basic health principles shown her in the Otsego vision, she, her husband, and several other Adventist leaders spent three weeks observing the methods used at Dr. [James Caleb] Jackson's establishment ["Our Home on the Hillside", a water-cure institution] in Dansville, New York... They also decided to bring out a series of six pamphlets devoted entirely to the subject of healthful living. Entitled *Health, or How to Live*, these pamphlets appeared in 1865. Although each contained an article written by Ellen White, the majority of the material consisted of reprints from the writings of Sylvester Graham, Dr. Larkin B. Coles of Boston, Massachusetts, Dr. Russell T. Trall, Dr. James Caleb Jackson,

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Dio Lewis, and others. Trall, a regular columnist from about 1868-1873, wrote tirades against the medical profession and the use of sugar. The next year [1866] the Review [and Herald Press, founded in the 1850s] office also began publication of the *Health Reformer,* a monthly journal edited by Dr. H.S. Lay and dedicated to popularizing dietetic and sanitary reforms, not only among Adventists, but among the general public."

As an apprentice typesetter, John Harvey Kellogg set type for the early issues of the *Health Reformer.* In about 1873 James White, who was then the magazine's editor, pressed the 21-year-old John Harvey Kellogg into service as his chief editorial assistant. Since church responsibilities overburdened White, in July 1874 Kellogg officially became editor of the *Health Reformer,* a position he held until his death 61 years later. Kellogg began writing columns for this periodical in which he set forth the basic principles of healthful living that he would promote all his life. His system, which he eventually called "biologic living," was based on preventive medicine and a simple vegetarian diet; it demanded total abstinence from alcohol, tobacco, tea, coffee, and chocolate. In January 1879 the *Health Reformer* was renamed *Good Health.* A year after the name change, the Battle Creek Sanitarium officially acquired *Good Health* from the Seventh-day Adventist Publishing Association. The journal was now under Dr. Kellogg's control. Circulation soon increased to 20,000 copies a month, and by 1916 more than 5 million copies of the magazine had been printed. By 1921 *Good Health* had published its first article on soybeans or soyfoods. The basic ideas promoted in *Good Health* remained the same throughout the years until it ceased publication in 1955.

Talk with National Library of Medicine. 1991. Nov. 25. From Aug. 1866 (Vol. 1, No. 1) to 1875 *Health Reformer* was issued by the Health Reform Institute. The title was changed in Jan. 1879. The last issue was Vol. 88, No. 8, Aug. 1953.

The Loma Linda Univ. Library Heritage Room (Loma Linda, California) probably has the best and most complete set of this periodical; they own 1(1867)-13(1878), in both bound and microfiche formats.

Note 1. This is the earliest periodical seen (Dec. 2013) published in Battle Creek, Michigan, that has health and diet as its primary interests.

Note 2. This is the earliest document seen (Dec. 2013) connected with the work of Dr. John Harvey Kellogg. Address: Battle Creek, Michigan.

13. Bordeau, D.T. 1866. Health. No. 2: Eating and drinking. *Health Reformer* (*The*) (*Battle Creek, Michigan*) 1(2):25-27. Sept.

• ***Summary:*** This article begins: "'Whether therefore ye eat or drink, or whatever ye do, do all to the glory of God.' *I Corinthians* x, 31.'"

"1. "God's original design could not have been that man should subsist on flesh meats; that he should have to destroy the lives of other creatures equally tenacious of life, and averse to suffering, as himself, to prolong his own life. There is something deeply affecting to anyone whose heart vibrates in tenderness for all of God's creatures, to see any of them suffering and dying to save our lives. The tendency of this must be to remind us that man has fallen,..."

"A farinaceous and vegetable diet contains all the nutritive properties that can be derived from food, and we can partake of it without feeling that we are eating that which has had to suffer and die.

"2. It is a cheaper diet than that which consists of flesh meats."

"3. You can get a greater and better variety in a vegetable diet than in a meat diet.

"4. A farinaceous diet is more nutritious than a flesh diet."

"5. A vegetable diet is freer from disease, and consequently can be used with more safety, than a flesh diet."

"6. Inasmuch as those beasts which subsist on animal food are characterized by ferocity and rapacity, a flesh diet, eaten largely by man, naturally and necessarily develops fierceness and rapaciousness in him also; whereas a vegetable diet is constitutionally adapted to foster docility.

"7. In order that health may be promoted, it is necessary that our various faculties be equally exercised and developed; but a flesh diet excites and unduly develops the feelings and animal propensities to the prejudice and deterioration of the moral and intellectual faculties. This is equally true of intoxicating drinks, tea, coffee, and tobacco, and highly stimulating food of any kind. By these stimulants the animal organs are unduly excited and developed, and the blood and vitality are withdrawn from the moral and intellectual organs, and they are blunted and weakened."

"8. A plain vegetable diet is more conducive to longevity than flesh meats."

14. Bordeau, D.T. 1866. Health. No. 3: Eating and drinking (Continued). *Health Reformer* (*The*) (*Battle Creek, Michigan*) 1(3):33-35. Oct.

• ***Summary:*** "But the following objections are sometimes argued against the position that a vegetable diet is superior to flesh meats:

"Obj. 1. One feels better and stronger after eating meat, than after simply a vegetable diet; therefore there is more strength in animal food than in vegetable."

"No, feeling is not the criterion by which to decide which articles are the most nutritious, and impart the greatest amount of strength... In the case of spirituous liquors, tea, coffee, and other stimulating articles, the strength that is realized under their influence is not derived from them, but is drawn from the general fund of vitality in the system. These articles stimulate to undue action; and every time you use

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them, you make a direct draft upon your capital of vitality, and lessen the sum total of your life-power;..."

15. John Harvey Kellogg decides to become vegetarian (Early event). 1866.
• ***Summary:*** Richard W; Schwarz, in his excellent biography *John Harvey Kellogg, M.D.*, states (p. 25): "As an apprentice typesetter, John Harvey Kellogg set type for both *Health, or How to Live* [published in 1865] and the early issues of the *Health Reformer* [which began publication in Aug. 1866]. He became intensely interested in these publications and in the health journals the *Review* received on an exchange basis. In his spare moments he studied the complete works of [Sylvester] Graham and Coles, which the *Review* kept for sale in its office.

"Soon John put into practice some of the things which he had read. Although the Kellogg family had always served meat at almost every meal, and in spite of the fact that an oxtail, richly browned in the oven, was one of his favorite foods, John decided to become a vegetarian."

Note: John Harvey Kellogg, born 26 Feb. 1852, probably decided to become a vegetarian in 1865 or 1866, at the age of about 13 or 14. Quite remarkable for him to make such a big decision at such a young age!

16. Trall, Russell Thacher. 1867. The experimental evidence. *Health Reformer* (*The*) (*Battle Creek, Michigan*) 2(5):69-70. Nov.
• ***Summary:*** Adam and Eve were consistent vegetarians.

"Pythagoras raised up a society of vegetarians 550 years before Christ. Josephus testifies that the Essenes, a sect of the ancient Jews, numbering several thousands, were long-lived because of their regular course of life and simplicity of diet, which Pliny tells us consisted of the fruit of the palm-tree [dates]. It is certain, however, that they were vegetarians after the Pythagorean philosophy. The Brahmin priests, who are a very numerous sect, are all strict vegetarians."

"James Simpson, Esq., president of the English Vegetarian Society, stated at a public meeting held at Glasgow, June 17, 1851, that of the individuals belonging to the society, numbering between six and seven hundred adult members, two hundred and three have abstained from all kinds of flesh for upward of ten years; one hundred and fifty-three for more than twenty years; ninety-one for thirty years; twenty-nine for forty years; and eighty-five have abstained for the whole of their lives. These vegetarians belong indiscriminately to all trades and professions, and have, as a body, always a much higher and more uniform standard of health than flesh-eaters under similar general circumstances, and many of them have experienced a wonderful improvement in bodily vigor and mental vivacity.

"But we have equally interesting facts in the United States. The American Vegetarian Society, though of more recent date and fewer numbers, has in its ranks full-grown men and women who have never tasted 'flesh, fish, nor fowl.' Rev. Mr. Metcalfe, who is the corresponding secretary of the society, and also pastor of the Society of Bible Christians, who have adopted vegetarianism from religious motives, has practiced the vegetarian system for more than forty-one years, as has also his wife. In a late number of the Vegetarian Advocate he says: 'We have raised a family of five children, none of whom have ever eaten flesh. They are all married to vegetarians; they all have children, none of whom have ever used animal food; they are healthy, vigorous, and intellectual.' In this society there are now fifty-one persons who have never eaten flesh, nor tasted intoxicating drinks." Address: [New York].

17. Western Health Reform Institute (Photograph). 1868.
• ***Summary:*** See next page. Image courtesy of the Ellen G. White Estate. The Institute was established in 1866 and this photo taken in 1868.

18. Ellen G. White (standing) and James White (her husband) seated. (Photograph). 1868? Undated
• ***Summary:*** See page after this page. Image courtesy of the Ellen G. White Estate. The image is dated as "c. 1868." Ellen G. White (1827-1915) was an American religious leader and co-founder of the Seventh-day Adventist Church. 1827– Born Ellen Harmon in Gorham, Maine. 1842+. Follower of William Miller. 1846–Married James S. White, Adventist minister. 1855–Author of *Testimonies for the Church.* 1860+. Experienced numerous visions that guided formation and doctrine of Seventh-day Adventist Church.

19. The Health Reformer's progressive cook book, and kitchen guide: Comprising recipes for the preparation of hygienic food, directions for canning fruit, &c., together with advice relative to change of diet. 1870. Battle Creek, Michigan: Health-Reform Institute, Review & Herald Steam Press. 76 + [4] p. Index. 17 cm.
• ***Summary:*** Contents: Preface. Introductory: Health reform and healthful cooking, what is food?, foods which are not the best and are sometimes "positively injurious to life and health": Flesh meats, fine flour (white, bolted; Graham flour is preferred), milk, eggs, sugar, salt, butter, spices. Change of diet. Hygienic cookery: Bread (incl. biscuits, rolls, crisps, crackers, gems). Puddings, mushes, &c. Pastry (incl. pies). Fruits. Preserving fruit (drying, canning). Vegetables (incl. dried beans).

"Progressive" department ("The recipes contained in this department are intended for the benefit of those who are changing their mode of living, and progressing toward a radical system of diet." To help them make "the transition from the gross manner of living so prevalent at the present time, to a radically wholesome plan,...") Bread, cakes, &c. Puddings. Gruels and soups. Miscellaneous (incl. custard without eggs, roasted peanuts, pumpkin pie without eggs).

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Pure soft water. Drinks for invalids (lemonade, crust coffee [made from toasted crusts of bread rather than from coffee beans], tamarind water). Bleaching, &c. (for removing stains).

After page 76 are 4 unnumbered pages of ads: (1) List of books for sale at the office of the *Health Reformer* (Battle Creek, Michigan). (2) The celebrated Fountain Syringe (with 5 attachments incl. nasal douche, for the rectum [enema], the vaginal). (3) Works on hydropathy, or water cure: Four books and a special list, published by E.R. Wells, 389 Broadway, New York City. (4) Kedzie reliable improved water filter.

On the inside front cover: "*The Health Reformer.* This is the title of a health journal, 24 pp., magazine form, issued monthly at the Health Reform Institute, Battle Creek, Michigan. It is devoted to an exposition of the laws of our being, and the right application of those laws in the treatment of disease." Its also discusses the "temperance question." "R.T. Trall, M.D., founder and principal of the New York Hygeio-Therapeutic College, and writer and lecturer on health subjects, has a special department in each number, which is itself worth the subscription price. Everybody should have it. Price only one dollar per year, in advance. Specimen copies free."

On the inside rear cover: "Books and periodicals issued by the Seventh-day Adventist Publishing Association, Battle Creek, Michigan. Includes the *Advent Review and Sabbath Herald* (weekly), *The Youth's Instructor* (semi-monthly), and about 30 books, pamphlets, and tracts, with the price and postage for each. On the rear cover is detailed information about the Health-Reform Institute (opened 5 Sept. 1866) in Battle Creek, Michigan. Nature is the only healer; hence, no drugs are administered.

Note: This is the earliest known Seventh-day Adventist cook book. Soy is not mentioned. Address: Battle Creek, Michigan.

20. Bates, Joseph. 1871. Experience in health reform. *Health Reformer* (*The*) (*Battle Creek, Michigan*) 6(1):20-21. July.
• ***Summary:*** "In early life, before finishing my second European voyage, I was impressed into the British naval service. and stationed on board a British war ship, associated with about seven hundred men, on a daily stated allowance of hard bread, salt provisions, and one pint of inferior wine. Thus I was held for about two years and a half, until son after the declaration of war by the United States against England, the American citizens on board our ship petitioned, and became prisoners of war, and were placed on two-thirds of what had been allowed us before, and no wine. In this state I continued some two years and a half... Five years experience in these two schools of vice and debasement of moral character, seriously convinced me of the necessity of reform.

"What seemed most important of all at that time was the disuse of spirituous liquors. A few weeks after my return home from my imprisonment, in the summer of 1815, I was offered, and accepted, the office of second mate on board a new ship fitting for a European voyage. This was some twelve years before temperance societies were organized." He soon yielded to the temptation of "a social glass" but

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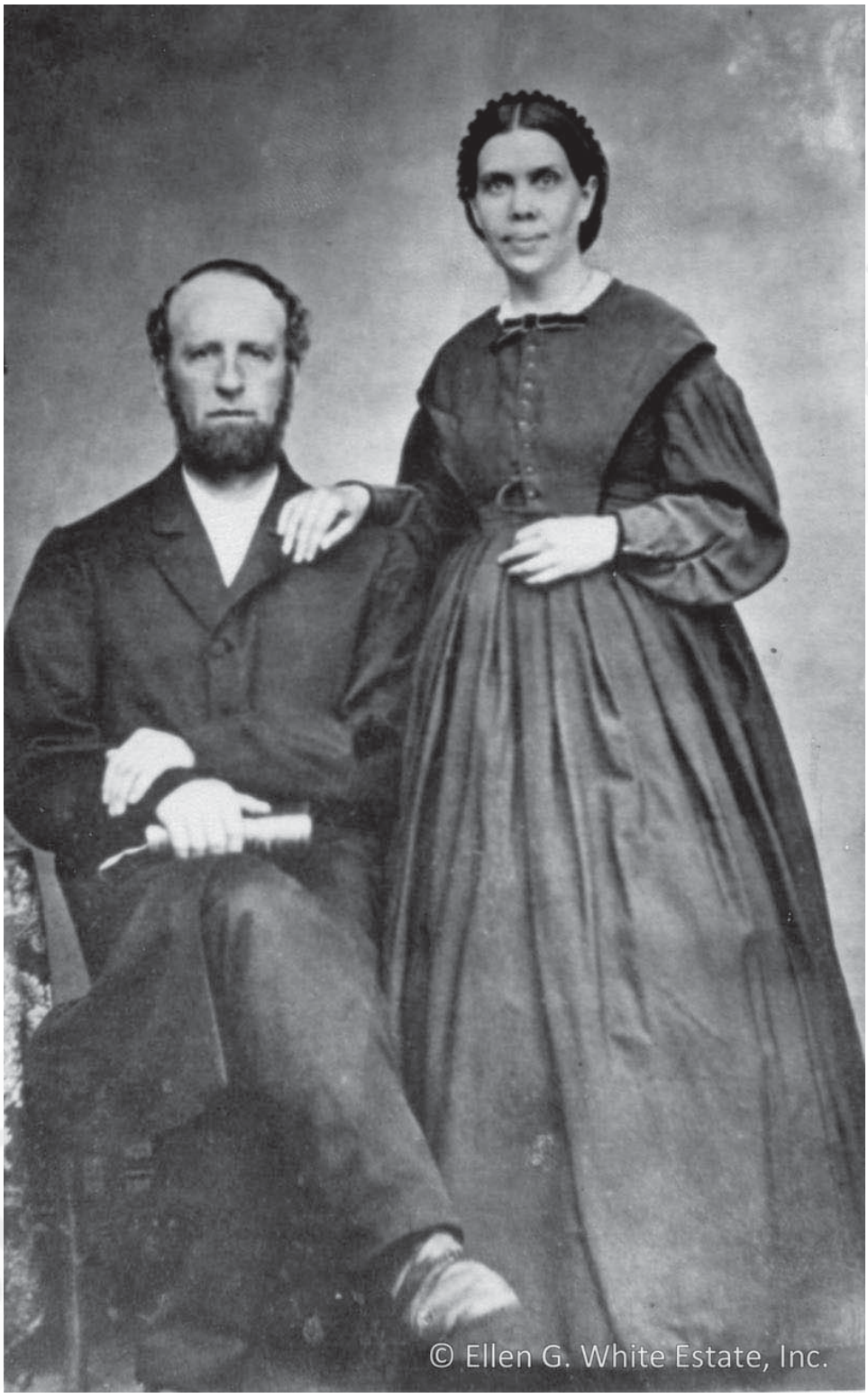

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finally confined himself "to one glass only in twenty-four hours. Wine, beer, and cider, were not considered spirituous liquors. These I used but seldom.

In the fall of 1821, he took a vow saying "I will never to drink another glass of spirituous liquors while I live. And I am not aware that I ever have." "In 1822 I fully resolved never to drink wine. By watchfulness and perseverance I broke up my habit of using profane language, and before I left the Pacific Ocean, I had forever discarded the use of that filthy weed, tobacco. These victories strengthened and encouraged me in the work of reform.

"In the summer of 1824, on leaving the capes of Virginia for another voyage, I resolved from thenceforth never to drink ale, porter, beer, cider, nor any liquor that would intoxicate. I now felt strengthened, and fully relieved from this burden to reform, which had been balancing in my mind for upwards of ten years."

"Turning my attention more to reading the Bible than I had done, I was led to see what a feeble worm of the dust I was–an unpardoned sinner under condemnation. I began to plead with God for pardoning mercy, for many days. I did then believe, and still believe, that he freely forgave me, for his Son's sake. My prospect then for this, and the life which is to come, was most cheering. I then convented with the Lord that I would serve him evermore.

"Some thirty years ago, on becoming satisfied of the poisonous nature of both tea and coffee, I resolved never more to use them.

Reform in food: In February, 1843, I resolved to eat no more meat. In a few months after I ceased using butter, grease, cheese, pies, and rich cakes. Since the introduction several years ago by my brethren of the Seventh-day Adventists, I have been endeavoring to conform in my eating more strictly to the hygienic practice, adopted by the Health Institute in Battle Creek, and confine myself to two meals only in twenty-four hours. Robinson (1965, p. 59) states that Joseph Bates was the first Adventist to become a vegetarian. But note that he seems to have done it more as personal penance than for reasons of health or concern for the lives of animals. "Regarding the minor points of reform, he exerted a silent influence, but did not urge his practices upon others. Sometimes his friends would ask him why he did not partake of flesh meat, or grease, or highly spiced foods; and he would quietly reply, 'I have eaten my share of them.' He did not make prominent in public or in private his views of proper diet unless asked about them." Address: Monterey, Michigan.

21. Heald, Mary H. 1872. Diet.–No. 9. *Health Reformer* (*The*) (*Battle Creek, Michigan*) 7(10):291. Oct.
• ***Summary:*** "An almost universal error in this country is the use of hot drinks with food; they are objectionable because they lessen the tone of the mucous surface of the mouth, throat, and stomach. Their introduction while hot raises the temperature of the parts beyond the normal degree; and by the time the natural temperature is restored, the parts are relaxed and weakened. The heat has also a directly injurious effect upon the teeth, particularly if followed by the introduction of cold liquid or solid matter. Besides these objections, the substances used for heated beverages–tea, coffee, and chocolate–are injurious.

"Tea is a well-known stimulant. Many who are weary or half sick use it, and feel refreshed in a few minutes' time, and so come to labor under the delusion that its use is beneficial, whereas, the relief gained is at the expense of the system. Under its influence, the nerves are debilitated and diseased, and the body grows into an unnatural, morbid dependence upon it."

"Coffee is a decided narcotic, and is recognized by scores of our most eminent physiologists as productive of many nervous disorders. If one wishes to measure the injury it does him, let him discontinue its use for some time."

"Chocolate should not be used on account of its oily character, and because of the sugar, cinnamon, etc., used in its preparation. Moreover, it is not often found pure. Lard or some other pernicious, oily matter, is often added in preparing it for the market. All can therefore see strong objections to its use. The roasted kernel of the nut of the cacao, or chocolate tree, which is the basis of the compound, would not probably be objectionable to a healthy person with fine digestive power; but warm drinks are always hurtful; they lessen the tone and vigor of the stomach, besides containing the unhealthy principles before-named."

22. John Harvey Kellogg officially replaces James White as editor of *Health Reformer* magazine. In January 1879 the *Health Reformer* is renamed *Good Health.* (Early event). 1874. July.
• ***Summary:*** Richard W; Schwarz, in his excellent biography *John Harvey Kellogg, M.D.*, states (p. 37, 91-92) In about 1873 James White, who was then the magazine's editor, pressed the 21-year-old John Harvey Kellogg into service as his chief editorial assistant. Since church responsibilities overburdened White, in July 1874 Kellogg officially became editor of the *Health Reformer,* a position he held until his death 61 years later. Kellogg began writing columns for this periodical in which he set forth the basic principles of healthful living that he would promote all his life. His system, which he eventually called "biologic living," was based on preventive medicine and a simple vegetarian diet; it demanded total abstinence from alcohol, tobacco, tea, coffee, and chocolate. In January 1879 the *Health Reformer* was renamed *Good Health.* Dr. Kellogg entrusted much of the editing work for *Good Health* to his wife, Ella Eaton Kellogg

23. Bentley Historical Library, University of Michigan. 1874. John Harvey Kellogg (1852-1943): Printed books, pamphlets, and serials, 1874- (Inventory and finding aid for

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archival collection). Ann Arbor, Michigan. 15 p. Undated. 28 cm. [255 ref]
• ***Summary:*** The typewritten inventory and finding aid, which describes printed works in the John Harvey Kellogg archives at the University of Michigan at Ann Arbor (see Pugh 1980), is divided as follows: 1. Printed books authored by John Harvey Kellogg–By title (5 pages; DA 2 K29.5 P946–Boxes 1-6). 2. Pamphlets authored by John Harvey Kellogg–By title (14 pages; DA 2 K29.5 P976–Boxes 7-8). 3. Serials [edited or published by John Harvey Kellogg]–By Title (1 page; DA 2 K29.5 P976–Boxes 9-15).

The serials are as follows: (1) The Cricket, Vol. 1, no. 1-10, May 1898-June 1899. (2) The Health Reformer, Vols. 1-12, 1866-1877. Continued as Good Health. A Journal of Hygiene, 1878-1973. Missing vols. 13, 17, 21.

Note: This is the finding aid for the earliest archival collection seen (Oct. 2001) that contains information on soy. Address: Michigan Historical Collections, Bentley Historical Library, Univ. of Michigan, Ann Arbor, Michigan 48109-2113. Phone: 313-764-3482.

24. Bentley Historical Library, University of Michigan. 1874. John Harvey Kellogg (1852-1943): Papers, 1832-1965 (primarily 1874-1943) 19.3 feet in 19 boxes and 2 oversize boxes (Inventory and finding aid for archival collection). Ann Arbor, Michigan. 13 p. Undated. 28 cm. [255 ref]
• ***Summary:*** The typewritten inventory and finding aid, which describes John Harvey Kellogg's personal papers in the Bentley Historical Library at the University of Michigan at Ann Arbor, is divided as follows: Biography of J.H. Kellogg (p. i-iv). Summary contents list (p. v). Box 1–Autobiographical and biographical notes. Awards, citations, etc. (and oversize box 21) Correspondence 1875-June 1935. Box 2–Correspondence, July 1935-1940. Box 3. Correspondence 1941-1948, and undated. Lectures, speeches, and related, 1875-1901 (22 folders) (see attached index). Box 4–Lectures, speeches, and related, 1901-07 (23 folders). Box 5–Lectures, speeches, and related, 1908-11 (17 folders). Box 6–Lectures, speeches, and related, 1912-17 (24 folders). Box 7–Lectures, speeches, and related, 1918-43 (15 folders). Boxes 7-10–Lectures, speeches, notes, and articles [undated by Topic], ca. 1890-ca. 1943. Boxes 10-11–Notes and memoranda, 1876-1943. Boxes 11-12–Subject files (primarily medical missionary materials). Box 13–Clippings, dated and by topic. Boxes 13-14 (and oversize box 21)–Scrapbooks, dated and arranged by subject, 1878-1944. Box 14–Guestbooks and registers. Box 15–Miscellaneous bound materials. Ledgers/daybooks, 1899-1923. Index Rerum, ca. 1888-1896. Boxes 16-17–Notebooks (as student and physician), 1869-1927. Box 17–Printed works by JHK and various Sanitarium physicians, ca. 1890-1940. Bound manuscripts of JHK, ca. 1890-ca, 1925. Box 18–Works by others (manuscript). Works by others (published), ca. ca. 1832-ca. 1940. Box 19 and oversize box 20–Photographs.

The Kellogg collection came to the Michigan Historical Collections in two primary accessions, one in 1962 and another in 1972. The collection was a gift of Gertrude W. Goodwin, secretary of the Race Betterment Foundation of Battle Creek, Michigan. A microfilm copy of the collection is available (see attached listing by reel number, p. 5-8).

"John Harvey Kellogg was also a skilled surgeon, an editor, and scientist who saw himself as primarily an educator determined to focus public attention on preventive medicine as the means to maintain good health. The main thrust of Kellogg's good health message was that vegetarian diet, regular exercise, fresh air, and sunshine are the keys to a long and vigorous life. Kellogg was a testament to the efficacy of his principles, living to age ninety-one and working diligently until succumbing to pneumonia on December 14, 1943."

"Kellogg, an 1875 graduate of Bellevue Hospital Medical College, brought a solid training in orthodox medicine to his health reform efforts. In this, he differed from most earlier health reformers, whose systems often lacked grounding in science. Kellogg made repeated trips to Europe to keep abreast of developments in medicine, surgery, and physiology in order to buttress the scientific foundations which supported his health message." Address: Michigan Historical Collections, Bentley Historical Library, Univ. of Michigan, Ann Arbor, Michigan 48109-2113. Phone: 313-764-3482.

25. The hygienic cook book: Comprising, in addition to many valuable recipes for the preparation of healthful food, brief remarks upon the nature of food, how to make the change of diet, time for meals, canning fruit, &c. 1874. Battle Creek, Michigan: Office of the Health Reformer. 96 p. Index. 18 cm.
• ***Summary:*** A vegetarian cook book. Contents: Preface. Introductory: Food and diet (What is food?, man's natural diet), Perverted appetites (animal food, eggs, milk, cheese, butter, fine flour {bolted}, spices, salt, soda and other minerals, sugar {incl. molasses, maple sugar, honey, etc.}, vinegar, pickles, and preserves, tea and coffee, wine, time for meals {two a day is best}, change of diet). Cookery: The art of cooking. Bread, loaf bread (Graham bread, etc.), toast, fruit-bread and cake, puddings, pastry (incl. pies, dumplings, tarts), cooked fruit and sauces, vegetables (incl. dried beans), soups, stews, and gruels, preserving fruits and vegetables (canning, drying). Beverages: Filtered water, summer drinks.

On the inside rear cover is a full page advertisement for the Health Reform Institute, Battle Creek, Michigan. "This Institution has a competent corps of Physicians, both male and female, and is under the general supervision of a Board of Directors... At this Institute diseases are treated on Hygienic Principles. Instruction, both Theoretical and Practical, is given to Patients and Boarders on the great subject of How to Live so as to Preserve Health, and also

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respecting the safe and sure means of Recovery from Disease. In the treatment of the sick, No Drugs will be given. Those means only will be employed which Nature can use in her healing work; such as Proper Food, Water, Air, Light, Exercise, Cheerfulness, Rest, and Sleep. Grains, vegetables and fruits constitute the staple articles of diet."

On the rear cover is a "Catalogue of books" (and pamphlets) published at the office of the *Health Reformer,* Battle Creek, Michigan. Thirteen titles and prices are listed. One pamphlet is titled "Proper diet for man." Three are written by R.T. Trall, M.D. and one (*Science of Human Life*) by Sylvester Graham.

Note: This is the second earliest known Seventh-day Adventist cookbook. Soy is not mentioned. Address: Battle Creek, Michigan.

26. John Harvey Kellogg receives his M.D. degree from Bellevue Medical School in New York at age 23. He has been a vegetarian for 9-10 years (Early event). 1875. Feb. 25.
• ***Summary:*** Richard W; Schwarz, in his excellent biography *John Harvey Kellogg, M.D.,* states (p. 30-33). "As evidence of their faith in him, the Whites [James White and his wife, Ellen G. White] lent John a thousand dollars to meet expenses. Kellogg soon made a decision. He would go to Bellevue Hospital Medical School in New York, which that year had graduated the largest medical class of any medical college in America." Kellogg had to spend only one year at Bellevue to qualify for his M.D. degree. He "needed two full courses of medical lectures, but the year spent at [the University of Michigan Medical School] Ann Arbor counted for one of them." He received his degree on the date given above at Bellevue's 14th annual commencement, held in the New York Academy of Music.

During his year at Bellevue, John apparently ate a vegetarian diet. While it is not clear exactly when Kellogg decided to become a vegetarian, he was probably a vegetarian by the date of his graduation, and perhaps as early as 1873.

As Schwartz says further (p. 37): "While still a medical student at Bellevue, John Harvey Kellogg outlined in the *Health Reformer* the basic principles of healthful living that he would promote all his life... It had as its goal to help people stay well, rather than to recover from illness. Kellogg started with the premise that obedience to the natural laws of health was a moral duty and was essential to the maintenance of mental and moral as well as physical health. Biologic living demanded total abstinence from alcohol, tea, coffee, chocolate, and tobacco, since each contained some factor detrimental to the body. It stressed a simple vegetarian diet as most 'natural' for man."

"No food came under more sustained attack by Dr. Kellogg than meat of any kind."

Page 41: "Milk and eggs were two other foods which Kellogg long regarded with suspicion. For many years he excluded milk from his personal diet. Gradually he altered his views, however, and in 1917 he told the National Milk Congress that milk was 'the choicest product of nature's laboratory'; no other food product could compare with it. For years he regarded clean raw milk from healthy cows as superior to pasteurized because he believed the process destroyed essential natural qualities. No dairy product stirred Kellogg's enthusiasm more than yogurt. Convinced that it largely explained the longer life expectancy of the Bulgarian people, the doctor was one of the first persons in the United States to promote its use.

"During his entire lifetime, Kellogg remained unenthusiastic about eggs as food."

Note: Dr. Kellogg may have eaten a "vegan" diet (although that word was not coined until 1944) from about 1874 until around 1915.

27. *Health Reformer* (*The*) (*Battle Creek, Michigan*). 1875. Tea and coffee: Number one. 10(3):92-95. March.
• ***Summary:*** "If tea and coffee are medicines, and hence poisons, should we not be led to mistrust that they are anything but suitable articles for daily consumption? But to still further confirm the position just suggested, we will give the following, which is a summary of the results of a series of experiments conducted by Dr. Bennet in the Physiological Laboratory of the University of Edinburg, and reported in the *Edinburg Medical Journal,* for October, 1873, more than one hundred experiments being performed on various animals:-

"1. The effects of tea, coffee, cocoa, and chocolate, are due to the presence in them of *theine* or *caffeine* in tea and coffee, and of *theobromine* in cocoa and chocolate.

"2. They are all powerful *poisons.*

"3. They are identical in physiological action.

"4. In small doses they produce, first, Cerebral excitement; secondly, Loss of sensibility.

"5. In large doses, they produce, a. Cerebral excitement; b. Complete paralysis of sensibility; c. Tetanic spasms and convulsions; d. Death.

"6. They first increase, then impede, and finally stop, respiration.

"7. They first increase, and then diminish, the heart's action."

28. Ellen G. White (Engraving). 1875? Undated
• ***Summary:*** See next page. Image courtesy of the Ellen G. White Estate. The image is undated. Letter (e-mail) from Tim Poirer, Vice-Director, Ellen G. White Estate, Inc., Silver Spring, Maryland 20905. 2012. Nov. 7. In reply for a request for more details, Tim replies: Yes, I can give you some additional details. It is an engraving that was made c. 1875. The engraving was printed in the *American Biographical History of Eminent and Self-Made Men,* Michigan Volume, published in Cincinnati in 1878 by the Western Biographical Publ. Co. The engraver may have been M.A. Samuels,

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but we cannot be sure. He made the engraving from a photograph of Ellen G. White, owned by the White Estate, dated 1875 on the back, and taken by Dunham & Lathrop's, Broadway, between 13 & 14th, Oakland, Cal. A photo of the engraving has printed on the back: "M.A. Samuels, Palace of Art, Corner 10th and Clay Streets, Oakland, Calif."

29. *Health Reformer* (*The*) (*Battle Creek, Michigan*). 1876. Vegetarian sentimentalism. 11(5):148. May.
• ***Summary:*** "Some time since a guest in one of our city hotels chanced to encounter a copy of the *Health Reformer,* which lay with other periodicals upon the parlor table. In glancing it through, his eye met a paragraph in which it was argued against the use of flesh as food in that it involved the infliction of unnecessary pain upon animals. It was suggested that the idea of butchering and then devouring the patient ox was a repulsive one, and that the act would have a tendency to harden the feelings, and make an individual obtuse to the sufferings of his fellows. Our carnivorous friend could see nothing in this argument but a ludicrous play of sentimentalism, and entertained his fellow guests at the breakfast table with an account of his discovery of a sentimental fellow who 'thought it wrong to slay the meek-eyed ox.'"

Horace Walpole might have been in sympathy with him.

30. John Harvey Kellogg, M.D., officially takes over the leadership of the Western Health Reform Institute in Battle Creek, Michigan (Early event). 1876. Oct. 1
• ***Summary:*** Richard W; Schwarz, in his excellent biography *John Harvey Kellogg, M.D.*, states (p. 59-63). The Institute began in 1866 "in response to the urgings of Ellen White. As the true pattern of healthful living opened to Mrs. White, she saw that Adventists should establish an institution which could care for the sick in harmony with the newly accepted principles." Much of the initial funding came from John Preston Kellogg, John Harvey's father. By 1868 the Institute had essentially become a nonprofit organization. But it fell on hard times, and "the directors seriously considered closing the Institute and selling its property to pay its debts. At this critical point, in the fall of 1976, leading church members persuaded John Kellogg, then only twenty-four years of age, to take over as physician-in-chief."

"When Dr. Kellogg officially took over the leadership of the institute on October 1, 1876, it contained only twenty patients. Six left with the former chief physician, Dr. William Russell, who preceded to open a rival establishment in Ann Arbor." But under Dr. Kellogg the fledgling Institute thrived. "Within a year after he had assumed charge... John Kellogg decided that a change of name would improve the institution's public image. Consequently, apparently acting entirely on his own initiative, he renamed it the Battle Creek Sanitarium. The doctor explained that the new name which he had coined, a variant of 'sanitorium,' would come to mean a 'a place where people learn to stay well. He consistently maintained that the sanitarium's teaching function distinguished it from the average medical institution." Within 25 years it would become one of the finest and best known hospitals in the United States.

31. *Health Reformer* (*The*) (*Battle Creek, Michigan*). 1876. Vegetarian diet a cure for apoplexy. 11(11):342. Nov. [1 ref]

32. *Health Reformer* (*The*) (*Battle Creek, Michigan*). 1876. The diet cure for intemperance. 11(11):339. Nov. [1 ref]
• ***Summary:*** "A few months ago, reference was made to the successful efforts of Mr. Napier, of England, in curing intemperance by the aid of a vegetarian diet. The following is a portion of an address recently delivered by the same gentleman at a public meeting in London; we quote from the *Dietetic Reformer*: -" This is a long extract from the following article: Groom Napier, C.E. 1876. "The diet cure for intemperance." *Dietetic Reformer and Vegetarian Messenger* (England). Aug. p. 128-29.

33. *Good Health* (*Battle Creek, Michigan*). 1879-1953. Serial/periodical. Battle Creek, Michigan. John Harvey Kellogg, editor and publisher.
• ***Summary:*** Continues: Health Reformer: 1(1867)-13(1878). Dr. Kellogg, a Seventh-day Adventist and head of the Battle Creek Sanitarium, was one of America's most prominent and respected doctors. This was his most important serial publication. On the title page of the Jan. 1879 edition is written: "Pure air, water, food. Health is wealth. A sound mind in a sound body. Proper clothing, ample exercise, adequate rest. A journal of hygiene devoted to physical, mental and moral culture. Cleanliness next to godliness. Temperance in all things." The magazine at this time is strongly opposes to the use of alcoholic beverages and tobacco. It supports vegetarianism, temperance, bread made from unbolted flour, and a healthful lifestyle. In 1879 there are many more articles about the dangers of alcohol and tobacco than about the benefits of a vegetarian diet, but by 1904 vegetarian articles predominated. In 1904 pneumonia was the most deadly disease in America. By the 1900s the cover of many issues stated that *Good Health* was established in 1866.

Richard Schwarz in his excellent book *John Harvey Kellogg, M.D.* writes of *Good Health:* By 1916 Dr. Kellogg estimated that more than 5 million copies of the magazine had been printed (p. 87). "Several years after he assumed the editorship of the *Health Reformer,* Dr. Kellogg decided that it needed a new name if the magazine and its teachings were to gain wider acceptance. He reasoned that public reaction to the word *reform* had changed. No longer did it call up visions of progress, advancement, and the substitution of truth for error. Rather, Kellogg felt, the average person associated reform with revolution, controversy, discord, and radicalism.

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A more positive name was essential. He decided to rechristen the periodical *Good Health* and make it into a journal which would tell its readers how to find and maintain their health. A year after the name change [it changed in Jan. 1879], the Battle Creek Sanitarium officially acquired *Good Health* from the Seventh-day Adventist Publishing Association. Thus what had begun as a Seventh-day Adventist publication remained under Dr. Kellogg's control even after his separation from the church. Within a few months after he began his program of rejuvenating *Good Health*, he had succeeded in increasing its circulation to 20,000 copies a month... apparently the subscription list never grew much beyond 25,000, and it probably stayed considerably below that number most of the time" (p. 90-92). *Good Health* was always plagued by chronic deficits. Eventually the American Medical Missionary Board contributed more than $100,000 to keep the Kellogg journal alive (p. 220). After Dr. Kellogg's death, the Race Betterment Foundation published *Good Health.*

Excellent sets of this periodical are owned by both the National Library of Medicine and the Loma Linda Univ. Library Heritage Room (Loma Linda, California). The magazine ceased publication in Aug. 1953.

Note: This is the earliest periodical seen (May 2006) that is part of the health foods movement or industry in the United States (after about 1890).

34. *Good Health* (*Battle Creek, Michigan*). 1879. Vegetarianism. 14(4):119. April.

35. *Good Health* (*Battle Creek, Michigan*). 1879. A vegetable diet. 14(11):342. Nov.
• ***Summary:*** "At a recent meeting of the London Medical Society, Sir Joseph Fayrer said that he had seen in the northwest provinces of India, whose inhabitants are pure vegetarians,–eating not even butter, eggs, or milk,–some of the finest specimens of the human race, as regards strength, endurance, and physical development.

"'Their food consists chiefly of peas, beans, and the like–articles of diet specially rich in nitrogen, which is one of the chief elements of nutrition.'"

Note: This is the earliest English-language document seen (June 2005) that uses the term "pure vegetarians" (or "pure vegetarian") to refer to people who eat a vegan diet, free of milk, dairy products, and eggs.

36. *Good Health* (*Battle Creek, Michigan*). 1881. Bean-flour bread. 16(3):92. March.
• ***Summary:*** Soy is not mentioned.

37. *Good Health* (*Battle Creek, Michigan*). 1881. A vegetable diet for children. 16(6):184. June.

38. *Good Health* (*Battle Creek, Michigan*). 1881. Publisher's page: The Sanitarium foods are meeting with much favor everywhere... 16(7):224. July.
• ***Summary:*** "... Those who have employed the various kinds of invalid food, are highly pleased with them. The praise which they have received from those who have given them a fair trial, is unstinted. We have no hesitation in recommending them to be exactly what they claim to be, which cannot be said of the various foods prepared by some firms, which make a business of supplying so-called 'health foods.' An examination of the article sold as gluten by a firm in New York, was recently made by an eminent Boston gentleman, with the result of showing that it was composed almost wholly of starch, and actually contains less gluten than some brands of wheat flour. The Sanitarium foods were first prepared for use at the sanitarium, in the treatment of the sick. The present great demand for them, has been occasioned by the success which has attended their use as invalid foods at the Sanitarium. The manufacturers guarantee their goods to be exactly as represented, and to give satisfaction." Address: Battle Creek, Michigan.

39. *Good Health* (*Battle Creek, Michigan*). 1881. Publisher's page: Invalids who have tried the "Sanitarium Foods" find they are indispensible... everywhere... 16(8):256. Aug.
• ***Summary:*** "... We have been sending out a large number of packages, and notice that when a sample package goes away we receive in a short time an order for a large supply. Our food products are unexcelled in quality, being prepared with the greatest nicety from a formula obtained by many pains-taking experiments. The Wheatena, Maizena, Avena, and Granula, are foods which will be universally used when their qualities have become sufficiently well known to give them a fair introduction. We would also call special attention to our 'Infant Food' as an article which is especially opportune at this season of the year."

Note: This is the earliest document seen (Sept. 2012) in the Seventh-day Adventist archives (www.adventistarchives.org) that contains the word "Granula." Address: Battle Creek, Michigan.

40. *Good Health* (*Battle Creek, Michigan*). 1881. Publisher's page: The "Sanitarium Foods" are meeting with great sales... 16(8):256. Aug.
• ***Summary:*** "... The food department is a busy place now-a-days. To a visitor the many novel processes by which all kinds of grain products are converted into palatable, wholesome foods, and when necessary into dietetic remedies for disease, are an interesting study. The 'Infant Food,' prepared from the formula devised by Dr. Kellogg, is one of the most serviceable of all the numerous excellent preparations. Most of the various 'foods' for infants sold at the stores are really of little or no value, consisting as they do almost wholly of sugar or dextrine, a substance almost identical with sugar. These patent foods will not sustain life

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if eaten alone."

"Persons residing in Canada can obtain the Sanitarium Foods of Geo. Detweiler, Berlin, Ontario." Address: Battle Creek, Michigan.

40a. Portrait of Dr. John Harvey Kellogg (Illustration). 1881.
• ***Summary:*** This portrait, drawn when Dr. Kellogg was about age 29, is from the book *Plain Facts for Old and Young.* He was born in 1852. We copied it from the Wikipedia page for John Harvey Kellogg.

41. Sanitarium, Food Department. 1882. Sanitarium Foods (Ad). *Good Health* (*Battle Creek, Michigan*) 17(12):Unpaginated at end of volume.
• ***Summary:*** Describes products made by this company, directed by John Harvey Kellogg, including: Graham Crackers (No. 1 [with the best with granulated sugar plus butter], and No. 2 [unsweetened]). Plain Graham or dyspeptic crackers. Fruit crackers. Gluten wafers. Wheatena. Maizena [made from corn/maize]. Avena [made from oats]. Granola [combines all the qualities of Avena. "It is greatly superior to 'steam-cooked' preparations which are offered at a much higher price..."]. Beef and bread combination biscuit (Based on a "recent remarkable discovery by an eminent German professor..." Contains easily digested lean beef). Beef and bread granola. Diabetic food (probably made of wheat gluten). Gluten food (A "perfect substitute for animal food in cases in which the latter is thought to be indicated"). Infant's food.

Concerning Gluten wafers: "A person who suffers from acid or flatulent dyspepsia, or who is in a condition of nervous exhaustion, needing a restoration of nerve power as speedily as possible, will accept this article of food as a real godsend. Those who are obliged to live on a meat diet on account of their inability to digest vegetable food will find in these wafers a grateful substitute. We say this after using them in hundreds of cases successfully."

Products sell for 12 to 25 cents/pound. Note 1. Dr. Kellogg sold non-vegetarian products at this time. Note 2. This is the earliest original publication seen (Dec. 2013) for wheat gluten in the United States and the earliest document seen that mentions Seventh-day Adventist work with wheat gluten.

Note 3. This is the earliest document seen (Dec. 2013) that contains the word "Sanitarium" (spelled in that way), or mentions the Sanitarium (Battle Creek) as a maker and seller of foods. A related word, "Sanatorium," first used in 1839, refers to a "an establishment that provides therapy combined with a regimen (as of diet and exercise) for treatment or rehabilitation." This word was often used in connection with treatment of tuberculosis.

Note 4. This is the earliest document seen (June 2002) concerning vegetarian foods and diabetes.

Note 5. This is the earliest document seen (Aug. 2010) that mentions "Granola." Address: Battle Creek, Michigan.

42. *Good Health* (*Battle Creek, Michigan*). 1883. A race of vegetarians. 18(3):89. March.
• ***Summary:*** The Podhalians live high in the Carpathian Mountains. They use strong drink, consume no animal food, and are fond of music and dancing. They are in excellent physical condition, with fine intellectual development. "From the above it would not seem that there is much ground for the belief that vegetarianism produces a tendency to degeneration."

43. *Good Health* (*Battle Creek, Michigan*). 1883. Food of the Japanese. 18(4):103. April.
• ***Summary:*** "In noticing a recent report sent to his Government by Thomas V. Van Buren, U.S. Consul-General to Japan, the *Scientific American* remarks as follows:

"'Among the many reports returned to the State Department at Washington [DC] by our consular agents abroad, this report on the food of the Japanese people is of exceptional interest."

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"More than forty varieties of peas and beans are cultivated. The richly nutritive soy bean properly supplements the rice, which plays so large a part in the national diet."

Note: This is the earliest document seen (Dec. 2013) in which Dr. John Harvey Kellogg [or any other Seventh-day Adventist] mentions the soy bean.

44. *Good Health* (*Battle Creek, Michigan*). 1883. Vegetarianism and gout. 18(7):222. July.
• ***Summary:*** "An old English doctor reports that he has never been successful in the treatment of gout, except in cases in which he required total abstinence from animal food as well as from wine."

45. *Good Health* (*Battle Creek, Michigan*). 1884. The cooking school: Granola crust. 19(8):253. Aug.
• ***Summary:*** "For pies requiring an under crust only, the prepared granola manufactured by the Sanitarium Food Co. makes a superior crust. To prepare, moisten with thin sweet cream or rich milk,–one-half cup of cream for every two-thirds cup of granola is about the right proportion, and will make sufficient crust for one pie. Flour the board quickly, and lift the moistened granola on to it, spreading it as much as possible with the hands. Dredge flour over the top, and roll out gently, without turning, to the required size."

Note: This is the earliest document seen (Sept. 2012) in the Seventh-day Adventist archives (www.adventistarchives.org) that contains the word "granola." Address: Battle Creek, Michigan.

46. Kellogg, E.E. 1884. The cooking school: Granola crust. *Good Health* (*Battle Creek, Michigan*) 19(8):253. Aug.
• ***Summary:*** "For pies requiring an under crust only, the prepared Granola manufactured by the Sanitarium Food Co. makes a superior crust. To prepare, moisten with thin sweet cream or rich milk,–one-half cup of cream for every two thirds cup of granola is about the right proportion, and will make sufficient crust for one pie. Flour the board thickly, and lift the moistened granola on to it, spreading it as much as possible with the hands."

47. *Good Health* (*Battle Creek, Michigan*). 1885. Caramel coffee (Letter to the editor). 20(2):59. Feb.
• ***Summary:*** "L.B.P. inquires how to make caramel coffee.

"Ans.–This preparation, sometimes known as cereal coffee, is made by roasting in the oven a mixture of molasses and [wheat] bran, or coarse middlings [of wheat]. Cereal coffee properly consists of coarse wheat or barley, or a mixture of the two. The brown color is due to the conversion of starch or sugar into caramel. It is comparatively harmless, but we do not approve of the large use of fluids of any kind at meals."

Note: This is the earliest document seen (Nov. 2012) that mentions "caramel coffee" (regardless of hyphenation or capitalization) an early caffeine-free alternative to coffee.

48. *Good Health* (*Battle Creek, Michigan*). 1885. A vegetarian cat. 20(3):85. March.
• ***Summary:*** The writer's cat has been a vegetarian for 16 years (which is equal to 150 human years).

49. White, Ellen G. 1885. Diary entry of 28 August 1885 [Concerning her stay in London, England].
• ***Summary:*** "We met Elder Jones in the Mission and became acquainted with him. He is a Seventh-day Baptist preacher... We were obliged to go to our restaurant dinner. In this place a vegetarian diet alone can be obtained. We enjoyed our dinner, then took the train for Southampton..."

Note: This is the earliest use of the word "vegetarian" seen in the collected papers of Ellen G. White, co-founder of the Seventh-day Adventist church. The full text of all her letters and diary entries has been computerized and this fact is the result of a search conducted by the Ellen G. White Estate. This letter is cited as follows: Ms 16a, 1885

NP

July 1885

Diary (July 7–September 24). The original is in the Ellen G. White Papers, Ellen G. White Estate, Inc., General Conference of Seventh-day Adventists, 12501 Old Columbia Pike, Silver Spring, Maryland 20904-6600.

The second earliest use of the word "vegetarian" by E.G. White appeared a few days later in her diary entry dated 1 Sept. 1885. "It is cloudy, but we have a fire, which is a blessing. Our time is occupied in writing. A gentleman called–an Englishman, a vegetarian. He talks well and seems to be honest. He is an intelligent man. We had a profitable conversation. He is keeping the Sabbath."

The third earliest use of the word "vegetarian" by E.G. White appeared about a year later in an undated dairy entry from September 1888. She is again in London. "We met William C. White in London about 12 M. Walked out to a restaurant, vegetarian, and obtained wholesome refreshment."

Talk with Tim Poirier of the Ellen G. White Estate. 1997. May 5. The terms "vegetarian" and "vegetarians" appear 44 times in Ellen White's writings, mostly during the 1890s. She never used the term "vegetarianism." Address: London.

50. *Life and Health: The National Health Magazine.* 1885-1985. Serial/periodical. Washington, DC: Review and Herald Publishing Association. Published by the Seventh-day Adventist Church. *
• ***Summary:*** Succeeded by *Vibrant Life.* Vol. 30, no. 5 was May 1915. Address: USA.

51. Kellogg, Ella Eaton. 1885. The cooking school. Battle

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Creek, Michigan: Health Pub. Company. 60 + [4] p. 18 cm.
• ***Summary:*** This is the 3rd earliest known Seventh-day Adventist cookbook. Cover title: "Part of a large work on food and cookery... now nearly completed." In it, the author's name is written "Mrs. E.E. Kellogg."

Contents: Introduction. Soups. Bread. Yeast and fermentation. Unfermented bread [made without soda, saleratus or baking-powder]. Grains and mushes. Leguminous seeds (incl. dried peas, white beans, Lima beans, lentils). Vegetables. Simple puddings. Pies and cake (incl. Granola Crust, using granola made by the Sanitarium Food Co. {p. 46}). Fruit for desserts and sauces. Breakfast dishes ("The habit of using fried potatoes, fried mushes, salt fish, salted meats, and other similar foods of almost impossible digestibility for breakfast dishes, is a most pernicious one." "The breakfast should be as simple as possible,..." "Fruit... should always have a place at the breakfast table." "The grains form one of the most healthful, appropriate, and convenient breakfast dishes").

This vegetarian cookbook often calls for the use of milk or cream in recipes. It describes how to prepare home-made yeast and make yeasted bread.

Ella Eaton Kellogg lived 1853-1920. Address: Battle Creek, Michigan.

52. *Good Health* (*Battle Creek, Michigan*). 1887. A vegetarian nation. 22(11):339. Nov.
• ***Summary:*** The Chinese are vegetarians. "Their country is so densely populated with human beings, that the land must be closely cultivated to the best advantage. As every one knows, flesh-eating is a most wasteful practice, as the same amount of land will support thirty or forty times as many persons taking the products of the earth at first hand, as when taking corn and other vegetable products at second hand, in the form of flesh."

53. Parloa, Maria. 1887. Miss Parloa's kitchen companion: A guide for all who would be good housekeepers. Boston, Massachusetts: Published by Estes and Lauriat, for The Clover Publishing Co. 966 + [10] p. Illust. 22 cm. 19th ed.
• ***Summary:*** The section on "Relishes" states (p. 91): "Soy is a sauce made in China and Japan, it is a thick reddish-brown liquid, and is used in many fish sauces."

In the section on "Cereals." the subsection titled "Graham" (p. 93-94) says: "Graham is one of the most uncertain of the bread materials with which we have to deal. A large part of it is made by mixing a poor quality of flour with coarse bran. In buying graham, select that containing a rather fine bran, which does not separate readily from the flour when shaken in the hand. The Health Food Company [of Battle Creek, Michigan] makes an excellent graham; and when there is any doubt as to the quality of the ordinary graham, it would be wise to purchase that sold by this company."

Note: This company was founded and run by Dr. John Harvey Kellogg. This is the earliest document seen (Dec. 2013) concerning the pioneering work of Dr. J.H. Kellogg with health foods.

Under "Olive Oil" (p. 96): "Unless you have a good cool cellar, it will be best to buy oil in small quantities... oil loses its fine flavor if the bottle be opened often. Rae's Lucca oil is very reliable;..."

The chapter on "Soups" states (p. 109): Maigre soups are those made without meat, and are especially appropriate for fast days. Some of them are good enough for any season, and make a pleasant change from meat soups.

Under the recipe for "Pearled wheat mush" (p. 581): "The Health Food Company sells a nice quality of pearled wheat."

Under the recipe for "Granulated-wheat muffins" (p. 809): "Mix together in a sieve, and rub through it, three cupfuls of fine-granulated wheat meal, such as is made by the Health Food Company, four table-spoonfuls of sugar,..."

The recipe for "Green tomato soy," which is a type of homemade ketchup, does not call for "soy" [sauce] as an ingredient. It is followed by two recipes for "Tomato ketchup"–which also use no soy. Address: Founder of the original cooking-school in Boston; Principal of the School of Cookery in New York; and author.

54. *Brisbane Courier* (*Queensland, Australia*). 1888. Classified ad: Miscellaneous. April 27. p. 8.
• ***Summary:*** "Drink Caramel-Cereal! Elegant, fragrant, harmless, and perfect substitute for coffee. Sanitarium Health Food and Supply Agency, Matthewson's Photographic Lobby, Queen-street."

"Eat Nut Butter, delicious, germ-free, non-bilious preparation, a necessity where meat is prohibited. Sanitarium Health Food and Supply Agency, Matthewson's Photographic Lobby, Queen-street."

Note 1. These foods and beverages are probably made in Battle Creek, Michigan, USA, by a company associated with the Battle Creek Sanitarium, then imported to Australia by the Sanitarium Health Food and Supply Agency.

Note 2. This is the earliest document seen (Feb. 2010) that mentions a "Sanitarium Health Food" company in Australia. They do not yet manufacture health foods.

Note 3. This is the earliest document seen (Nov. 2012) that mentions "Caramel-Cereal" (regardless of hyphenation or capitalization) an early caffeine-free alternative to coffee.

55. *Advent Review and Sabbath Herald.* 1888. Camp-meeting hygiene. 65(36):569. Sept. 4.
• ***Summary:*** "2. The diet while attending a camp meeting, should be the most wholesome possible, and simple in character. Good graham bread, well cooked grains, particularly such preparations as boiled rice, oatmeal, cornmeal, or graham porridge, rice puddings, milk toast,

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granola, potatoes, baked or boiled, with an abundance of good milk and ripe fruit,..."

Note: This is the earliest article seen (Aug. 2010) in this Seventh-day Adventist periodical that mentions "granola."

56. Kellogg, John Harvey. 1888. [Vegetable diet capable of maintaining strength]. *Good Health* (*Battle Creek, Michigan*) 23(11):351. Sept.
• ***Summary:*** Dr. Rutgers of England has been conducting a series of dietetic experiments comparing the effects of a mixed diet and a vegetable diet. "He reported as the result, that he found a vegetable diet wholly capable of maintaining the strength of the body, and that vegetable albumen was equivalent, weight for weight, to animal albumen."

"Such experiments are interesting, but at this age of the world, are not really necessary, as the question of the capability of vegetable food to sustain life, even in its highest vigor, was settled so long ago as the time of Pythagoras, who, with his followers, was a radical vegetarian. Indeed, we may say that this question was experimentally settled by Adam and his immediate descendants, who proved that long and vigorous life may be maintained upon a diet from which animal food is excluded."

Note: This is the earliest document seen (June 2002) concerning protein [vegetable albumen] and vegetarian diets.

57. Kellogg, Ella Eaton. 1889. Cooking school for instruction in Mrs. Dr. Kellogg's system of scientific cookery. Battle Creek, Michigan. 3 p. 21 cm.
• ***Summary:*** Describes "Mrs. Kellogg's System of Scientific Cookery." "As the result of many years' experience in the management of a School of Cookery and an 'Experimental Kitchen,' Mrs. Dr. J.H. Kellogg has developed a system of cookery, the leading features of which are so entirely novel and so much in advance of the methods heretofore in use, that it may be justly styled A New System of Cookery. It is a singular and lamentable fact, the evil consequences of which are wide-spread, that the preparation of food, although involving both chemical and physical processes, has been less advanced by the results of modern researches and discoveries in chemistry and physics than any other department of human industry. Iron-making, glass-making, even the homely art of brick-making, and many of the operations of the farm and the dairy, have been advantageously modified by the results of the fruitful labors of modern scientific investigators; but the art of cookery is at least a century behind in the march of scientific progress. The mistress of the kitchen is still groping her way amid the uncertainty of mediæval [medieval] methods, and daily bemoaning the sad results of the 'rule of thumb.'"

The course of instruction will consist of eight lessons, to be given at 21 East Jefferson St. on June 14-23 at 3 p.m. The instructor is Mrs. D.H. Kress. The eight sessions will comprise the following subjects: 1. Soups. 2. Grains. 3. Breakfast dishes. 4. The possibilities of yeast. 5. Unfermented breads. 6. Vegetables. 7. Invalid foods. 8. Desserts.

Note: This is the earliest Seventh-day Adventist cookbook seen (Sept. 1999). However soy is not mentioned in a SDA cookbook until 1919 or 1924. Address: Battle Creek, Michigan.

58. *Good Health* (*Battle Creek, Michigan*). 1890. Vegetable milk. 25(5):153. May.
• ***Summary:*** An English periodical notes: There are several trees which produce milk, the best known being the *Palo de Vaco* or "cow-tree," of the Cordilleras of the coast of Caracas [Venezuela] in South America. "Humboldt says of this tree, 'Among the many curious phenomena that I beheld during my journey, there was hardly any that struck my imagination so forcibly as did the "cow-tree..." pierce the trunk and a sweet and nourishing milk flows. At sunrise this vegetable source is most abundant; then the blacks and native people hurry from all parts, provided with jugs to catch the milk, which turns thick and yellow on the surface.' M. Boussingault has analysed this vegetable milk, and declared before the Academy of France that it most certainly approaches in its composition to the milk of a cow..."

Note: This is the earliest English-language document seen (April 2010) that contains the term "Vegetable milk." However it does not refer to (or even mention) soymilk.

59. *Good Health* (*Battle Creek, Michigan*). 1890. The vegetarian cannibal. 25(5):152. May.
• ***Summary:*** The great actor Booth was a vegetarian. But when he met a Quaker on a steamboat on one of the Western rivers, the Quaker offered him various types of meat. Booth refused each, then finally said in a booming voice: "I never eat any flesh but human flesh, and I prefer that raw."

60. *Good Health* (*Battle Creek, Michigan*). 1890. Vegetarianism in England. 25(6):183. June.
• ***Summary:*** Vegetarian principles appear to be gaining ground in beef-eating England, as evidence by a long article reproduced from the *London Christian* magazine.

61. *Good Health* (*Battle Creek, Michigan*). 1890. Vegetarian diet. 25(9):279. Sept.
• ***Summary:*** A vegetarian diet consists of "the productions of the vegetable kingdom, the best of which are the various grains and fruits. Milk is usually added, as it is quite free from the unwholesome qualities that render flesh food objectionable. Dr. Dujardin-Beaumetz, the renowned Parisian physician, maintains that the body may be thoroughly well supported on a diet from which meat is wholly excluded." He adds that "this diet is of therapeutic importance in certain diseases."

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62. *Good Health* (*Battle Creek, Michigan*). 1890. Vegetarianism and old age. 25(12):372-74. Dec. [1 ref]
• ***Summary:*** The first half is a long excerpt of an article by Dr. Alanus first published in the *Rhenish Courier* (in German) entitled "Why I no longer live as a vegetarian." It argues that a vegetarian diet ruins the blood vessels and makes them prematurely old. The second half is an analysis of the article.

63. *Good Health* (*Battle Creek, Michigan*). 1890. A noted vegetarian. 25(12):376. Dec.
• ***Summary:*** Mr. Isaac Pittman, of Bath, England, the inventor of phonography [a system of shorthand writing based on sound], is a vegetarian in his 78th year, is still in the enjoyment of excellent health, and able to supervise correspondence of about 40,000 letters per year, to edit a phonographic journal, and to compile and publish annually a number of works. He is a teetotaler and a total abstainer from tobacco and other narcotics. His life is being written by Mr. Reed.

64. Clubb, Henry S. 1891. A vegetarian talk. *Food, Home and Garden* (*Philadelphia*) 3:19-20. Feb. Whole No. 26.
• ***Summary:*** From the *Hillsdale Standard.* This talk was given on Tuesday, Dec. 9, 1890, at Beethoven Hall, Hillsdale College (Hillsdale, Michigan). The speaker, formerly state senator from the Ottawa and Muskegon district, was one of the organizers of the Michigan "Pomological Society" (now "Horticultural Society"); he "is now a resident of Philadelphia, president of the Vegetarian Society of America, and editor of *Food, Home and Garden,* one of the publications of that Society."

Discusses: The story of Daniel in the Bible (Daniel 1:8-16). The poisons in meat and diseases in meat animals. The Kellogg Orphan School at Battle Creek, Michigan.

65. *Good Health* (*Battle Creek, Michigan*). 1891. Vegetarianism in Japan. 26(3):87. March.
• ***Summary:*** The writings of Buddha strictly enjoin abstinence from the use of flesh foods. A long discussion of what the Sutras say and why. Yet Christians in Japan kill animals and fish, even though Japanese Buddhists ask them to stop. These Christians consider the Japanese to be ignorant and unable to keep the body healthy.

66. *Good Health* (*Battle Creek, Michigan*). 1891. A noted vegetarian. 26(3):89. March.
• ***Summary:*** "Prof. F.W. Newman, brother of the late Cardinal Newman, has been a strict vegetarian for more than thirty years, and during a considerable portion of that time has been president of the Vegetarian Society of England. He is one of the most eminent literary men of England, and professor in the London University, and is still active, although more than eighty years of age."

67. Bentley Historical Library, University of Michigan. 1891. Index to John Harvey Kellogg speeches and lectures (1891-1943) (Archival collection). Ann Arbor, Michigan. 10 p. Undated. 28 cm. [409 ref]
• ***Summary:*** This typewritten list gives the titles of the 409 speeches and lectures Dr. Kellogg (lived 1852-1943) presented from 1891 to 1943. They are listed alphabetically under each year. On average, he presented 8.2 per year, but in 1898 he presented 33, in 1901 he presented 22. His most oratorically productive decade was from 1900 to 1909, when he presented 148. Amazingly in 1940, at age 88, he presented 12 (including one titled "Soy Acidophilus"), in 1942 (at age 90) he presented 8, and in 1943 he presented 3.

Some interesting lecture titles: 1891–Nature's method of defending the body against disease. A twentieth century doctor.

1893–Relations of the muscles to religion. What is the medical profession?

1896–Religion of the body.

1897–Common errors in diet. Twenty years experience in the non-alcoholic treatment of diseases.

1898–How to get well quick. God's design in establishing Sanitariums. St. Helena Sanitarium [California].

1900–Dress reform talk. How nature fights diseases. What is the natural food of man? 1901–Exercise. Health food fakirs.

1903–Flesh food. 1905–How Christians should eat.

1906–How incurable are cured. The natural diet of man. 1907–The anti-toxic diet. How to live well one hundred years. Oatmeal. The scientific basis of vegetarianism.

1908–Constipation. 1909–Evils of civilization. The magical curative power of water. Sugar.

1910–The Battle Creek Idea. Is the human race degenerating? The physiological necessity of hard work. The possibilities of preventative medicine. Why flesh eating is wrong.

1911–Tendencies toward race degeneration. The beginning of the Battle Creek idea. Tobacco. Yogurt ferments in the treatment of intestinal disorders. 1913–Meat germs. 1914–Why laughing is an aid to digestion. 1916–The case against sugar.

1930–Soybeans as human food. 1932–The Eskimos not exclusive meat eaters. 1933–Orange juice versus flu. 1935–The aristocracy of health. Improved apparatus for irrigating and flushing the colon. 1937–Soy acidophilus milk. Special health value of the soybean. 1938–The case against meat eating. 1940–Soy acidophilus. 1942–Nature a false god. The new sugar. My search for health. 1943–Drink more water. Address: Michigan Historical Collections, Bentley Historical Library, Univ. of Michigan, Ann Arbor, Michigan 48109-2113. Phone: 313-764-3482.

68. Battle Creek Bakery Co. 1892. Health foods (Ad). *Food,*

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Home and Garden (*Philadelphia*) 4(37):Inside front cover. Jan.
• ***Summary:*** A half page ad. "Pure crackers and biscuits manufactured." This bakery company was "Established in 1881. "We manufacture a choice line of these goods, entirely free from lard and all adulterations at the following prices:..." Products include: Fruit biscuits (white flour or whole wheat flour). Graham biscuits (sweetened). Graham crackers (sweetened or unsweetened). Whole wheat crackers, Gluten crackers, Carbon crackers (leavened or unleavened). Cereola, a prepared grain food in bulk. Pure gluten, or Wheat gluten (in packages). Cereal coffee, prepared from grains only, a very choice and healthful drink. Many of these products are also sold in 13 lb or 30 lb boxes.

At the end of the ad, we read: "References. To whom it may concern. We the undersigned residents of Battle Creek, Michigan, take pleasure in stating that Mr. Joseph Smith, manager of the Health Food Department of the Battle Creek Bakery Co., has resided in Battle Creek for nearly 20 years, and is a competent and responsible man, and of long experience in this line of business, and one whose goods we can heartily recommend to the public." There follow 11 names, each with a title. The latter include two ex-mayors, three physicians (M.D.s), the postmaster, the vice-president of the city bank, and the editor of the *Review and Herald* magazine.

Note 1. This is the earliest English-language document seen (Sept. 2006) with the term "health foods" (or "health-foods" or "health food") in the title.

Note 2. This is the earliest document seen (Sept. 2006) that mentions "Cereal Coffee," the earliest known commercial alternative to coffee, made in Battle Creek. Address: Battle Creek, Michigan.

69. *Good Health* (*Battle Creek, Michigan*). 1892. A royal vegetarian. 27(1):312-13. Oct.
• ***Summary:*** "It was recently announced that Lady Paget, wife of the British ambassador to the Austrian court, had become a vegetarian, having renounced the use of flesh meat on humane grounds." She also observed that "vegetarians have usually a very clear and beautiful complexion." Contains a long extract from an article by her which appears in the April 1892 edition of the *Nineteenth Century.*

70. Kellogg, Ella Ervilla Eaton. 1892. Science in the kitchen: A scientific treatise on food substances and their dietetic properties, together with a practical explanation of the principles of healthful cookery, and a large number of original, palatable, and wholesome recipes. Battle Creek, Michigan: Health Publishing Co. 573 p. Illust. Index. 23 cm.
• ***Summary:*** The wife of the famous Dr. John Harvey Kellogg discusses the principles and methods of the dietary system employed at the Battle Creek Sanitarium. The Preface, written by the publishers, begins: "The interest in scientific cookery, particularly in cookery as related to health, has manifestly increased in this country within the last decade..." Many successful schools for instruction in cookery have been established. Unfortunately the focus has been on "the preparation of toothsome and tempting viands, but little attention has been paid to the science of dietetics, or what might be termed the hygiene of cookery.

"A little less than ten years ago the Sanitarium at Battle Creek, Michigan, established an experimental kitchen and a school of cookery under the supervision of Mrs. Dr. Kellogg... the demand for instruction has become so great that classes are in session during almost the entire year. During this time Mrs. Kellogg has had oversight of the cuisine of both the Sanitarium and the Sanitarium Hospital, preparing bills of fare for the general and diet tables,... [for] 500 to 700 inmates.

"These large opportunities for observation, research, and experience, have gradually developed a system of cookery... [that] may justly be styled, *A New System of Cookery.* Although based on modern chemistry, the methods are simple, and the results are tasty, wholesome and attractive. Many people say its has never occurred to them "to do it this way before." Great success has also "attended the cooking school in connection with the Bay View Assembly (the Michigan Chautauqua),..."

In the Introduction, the author emphasizes that diet and cooking should be studied as a science whose aim is to promote good health. This book focuses on those scientific principles. The most important foods, the legumes and grains, and their products, are given extra space and special attention.

Chapter 1, titled "Foods," discusses the properties of food, the food elements (starch, sugar, fats, albumen, mineral substances {phosphates, carbonates}, and indigestible substances), uses of the food elements, proper combination of foods (6 of carbonaceous to one of nitrogenous), condiments (which have no real food value, are all strong irritants, and only disguise the natural flavor of food. The use of condiments invites habitual use of intoxicating drinks), etc. Each chapter is followed by a page titled "Table topics" containing quotations, often from well-known or respected people. For example: "A man's food... suggests his moral nature. Many a Christian is trying to do by prayer that which cannot be done except through corrected diet.–Talmage." The first two food chapters are about cereal grains (p. 78-107, and about breads and bread-making). In the next chapter, titled "Fruits," is a long section on "nuts, or shell fruits" with recipes. Note 1. Neither peanut butter nor "nut butters" are mentioned in this book.

The long chapter on "Legumes" (p. 217-27) focuses on dry peas, beans, and lentils. Although neither soybeans nor soyfoods are mentioned, we read (p. 217-18): "The nitrogenous matter of legumes is termed *legumin*, or vegetable casein, and its resemblance to the animal casein of

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milk is very marked. The Chinese make use of this fact, and manufacture cheese [clearly tofu] from peas and beans."

Note 2. This is the earliest known Seventh-day Adventist cookbook that mentions soyfoods.

Note 3. This is the 2nd earliest document seen (Dec. 2013) concerning soyfoods in connection with Dr. John Harvey Kellogg–actually his wife, Ella.

The chapters on animal products are toward the back of the book, after the chapter on desserts. The first of these, titled "Milk, cream, and butter" (p. 364-79) says that milk is best used in its fresh, natural state, and includes discussions of "adulteration of milk, quality of milk influenced by the food of the animal, diseased milk, kinds of milk to be avoided, and distribution of germs by milk." The section on "artificial butter" discusses various "fraudulent preparations" such as oleomargarine. The use of cheese is strongly discouraged, since it "is very difficult of digestion" and "is very liable to contain a poison called tyrotoxin, capable of producing most violent and indeed fatal results..." Recipes for non-fermented cheese are given. The next chapter is titled "Eggs" (p. 380-88).

Surprisingly, this is not a vegetarian cookbook, although the author and her husband were long-time ardent vegetarians. Next comes a long chapter on meats, with recipes (p. 389-417). Possible reasons for including such a chapter are: (1) As a place to criticize the use of the "flesh and various organs" of animals, poultry and game as food. (2) As a place to praise the vegetable [vegetarian] diet. (3) To help prevent other leaders of the domestic science / scientific cookery movement (most of whom were not vegetarians) from categorically dismissing the book. On the first 3 pages of this chapter we read: "At the present time there is not much question in the minds of many intelligent, thinking people as to the propriety of using foods of this class, and especially of their frequent use. Besides being in no way superior to vegetable substances, they contain elements of an excrementitious character, which cannot be utilized, and which serve only to clog and impede the vital processes, rendering the blood gross, filling the body with second-hand waste material which was working its way out of the vital domain of the animal when slaughtered. To this waste matter... are added those productions of the putrefactive process which so quickly begin in flesh foods exposed to air and warmth.

"That flesh foods are stimulating has been shown by many observations and experiments.

"Flesh foods are also specially liable to be diseased and to communicate to the consumer the same disease... It has been abundantly proved that such diseases as the parasitic, tuberculous, erysipelatous, and foot and mouth diseases are most certainly communicable to man by infected flesh. All stall and sty fed animals are more or less diseased. Shut up in the dark, cut off from exercise, the whole fattening process is one of progressive disease... Add to this the exhaustion and abuse of animals before slaughtering; the suffering incident to long journeys in close cars, often without sufficient food and water; and long drives over dusty roads under a burning sun to the slaughter house, and it will be apparent to all thoughtful persons that such influences are extremely liable to produce conditions of the system that render the flesh unfit for food." Note 4. The main concern here is human health, not animal suffering.

"Meat is by no means necessary for the proper maintenance of life or vigorous health, as is proved by the fact that at least 'four tenths of the human race,' according to Virey, 'subsist exclusively upon a vegetable diet, and as many as seven tenths are practically vegetarians.' Some of the finest specimens of physical development and mental vigor are to be found among those who use very little or no animal food." "The use of large quantities of animal food, however free from disease germs, has a tendency to develop the animal propensities to a greater or less degree, especially in the young, whose characters are unformed. Among animals, we find the carnivorous the most vicious and destructive, while those which subsist upon vegetable foods are by nature gentle and tractable." Nevertheless, many meat-centered recipes are given. The page of "Table topics" at the end of the chapter contains only quotations critical of eating meat.

The chapter on "Food for the sick" contains recipes (p. 426-28) for: Beef tea. Chicken broth. Mutton broth. Chicken panada, etc. The section titled "Grains for the sick" (p. 429) states: "The various cooked preparations of grains–granola, wheatena, avenola, wheat gluten, and gluten meal–Manufactured by the Sanitarium Food Co., Battle Creek, Michigan, form excellent articles of diet for many invalids, when served with hot milk or cream..." Then comes a section on "Meats for the sick" with 7 recipes (p. 430-31).

A closing chapter titled "A year's breakfasts and dinners" (p. 481-538) gives 365 days of sample healthy menus, with this introduction: "We have given meats no place upon these bills of fare, as we wished particularly to illustrate how good, substantial menus of appetizing variety could be provided without their use;..."

Caramel coffee, one of "various grain coffees" is mentioned on at least 7 pages in this book. For example, the chapter on "Beverages" (p. 357+) discusses caffein [caffeine], the adulteration of tea and coffee, and the idea that these beverages contain "poisons." A section in this chapter on "Substitutes for tea and coffee" gives recipes for making five different types of "Caramel Coffee." The first one states (p. 360): "Take three quarts best bran, one quart corn meal, three tablespoonfuls of molasses; mix and brown in the oven like ordinary coffee. For every cup of coffee required, use one heaping tablespoonful of the caramel. Pour boiling water over it, and steep, not boil, for fifteen or twenty minutes."

This book also discusses: Artificial human milk (3 recipes, one based on pearl barley). Graham bread, Graham

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flours, and other whole-wheat flours. Wheat gluten (with many recipes).

A 3rd ed. was published in 1898, a 4th edition in 1904, and a final edition in 1910.

Concerning the Bay View Assembly School of Cookery, this was connected with the Michigan Chautauqua, which was a Methodist camp meeting resort begun in 1875. A chautauqua was an institution of the time that provided popular education combined with entertainment in the form of lectures, concerts, plays, etc., often presented outdoors or in a tent. Ella Kellogg was very involved with the Women's Christian Temperance Union (WCTU), which built a hall on the grounds of the Bay View Assembly in 1890. Address: A.M., Superintendent of the Sanitarium School of Cookery and the Bay View Assembly School of Cookery, and Chairman of the World's Fair Committee on Food Supplies for Michigan [Battle Creek, Michigan].

71. *St. Louis Post-Dispatch* (*Missouri*). 1893. A vegetarian missionary: Miss May Yates coming from England for the world's good. May 12. p. 7.

• ***Summary:*** "New York, May 12.–Among the passengers of the steamer Arizona, which is expected here within the next few days, is Miss May Yates, Organizing Secretary of the London Vegetarian Society. Miss Yates, who is the founder and honorary secretary of the Bread and Food Reform League, comes to this country to make arrangements for the vegetarian congress to be held at the Chicago Exposition in the first week of June.

"The New York Vegetarian Society, of which Walter John Scott, the well-known philatelist [stamp collector] is President, has under consideration the propriety of tendering Miss Yates a reception on her arrival. From statements made by Mr. Scott the cause of vegetarianism is in a most flourishing condition. The number of its adherents is steadily on the increase, especially in England and Germany. In the latter country there have been nineteen new societies organized during the last three months. Great things are expected at the Chicago congress. There will be addresses, resolutions and declarations at which the menu will consist of humble potatoes and lettuce, the homely cabbage, the blushing carrot, the aristocratic pea, rare fruit and the thousand and one food preparations which abound in the cereal West [Battle Creek, Michigan].

"The enthusiasts will gorge themselves in honor of Miss Yates and the large delegation from the other side, which is expected will accompany her, and the rest of the world will read about it and stick to chops, steaks and game."

72. Battle Creek Sanitarium. 1893. Sanitarium health foods. Battle Creek, Michigan. 32 p. Illust. 21 cm.

• ***Summary:*** The foods in this catalog are manufactured by the Sanitarium Health Food Co., Battle Creek, Michigan. An illustration on the front cover shows two views of a large building, probably the one housing that company. Contents: Introduction: Wheat flour, the modern miller, the ancient miller. The question of food. Granola. Wheat Granola. Avenola. Gluten. Water biscuit. Whole wheat wafers. Rye wafers. Zwieback. Gofio. Wheat-germ grits. Whole-wheat flour. No. 1 Graham crackers. No. 2. Graham crackers. Plain Graham crackers or dyspeptic crackers. Oatmeal biscuit. Medium oatmeal crackers. Plain oatmeal crackers. White crackers. Fruit crackers. Carbon wafers. Infant food: What an infant needs, twenty per cent of gluten, for nursing mothers. Wheat charcoal. Recipes: Granola, Wheat Granola, pure Gluten Meal, nos. 2 and 3 Gluten Meal. Testimonials.

"The growing demands of the great army of dyspeptics in this and other civilized countries, and the remarkable advances recently made in the science of dietetics, have given rise to the term 'Health Foods.' There is a general recognition of the fact that some foods are less wholesome than others."

The testimonials (p. 28-31), written from Jan. 1890 to March 1893, to the Sanitarium Foods Co. (Battle Creek, Michigan), by both merchants and individuals, praise foods made by the company. The first and earliest, dated 18 Jan. 1890 and written from Williamsport, Pennsylvania, is of interest because it mentions the term "Health Foods." It reads: "Gentlemen:–Eighteen months ago I was a complete wreck from nervous dyspepsia. My case was considered beyond the reach of the remedies usually prescribed by physicians for this malady. I was induced to throw medicine to the dogs, and try diet and exercise. I inquired into the merits of the various 'Health Foods.' Among others I tried your Granola, and it affords me much pleasure to say that I regard it as a valuable, nutritious, and palatable food. I use it twice every day, and would not be without it. I have lived principally on the foods prepared by your company for many months, and have made great gain in health and strength, but more especially in weight; as one year ago I weighed 130 pounds, now I tip the beam at 172 pounds.

"Wishing you continued success in your grand work, I am, Very respectfully, W.H. Miller, Principal Washington Building School." Address: Battle Creek, Michigan.

73. *Chicago Daily Tribune.* 1893. Live on vegetables. Men and women who eat no meat open a world's congress: Vegetarians assemble at the Art Institute and expound their views. June 9. p. 3.

• ***Summary:*** Today's program: Vegetarian Congress, Hall 2, Morning session–Addresses: Dr. L.H. [sic, J.H.] Kellogg, Battle Creek, Michigan; Dr. H. Louisa Exton, Clinton, New Jersey; the Rev. Louis Paroli, New Orleans, Louisiana; W.D. Campbell, Sydney, New South Wales [Australia]; Dr. E.M. Bingham, Springfield, Massachusetts; the Rev. Madison Allen, California; the Rev. W.P. Alcott, Indianapolis, Indiana; Philander Dasi, California.

Afternoon session–Addresses: W. Forward; J.S. Perron,

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Belfast, Ireland; Mrs. C.H. Wallace, London; the Rev. H.J. Bruce, Liverpool; T.B. Bruce, England; Dr. James H. Jackson, Danville, New York; Miss A. Stanford, Pasadena, California; Dr. J.G. Stair, St. Joseph, Missouri; Edmund J. Baillie, Chester, England.

"Evening session–Addresses: Juliet H. Severance; the Rev. S.J. David, Minneapolis [Minnesota]; Miss Adelaide Johnson, Washington, DC; James Arbuckle Sr., Glasgow, Scotland; Mrs. Le Favre, Chicago; Emory F. Boyd, New (Britain?), Connecticut; Drs. Martha and J.H. Neff, Fort Wayne, Indiana."

"Fresh countenances and sturdy frames characterized most of the vegetarians who met in a World's Congress yesterday in Hall 2 of the Art Institute. Some of the disciples of fruits and plants had passed the three score and ten mark, but their hale and beauty bearing testified to the merits of their doctrine. C.C. Bonney made an address of welcome, which was responded to by W.E.A. Axon, Secretary of the International Vegetarian Society.

"Acting Chairman Clubb, President of the Vegetarian Society of America, made an address. He said that vegetarianism lay at the formation of all reforms. If practiced it would do away with war by taking the fierceness out of human nature and making man friendly to his fellows.

"Miss May Yates, a prominent vegetarian from England, read a paper on vital food written by Arnold F. Hills, President of the Vegetarian Federal Union of England. He called meat the conventional carnality of carrion and wanted it replaced by the 'kindly fruits of the earth.'

"John E.B. Mayor, professor of Latin in the University of Cambridge, England, contributed a comprehensive paper on Universal Vegetarianism, which was read by Ernest Locke of Manchester, England.

"Vegetarianism and Agriculture was the subject of an address by Dr. M.L. Halbrook of New York.

"Thomas Bruce of England had written a paper for the congress on the 'Esthetics of Vegetarianism.' He claimed for vegetarianism that it carried in its train no distressing sights, no offensive smells, and was favorable to beauty, health, and refinement.

"The Rev. A.T. De Learsey of Como, Mass., said that more than two-thirds of the world's inhabitants were vegetarians.

"Dr. Rachel Swain in speaking of the evolution of vegetarianism said that by slow processes the human race had reached a point where it eschewed the eating of human flesh. The time would come when all flesh would be abominated.

"Josiah Oldfield of London contributed a paper on the use of starch in the human system. He recommended graham bread strongly.

"Mrs. M.L. Mason of Chicago gave an address on right thought and right life. She said that to eat dead animals was to wrap about us the shroud of mental death."

Note: Today, a Temperance Congress will also meet in two other halls; it is separate from the Vegetarian Congress.

74. Axon, William Edward Armitage. 1893. Milton as a vegetarian poet. *Vegetarian Messenger* (*Manchester, England*). July. p. 248-55. [4 ref]
• ***Summary:*** "(An address delivered at the Sanitarium, Battle Creek, Michigan, June 12th, 1893.)"

75. *Good Health* (*Battle Creek, Michigan*). 1893. The Vegetarian Congress. 28(7):215-16. July.
• ***Summary:*** "The Vegetarian Congress was a success. The Congress was conducted under the auspices of the Vegetarian Alliance, an English association which was represented by Miss Yates, the very able and enthusiastic English bread reformer. Miss Yates has done more than perhaps any one else to introduce the use of wholesome bread in England, and will remain a little time in this country, lecturing upon her favorite themes. Mr. Clubb, the President of the American Vegetarian Association, and Mr. William E. Axon, Honorable Secretary of the English Vegetarian Society, we believe the oldest vegetarian society in existence, together with many other prominent vegetarians, were present, and took a leading part in the meeting."

Note: This is the earliest English-language document seen (June 2004) that contains the term "Vegetarian Alliance." It is also the *only* document seen that mentions this term.

76. Axon, William E.A.; Clark, Ernest C.; Clark, James. 1893. International Vegetarian Congress, Chicago, June, 1893. *Vegetarian Messenger* (*Manchester, England*). Aug. p. 282-86. [30 ref]
• ***Summary:*** "Your deputation left Liverpool, May 20th, after a farewell breakfast at Chapman's Restaurant [probably vegetarian], and arrived, May 29th, at New York, where they were met by Mr. Scott, President of the New York Vegetarian Society, Mr. Haviland, and Mr. Power, son-in-law of Mr. Harrison. It had not been found practicable to arrange a public meeting, but the above named and other friends joined the deputation at the Metropolitan Hotel, in an informal conference. The Rev. H.S. Clubb, from Philadelphia [Pennsylvania], came to New York, on May 30th, and returned with the deputation.

"Philadelphia was reached May 31st, and the deputation were met by the Messrs. Metcalfe and Mr. Horrocks, who escorted them to the Bible Christian Church, in the parlour of which a large company was assembled to greet them. Lunch was ready, and after it had been partaken of, Mr. Clubb gave a hearty and affectionate welcome to the visitors, which was responded to by the Rev. James E. Clark, Mr. Ernest Clark, Mr. Axon, Mr. T.A. Hanson (London), Mr. C. Dixon (Cambridge), and Mr. E.B. Reeves (Norwich). The afternoon was devoted to a delightful excursion to Fairmount Park,

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the Museum, and by steamer to Wissahickon Creek. In the evening, after dinner, a small tree was planted in the church grounds as a memorial of the visit, each member of the deputation assisting, and Mrs. Axon also sharing the pleasant duty. An evening service was held in the church, when the Rev. James Clark preached on the needs and duties of the members of that church. Many offers of hospitality had to be declined for want of time. On the same evening Mr. Axon gave an address at the Presbyterian Temple, on 'Peace and Vegetarianism.'

"Washington [DC] was reached June 1, where Miss A.F. English and Mr. Silliman had arranged a reception and meeting at the Wimodaughsis Club. The Rev. H.S. Clubb presided, and made a very spirited speech, which was followed by addresses from each of the deputation and their friends, and by a number of local Vegetarians. As a result, it was decided to form a Washington Vegetarian Society, for which there were evidently abundant and excellent materials.

"The next day began our thousand miles journey by rail to Chicago, which was reached June 3. A business meeting was held on the 6th, when Miss May Yates and Mrs. C. Le Favre were appointed secretaries of the Congress, and a committee was named to prepare resolutions. This committee consisted of Rev. H.S. Clubb, Miss Dusenbury, Mr. Axon, Mrs. Stockham, M.D., and Mr. Eisenstadt. The delegates were then invited to a Reception, to be given by the Chicago friends on the following evening, which proved a great success. About seventy persons were present, to most of whom the delegates were introduced, and a pleasant evening was spent, music and recitations being interspersed at intervals. On the 8th, the Congress assembled for its first session."

The article lists the various papers read and discussed over the two-day conference. "On June 8 Mr. and Mrs. Axon were invited to an informal reception, by the 'coloured' people of Chicago, and were accompanied by Mr. E.C. Clark, to an interesting gathering of clergymen, lawyers, doctors, authors, &c., all of the negro race. After addresses from Hon. Fred Douglass and others, Mr. Axon was called upon to respond, and incidentally showed how Vegetarianism might help in mitigating social prejudice. On June 9 Mr. Axon was invited to address a large meeting of the Chicago Stenographic Society, and took occasion to point out the interesting connection between Vegetarianism and shorthand, and to pay a warm tribute of respect to Mr. Isaac Pitman, a Vegetarian of more than half a century, and the 'Grand Old Man' of the stenographic world.

"On Saturday a reception was given at the Chicago Exhibition to inaugurate the exhibit of the Vegetarian Federal Union.

"Mr. and Mrs. Axon visited the Sanitarium, Battle Creek, Michigan, and Mr. Axon lectured there, June 12, on 'Milton and Shelley as Vegetarian Poets,'..." The delegation continued to travel.

"The World's Vegetarian Congress, which was the main aim of the journey of the deputation, was successful beyond any previous gathering of the kind, the attendance was good, the interest deep and continuous, and the papers were, on the whole, of the highest value and importance. The Chicago Congress will, we hope and believe, form the starting point for an earnest and active forward movement, and lead to a wide diffusion of Vegetarianism alike in the Old and in the New world."

77. Kellogg, John Harvey. 1893. Vegetarian diet in disease of the thyroid gland: Editorial. *Modern Medicine and Bacteriological World* (*Battle Creek, Michigan*) 2(9):239. Sept. [1 ref]
• ***Summary:*** Two experiments show that one of the duties of the thyroid gland is to destroy the toxic ptomaines and extractives contained in animal tissues. Therefore, in serious thyroid diseases a vegetarian diet is indicated. Address: Battle Creek, Michigan.

78. *Good Health* (*Battle Creek, Michigan*). 1893. Vegetarian cats. 28(12):374-75. Dec.
• ***Summary:*** A long excerpt from the London *Graphic* gives an interesting account of a vegetarian account living at Hampton Court. His coat is sleek, his teeth are sound, and he won't even eat fish.

79. *Good Health* (*Battle Creek, Michigan*). 1893. Vegetarian inns in Berlin. 28(12):377. Dec.
• ***Summary:*** "All the vegetarian innkeepers of Berlin, with one exception, have formed a union and advertise their respective vegetarian restaurants and taverns from time to time by posting up large handbills. The emblem used is a large green wreath, which incloses [encloses] the advertisement."

80. Kellogg, Ella Ervilla Eaton. 1893. Science in the kitchen: A scientific treatise on food substances and their dietetic properties, together with a practical explanation of the principles of healthful cookery, and a large number of original, palatable, and wholesome recipes. Chicago, Illinois: Modern Medicine Publishing Co. 581 p. Illust. Index. 23 cm.
• ***Summary:*** This 1893 edition is very similar to the 1892 edition. All the pages up to about p. 440 are identical, but somewhere after that 8 pages have been added. Pages 551-58 are blank except for "New recipes" and the page number printed at the top of each page. There are also 14 blank pages after the last numbered page.

Note: An ad in the Sanitarium health foods booklet (1893, inside rear cover) states: "The new hygienic cook book. Thoroughly scientific; entirely practical. Over 800 carefully tested recipes. Bright and entertaining in style, concise, the result of Ten Years of patient research and experimentation in the Experimental Kitchen connected

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with the Sanitarium at Battle Creek, Michigan. Ought to be in every family." Address: A.M., Superintendent of the Sanitarium School of Cookery and the Bay View Assembly School of Cookery, Battle Creek, Michigan, and of the Bay View Assembly School of Cookery, and Chairman of the World's Fair Committee on Food Supplies, for Michigan.

81. Axon, William E.A. 1894. Battle Creek, Michigan. *Vegetarian Messenger* (*Manchester, England*). Jan. p. 14.
• ***Summary:*** An engraving of both the Battle Creek hospital and sanitarium appears above the verse of William E.A. Axon, dated June 1892.

82. Kellogg, J.H. 1894. Sanitarium methods. *Vegetarian Messenger* (*Manchester, England*). Jan. p. 15-22.
• ***Summary:*** "It may not be inappropriate to present in this report a brief *résumé* of the general principles which underlie the medical work of a sanitarium conducted on rational principles, or at least which should underlie the work of such an institution, and the methods employed."

"Health is as much a matter of growth and development as is the growth of a tree or of a crop of wheat, and is as much dependent upon material conditions. By proper control and modifications of his nutritive processes, the chronic invalid may be gradually grown or trained out of disease into health. By raising his whole vital status and improving his general physical tone, morbid conditions are left behind, the normal rhythm of vital activity is re-established: and health comes, not as a result of ingenious antidoting or morbid conditions, but as the result of the working within the body of that occult force recognized by the ancients, but so often forgotten in modern times–the *vis medicatrix naturæ* [the healing power of nature]."

"The main idea of the Sanitarium, then, is health culture. The sick man is led to reform his unhygienic ways, and is taught to do works of supererogation [more than is required] healthward."

The author goes into great detail from the examination of the patient, to the importance of massage, and also describes the various mechanical means of therapy, including massage machines, some specially designed for Battle Creek, electrical current machines, bath rooms for hydro-therapy, and electric light baths. The article, then, is a virtual tour of the Battle Creek facilities and its holistic philosophy of health. "This institution has been conducted practically upon this basis for nearly twenty years, and its phenomenal growth may fairly be accepted as evidence that the idea which dominates the enterprise, and which has been briefly outlined in the foregoing, has a sound basis." Address: M.D., Superintendent of the Medical and Surgical Sanitarium, Battle Creek, Michigan.

83. Kellogg, John Harvey. 1894. Relation of modern physiological chemistry to vegetarianism. *Modern Medicine and Bacteriological Review* (*Battle Creek, Michigan*) 3(3):58-59. March.
• ***Summary:*** "For nearly half a century there has been considerable popular agitation upon the question of a fruit-and-grain diet as opposed to a flesh dietary for human beings. Pythagoras, Socrates, Plato, Solon, and other ancient philosophers, as well as Byron, Pope, Gay, and some other modern poets, together with Cuvier, Bell, and Humboldt, among the most distinguished of modern naturalists, have been advocates of a non-flesh diet, while Buddha the great religious reformer of the East, whose teachings are to-day revered by a larger number of persons than those of any other, ancient or modern, made abstinence from flesh diet a part of his religious creed. The same is true of many of the 'Fathers' of the early Christian church. These facts have led many of the laity to adopt a non-flesh diet as the most natural and wholesome dietary for man, and have furnished the basis for a quite active propaganda of vegetarian doctrines, especially within the last few years. Dujardin-Beaumetz, a leading French physician, and Bouchard, eminent as one of the most distinguished of modern physiologists and pathologists, have within recent years given their strong adherence to the doctrines of vegetarianism, especially as a therapeutic measure; while Bonnejoy, a French physician of some prominence, has written enthusiastically in favor of a non-flesh diet, as best fitted for the maintenance of health and the attainment of the greatest longevity for all classes. Modern interest in the subject has led the writer to undertake some studies with special reference to the scientific ground upon which the claims of vegetarianism may be based, and especially their relation to the doctrines of physiology, chemistry, and bacteriology."

Note: This is the earliest English-language document seen (Dec. 2003) that uses the term "non-flesh diet" to refer to a meatless diet. Address: M.D., Battle Creek, Michigan.

84. Kellogg, John Harvey. 1894. Relation of modern physiological chemistry to dietetics. *Modern Medicine and Bacteriological Review* (*Battle Creek, Michigan*) 3(4):82-85. April.
Address: M.D., Battle Creek, Michigan.

85. *Vegetarian Messenger* (*Manchester, England*). 1894. Battle Creek Sanitarium Foods. April. p. 142-43.
• ***Summary:*** "Some of our friends may like to take the opportunity that is now offered of making trial of the special foods prepared and supplied at Dr. Kellogg's Sanitarium. A small supply is at hand, and may be ordered from the depôt, 9, Peter Street, Manchester.

"One of their preparations is known in America as 'Granola,' but as this is the registered name in this country of a preparation of a different kind made by Messrs. Marshall of Glasgow (we can now supply this also by the way) we are offering it from 'number nine' under the name of 'Sanitarium

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Food.'"

A list of Sanitarium Foods" follows, including the price per pound of each (which ranges from 5 to 9 pence–not including the gluten products, which range from 10 to 24 shillings). The foods are: Granola. Gofio (parched grain food). Oatmeal biscuit. Medium oatmeal crackers. Plain oatmeal crackers. Graham crackers (No. 1, No. 2, and plain). White crackers. Whole wheat wafers. Water biscuits. Carbon crackers (containing wheat charcoal). Gluten wafers. Gluten biscuit (Nos. 1, 2, 3). Note 1. The "Gluten" preparations are "intended for persons suffering from diabetes, dyspepsia, obesity, &c..."

Note 2. This is the earliest English-language document seen (Feb. 2005) that contains the term "Gluten biscuit."

Note 3. These are all baked goods, with a low moisture content and long shelf life.

Note 4. This is the earliest document seen (May 2004) that mentions Battle Creek Sanitarium Foods.

86. Sanitarium Health Food Co. 1894. Health foods (Ad). *Good Health* (*Battle Creek, Michigan*) 29(11):Inside rear cover. Nov.

• ***Summary:*** The words "Health Foods" are written in huge bold letters across the top of the half-page ad. "In the efforts to meet the needs of a large Sanitarium, with a large variety of patients, we have produced a number of food preparations adapted to the different diseased conditions, the merits of which are such as to secure for them a very large and increasing sale, not only to persons belonging to the invalid class, but to those who wish by 'good living' to avoid disease. The following are the leading preparations:

"Oatmeal biscuit, Medium Oatmeal Crackers, Plain Oatmeal Crackers, No. 1 Graham Crackers, No. 2 Graham Crackers, Plain Graham Crackers, Dyspeptic, Water Cracker, White Crackers, Whole-Wheat Wafers, Gluten Wafers, Rye Wafers, Fruit Crackers, Carbon Crackers, Wheat Granola (bulk 10), Avenola (bulk 10), Gluten Food No. 1, Gluten Food No. 2, Gluten Food No. 3, Infant's Food." Address: Battle Creek, Michigan.

87. Newberry's. 1895. Just in: Ralston / Health Foods (Ad). *Los Angeles Times.* May 18. p. 7.

• ***Summary:*** Caramel Coffee, Gluten Biscuits, Whole Wheat Wafers, Gofio Wheat Maize, Ralston Graham Flour, Zwieback, Carbon Crackers, Wheat Granola, Ralston Bran."

Note: This ad is confusing, but one of 25 July 1895 will help to clarify it a little. Are all these foods made by Ralston? Several of them (Gluten Biscuits, Zwieback) have names similar to products made by Dr. John Harvey Kellogg's Sanitarium Food Company in Battle Creek, Michigan. Moreover, according to *The Ralston Chronicle: 1894-1994*, a centennial history of the Ralston Purina Co., William H. Danforth (of the Robinson-Danforth Commission Company, St. Louis, Missouri) "enters the human foods market in 1898 with *Purina Wheat* and a line of whole-wheat breakfast cereals. Danforth's fascination with fitness and health inspires the endorsement of 'Dr. Ralston,' a health guru with 800,000 followers. An undated poster (probably from about 1902) titled "Ralston Purina Foods: Absolutely pure" (with a red and black checkerboard square background) shows that the company now makes: Ralston Breakfast Food, Ralston Cereal Coffee, Purina Whole Wheat Flour for Bran Bread, Purina Pancake Flour, Ralston Hominy Grits, Ralston Kornkins (corn meal), Ralston Oats, and Ralston Barley Food. Address: 216-218 S. Spring Street [Los Angeles, California].

88. Kellogg, John Harvey. 1895. Milk as a food unsuited for the diet of adults: Editorial. *Modern Medicine and Bacteriological Review* (*Battle Creek, Michigan*) 4(5):121-22. May.

• ***Summary:*** "The popular idea that milk is one of the most wholesome and nutritious articles of food for use at all periods of life, is by many facts shown to be an error. Cow's milk is admirably adapted for digestion in the stomach of a calf."

"Kumyzoon is a scientific preparation of milk in which the lactose is replaced by lactic acid... Kumyzoon is manufactured by the Sanitarium Health Food Co., Battle Creek, Michigan, and 28 College Place, Chicago, Illinois. This company is manufacturing kumyzoon according to the formula furnished by the writer, and has it made under the writer's care at the Battle Creek Sanitarium."

Note: This is the earliest document seen (July 2013) that discusses problems with cow's milk as a food for adult humans. Address: M.D., Battle Creek, Michigan.

89. *Good Health* (*Battle Creek, Michigan*). 1895. Publisher's department: Chicago, Illinois, April 23, 1895 (Letter to the editor). 30(6):Unnumbered page near end of issue. June.

• ***Summary:*** This letter is addressed to "Sanitarium Health Food Co., Battle Creek, Michigan."

"Accept our thanks for the package of your new food preparation known as 'Granose.'"

Note: This is the earliest document seen (Dec. 2013) that mentions a food named "Granose"; it is made by the Sanitarium Health Food Co., Battle Creek, Michigan.

"The Caramel Coffee manufactured by the Sanitarium Health Food Company has constantly grown in popularity as a substitute for those baneful drugs, tea and coffee, which, under the deceptive guise of 'cups which cheer but do not inebriate,' have made nervous wrecks of thousands upon thousands of our American women. Recent improvements which have been made in Caramel Coffee, by which its palatableness and convenience for use are increased, will still further add to its popularity as a tea and coffee substitute. It is agreeable to the taste, aromatic, and at the same time entirely wholesome."

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"Digestive Coffee is another beverage which the Sanitarium Health Food Co. are preparing to place upon the market. It is in some respects allied to Caramel Coffee. It has the added virtue that it not only does not interfere with digestion but actually aids the digestive process by assisting in the conversion of starch to sugar, which should take place in the stomach under the influence of saliva acting upon the starch."

"... Sanitarium Health Food Co. is not a money-making concern, but simply one branch of the great missionary project represented by the Battle Creek Sanitarium, which has for more than a quarter of a century, stood as a champion for the most advanced principles in relation to dietetic and temperance reform, as well as other reforms relating to human welfare. No person receives individual benefit from the labors of this institution, all the dividends being devoted to the advancement of the institution itself, one important feature of which is the care of the sick poor."

90. Newberry (J.R.) & Co. 1895. Newberry's. Ralstonites (Ad). *Los Angeles Times.* July 25. p. 7.
• ***Summary:*** "Just in, another large shipment of Ralston Foods from Battle Creek Sanitarium [Michigan], consisting of the following: Granose Flakes, Granola, Gluten Meal, Wheat Gofio, Graham Flour, Bran, Graham Crackers, Fruit Crackers, Zwieback, Gluten Wafers, Gluten Biscuits, Carbon Wafers, Whole Wheat Wafers, and Caramel Coffee."

Note 1. Why are Ralston Foods being shipped by and from Dr. Kellogg's Battle Creek Sanitarium? Where are these foods made and by which company? Did Dr. Kellogg have agreement with "Dr. Ralston" of "Ralston Health Club" fame to use the Ralston name in marketing Dr. Kellogg's foods?

Note 2. This is the 2nd earliest document seen (Dec. 2013) worldwide that mentions "Granose" and the earliest that mentions "Granose Flakes." The flakes appear to be made in Battle Creek, Michigan, and sold in Los Angeles.

91. Newberry's. 1895. Health is wealth (Ad). *Los Angeles Times.* Sept. 14. p. 7.
• ***Summary:*** "Another large shipment of Ralston Foods from The Battle Creek Sanitarium [Michigan]. These goods are prepared strictly on scientific principles, and all dyspeptically inclined, in fact, all general sufferers, are cordially invited to call and examine these goods. Granose Flakes is one of their latest and finest preparations. Zwieback and Caramel Coffee are having and immense run. Call for samples." Address: 216–218 S. Spring St.

92. Kellogg, John Harvey. 1895. Re: Work with digestion, nuts, and peanut butter. Letter to Ellen G. White, "Norfolk Villa," Granville, N.S.W., Australia, Oct. 10. 6 p. Typed, with signature.
• ***Summary:*** The letter, addressed to "Dear Sister White," states: "I have just finished the MS. for a new edition of Digestion and Dyspepsia. It is really a new book, well illustrated, and I hope will prove helpful to the work. Mrs. Kellogg has also finished the MS. for a small book on Cookery, in which careful attention has been given to the many suggestions which you and others have made with reference to a work for Australia.

"I entirely agree with you in the suggestion that cream and milk should not be too freely used. I think they are even worse than the limited use of butter as a seasoning, as there are so many people who have dilated stomachs and cannot digest them. We make very little use of cream or milk in our family, and use no butter whatever for seasoning, but use nuts instead. I have recently succeeded in making some very excellent preparations from nuts which take the place of butter entirely and are sweeter, more palatable, and more digestible. I find this plan is working very successfully both with the patients and with the helpers at the Dormitory."

Note 1. The preceding paragraph states that Dr. Kellogg was developing various nut butters, but he does not say from what kinds of nuts. However, about 3 months later, on 4 Nov. 1895, he applied for a U.S. patent (No. 567,901) for a "nut-butter" made from peanuts or almonds. This is the earliest document seen (Dec. 2013) concerning the work of John Harvey Kellogg or Seventh-day Adventists with nut butters, and probably with peanut butter.

Note 2. The letter also discusses the Medical Missionary College and its Seventh-day Adventist students: "I cannot describe to you what an encouragement it is to me to see these 40 young men and women devoting their lives to the grand work which the Lord has placed in our hands. I have done my best to inspire them with confidence and courage and to lay before them the importance of thorough consecration to the work." Dr. Kellogg is anxiously awaiting Ellen White's revised manuscript for Christian Temperance.

Note 3. The original letter is in the Ellen G. White Papers, Incoming papers, Ellen G. White Estate, Inc., General Conference of Seventh-day Adventists, 12501 Old Columbia Pike, Silver Spring, Maryland 20904-6600. Address: M.D., Superintendent, Battle Creek Sanitarium, Battle Creek, Michigan.

93. *Atlanta Constitution* (*Georgia*). 1895. Agricultural Department. Nov. 22. p. 9.
• ***Summary:*** The section titled "Diploma of honor or silver medals" contains entries for: "Sanitarium Health Food Company, Battle Creek, Michigan–Food preparations of various kinds.

The N.K. Fairbank Company, Chicago, Illinois–"Cottolene." Also two makers of olive oil from California (from Pomona, and National City).

94. Nash Bros. 1895. Health foods (Ad). *Los Angeles Times.* Dec. 6. p. 10.
• ***Summary:*** "Wheat gluten, Wheat Granola, Zwieback.

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These are Sanitarium health foods from Battle Creek, Michigan. We have them. Cash grocers." Address: Pasadena, California.

95. Lenna Frances Cooper (1875-1961) in her college graduation cap and gown (Early event). 1895? Undated.
• ***Summary:*** This photo, found in Lenna Cooper's file, was sent to Soyinfo Center by Patricia Chapman, Del E. Webb Memorial Library, Loma Linda, California (Dec. 2013). The original source of the photo is unknown, as the is date and place of her graduation. Lenna Frances Cooper was a pioneering American dietitian and nutritionist, and a founding member of the American Dietetic Association.

96. Kamper (C.J.) Grocery Co. 1896. Everybody invited to the practical demonstration... (Ad). *Atlanta Constitution* (*Georgia*). Jan. 31. p. 10.
• ***Summary:*** "... by the Sanitarium Health Food Company, of Battle Creek, Michigan, of their Health Foods, in connection with J.H.F. California Fruits." Address: 390 and 392 Peachtree [Atlanta]. Phone: 628.

97. Siegel, Cooper & Co. 1896. The world's greatest food mart (Ad). *Chicago Daily Tribune.* Feb. 2. p. 44.
• ***Summary:*** "We carry all the health foods prepared by the Sanitarium Health Food Co., Battle Creek, Michigan." Also 5,000 barrels Ceresota Flour $3.38 per barrel. Gluten flour, $3.75 per brl. [barrel]. Bars of Procter & Gamble's Ivory Soap. Address: State, Van Buren & Congress streets [Chicago].

98. Kellogg, John H. 1896. Nut butter and nut meal. *Good Health* (*Battle Creek, Michigan*) 31(2):56-57. Feb. [1 ref]
• ***Summary:*** This article by Dr. Kellogg was reprinted from *Modern Medicine.* The most valuable products developed from nuts are nut butter, nut meal, and bromose. Gives ten "special advantages of nut butter over ordinary butter, tallow, lard, cottonseed oil, cocoanut butter, olive oil, suet, cream, and other materials used for shortening foods..." "1. Nut butter is a purely vegetable product, and hence free from the elements of disease which are often found to an extent dangerous to life in animal fats." "Bromose is a combination of nuts with digested starch. It is the vegetable analogue of malted milk and constitutes a perfect food."

"Nut butter, nut meal, and bromose are manufactured and sold at reasonable rates by the Sanitas Food Company, Battle Creek, Michigan." Almonds are mentioned; peanuts are not.

Note 1. This is the earliest document seen (May 2004) that mentions Sanitas Food Company.

Note 2. This is the earliest English-language document seen (Jan. 2005) that contains the term "Nut butter" used without referring to a specific type of nut.

Note 3. This is the earliest English-language document seen (Aug. 2013), that mentions Bromose, a dry non-dairy product resembling malted milk, made from nuts.

Note 4. This is the earliest document seen (Feb. 2005), that mentions a dairy alternative made by Seventh-day Adventists. Address: M.D., editor.

99. **Product Name:** Bromose (Dry Milklike Product Made from Malted Nuts–No Soy).
Manufacturer's Name: Sanitas Nut Food Co. from 1899. Renamed Kellogg Food Company in mid-1906, then Battle Creek Food Co. in the spring of 1921.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1896 February.
Ingredients: Mainly peanuts.
New Product–Documentation: Kellogg, John H. 1896. "Nut butter and nut meal." *Good Health* (Battle Creek, Michigan) 31(2):56-57. Feb. "Bromose is a combination of nuts with digested starch. It is the vegetable analogue of malted milk and constitutes a perfect food."

Sanitas Food Co. 1896. "New nut products" (Ad). *Chicago Vegetarian* 1(3):8. Nov. Four products are advertised: 2. Bromose. "Makes fat and blood. This is a product made by malting nuts, and is especially adapted to persons who cannot digest starch."

Ellen Goodell Smith. 1896. *The Fat of the Land and How to Live on it.* Page 195 contains a full-page ad for products made and sold by the Sanitas Food Company (Battle Creek, Michigan) titled "Pure Products of Nuts." These include Bromose.

Schwarz, Richard W. 1970. *John Harvey Kellogg, M.D.* Nashville, Tennessee: Southern Publishing Assoc. "During the decade following the appearance of peanut butter, Dr. Kellogg developed several other food products with a nut base. In 1896 he patented a product labeled 'Bromose,' which he claimed to be a vegetable equivalent of malted milk" (p. 120-21).

100. Woodward & Lothrop. 1896. We place on sale this day... (Ad). *Washington Post.* April 14. p. 7.
• ***Summary:*** The section titled "Health food exhibit" states: "We are now demonstrating the famous products of the Battle Creek Sanitarium Health Food Co., of Battle Creek, Michigan, and call special attention to the following perfect health foods: Granose, wheat flakes, per pkg.–15¢. Granola, cereal food, per pkg.–12¢. Caramel Cereal, wheat coffee, per pkg.–20¢. Whole wheat wafers, per pkg.–12¢. Graham crackers, sweetened or plain, per pkg.–12¢. Best fruit crackers, per pkg.–18¢. Whole wheat zwieback, per pkg.–12¢.

"Free samples served daily. Fifth floor, 11th st. building."

Note: This is the earliest document seen (Sept. 2006) that mentions "Caramel Cereal," an alternative to coffee made from roasted wheat. Address: 10th, 11th, and F Sts.

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N.W. Phone: 628.

101. Battle Creek Sanitarium Health Food Co. 1896. Health foods (Ad). *Modern Medicine and Bacteriological Review* (*Battle Creek, Michigan*) 5(5):Unnumbered at front. May.
• ***Summary:*** Three products are advertised: 1. Granola. 2. Granose. 3. Caramel-Cereal. "Established 1876. Food cure for constipation."

Note 1. This is the 2nd earliest know U.S. company with the term "Health Food" (or "Health-Food") in the company name.

Note 2. This is the earliest document seen (Sept. 2006) that mentions the Battle Creek Sanitarium Health Food Co.

Note 3. This is the earliest document seen (June 2013) that mentions a food cure for constipation in connection with Battle Creek Sanitarium or Battle Creek Sanitarium Health Food Co. Address: Battle Creek, Michigan.

102. Kellogg, John Harvey. 1896. Bean cheese: Editorial. *Modern Medicine and Bacteriological Review* (*Battle Creek, Michigan*) 5(5):112. May.
• ***Summary:*** "A variety of cheese known as *tofu* is much used by the Japanese. It is made from the soja bean, which, after soaking for twelve hours in water, is ground to a uniform pulpy mass, then boiled for an hour in three times its quantity of water, and afterward filtered through a cloth. The milky liquid thus obtained is allowed to stand two or three days, when lactic acid develops, by which the vegetable casein is separated as in sour milk. Ten per cent. of concentrated brine is added by constant stirring, which causes a flocculent precipitate. This is separated by a cloth filter, and is formed into tablets by a slow pressure.

"*Tofu* is eaten in the form of soup and in many other ways. The solid nutriment which it contains amounts to only about ten per cent. Sometimes the greater part of the water is separated by freezing, and the block of frozen *tofu* afterward allowed to thaw in the sun. When prepared in this way, the proportion of solid nutriment, chiefly fat and vegetable casein, is nearly eighty per cent."

Note 1. This is the earliest document seen (Dec. 2013) in which Dr. John Harvey Kellogg clearly mentions a soyfood product–tofu.

Note 2. This is the earliest English-language document seen (April 2013) that uses the term "frozen tofu" to refer to dried-frozen tofu. Address: M.D., Battle Creek Sanitarium, Michigan.

103. Newberry's. 1896. Just received: A large assortment of Health Foods from the Battle Creek Sanitarium (Ad). *Los Angeles Times.* July 21. p. 7.
• ***Summary:*** "Granose Flakes–25¢ package. Whole wheat biscuits–15¢ package. Granola–15¢ package. Aranola–15¢ package. Caromel coffee–15¢ package. And many others including Bromose." Address: 216 and 218 South Spring Street [Los Angeles, California].

104. **Product Name:** Nuttose (Meatlike or Cheeselike Product Made from Nuts–Mostly Peanuts, No Soy).
Manufacturer's Name: Battle Creek Sanitarium Bakery. Then Sanitas Nut Food Co. from 1899. Renamed Kellogg Food Company in mid-1906, then Battle Creek Food Co. in the spring of 1921.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1896 July.
Ingredients: Mainly peanuts.
New Product–Documentation: Dr. John Harvey Kellogg. 1896. *Good Health* (Battle Creek, Michigan) 31(7):195-96. July. "Nuttose: A new food for brain and muscle building." "It is so perfect a substitute for flesh food that in eating it one could readily imagine himself to be partaking of roast beef, dried beef, broiled chicken, or other meats, according to the mode of preparation..."

Note: Nuttose appears to be Dr. Kellogg's first commercial meatlike or cheeselike product, and the first commercial meatlike or cheeselike product introduced by any Caucasian in the Western world. It is also the earliest commercial meat alternative seen which is described as an alternative to chicken or poultry. Made solely from nuts, Nuttose contains no soy.

Ellen Goodell Smith. 1896. *The Fat of the Land and How to Live on it.* Page 195 contains a full-page ad for products made and sold by the Sanitas Food Company (Battle Creek, Michigan) titled "Pure Products of Nuts." These include Bromose and Nuttose.

Kellogg, John H. 1898. *Good Health.* Jan. p. 46. Nuttose is "a thoroughly cooked and sterilized product of nuts, chiefly peanuts. Nuttose is made in the form of a cheesy mass which readily dissolves in the digestive fluids, the nuts having been first completely disintegrated and then thoroughly cooked. It contains about the same amount of proteids as beefsteak, and, in addition, between twenty-five and thirty per cent of easily digestible nut fat in a state of natural emulsion."

Concerning the establishment and name of this company: Richard Schwarz in his excellent book *John Harvey Kellogg, M.D.* states: "Shortly after the production of Granola for patients at the sanitarium began in 1877, Dr. Kellogg organized the Sanitarium Food Company as a subsidiary of the Battle Creek Sanitarium. Operated as an adjunct to the sanitarium bakery, for more than a decade it marketed a variety of oatmeal, graham, and fruit crackers and whole-grain cooked cereals–all originally devised to provide variety in the menu of sanitarium patients." All products were made from whole grains without artificial additives, and all underwent prolonged high-temperature baking designed to dextrinize their starch. "By 1889 the Sanitarium Foods had become popular enough to warrant the establishment of a separate factory; Granola alone sold at the rate of two tons a

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week." But when Dr. Kellogg wanted to expand the business, other sanitarium doctors refused to vote the funds. So Dr. Kellogg launched the private Sanitas Food Company, relying heavily on his younger brother, Will Keith, who had served as his personal accountant and business manager since 1880. John Harvey's new flaked cereals and vegetable meats became the property of the Sanitas Company. In mid-1906 Dr. Kellogg decided to change Sanitas' corporate name to the Kellogg Food Company.

The Loma Linda University Library Heritage Room (Loma Linda, California) has a copy of a stock certificate for this company (White document file #497-h). On the certificate two company names appear: Sanitas Nut Food Co. and Sanitas Food Co.

Talk with Duff Stoltz of Battle Creek, Michigan. 2001. April 26. Duff believes that Nuttose probably contained peanuts as the main ingredient. Dr. Kellogg was making peanut butter by this time and his first U.S. patent (No. 567,901), issued on 15 Sept. 1896, describes the production of both peanut butter and peanut meal. He could well have used the latter to make Nuttose.

105. Kellogg, John Harvey. 1896. Nuttose: A new food for brain and muscle building. *Good Health* (*Battle Creek, Michigan*) 31(7):195-96. July.
• ***Summary:*** A disease known as "amylaceous dyspepsia" requires a diet which is entirely free of starch. "Quite a large proportion of persons suffering from this form of dyspepsia find so much relief from their distressing symptoms by the use of a flesh diet that they are naturally led to the conclusion that a vegetable diet does not agree with them..." To meet the needs of such patients, Dr. J.H. Kellogg has developed Nuttose, a most delicious and wholesome food, made solely from nuts. "It is so perfect a substitute for flesh food that in eating it one could readily imagine himself to be partaking of roast beef, dried beef, broiled chicken, or other meats, according to the mode of preparation."

Note 1. This is the earliest English-language document seen (Nov. 2003) that contains the term "substitute for flesh food" to refer to a meat alternative.

"Nuttose not only satisfies the craving for meat, but supplies the same kind of nutriment, and in a form which is digestible, and wholly free from the unwholesome properties of flesh food. Nuttose contains exactly the same proportion of proteids, or nitrogenous matter, as beefsteak, and in addition, thirty per cent. of fat, and a rich supply of the nerve- and bone-building salts. The invention of nuttose has thus removed one of the greatest obstacles which had stood in the way of the advancement of dietetic reform."

"Nuttose has the advantage over meats and most other foods in that it is very quickly digested, agrees with almost any stomach, can be made an exclusive article of diet if necessary, and contains all the elements required for complete nutrition... Nuttose is put up in one and one-half pound tins, hermetically sealed, and in this condition will keep for an indefinite length of time."

Note 2. Nuttose appears to be Dr. Kellogg's first meatlike or cheeselike product, and the first commercial meatlike or cheeselike product introduced by any Caucasian in the Western world. Though Nuttose was usually marketed as a substitute for meat, it was described as having "a consistency similar to brick cheese," and therefore could also be used as a cheese substitute.

Note 3. This is the earliest document seen (Oct. 2013) concerning a Western-style cheese alternative. It was a non-soy, non-dairy cheese alternative–although it did not melt. Address: M.D.

106. Kellogg, John Harvey. 1896. A doctor's chats with his patients: A new food for diabetics. *Good Health* (*Battle Creek, Michigan*) 31(8):248. Aug.
• ***Summary:*** The new food is Nuttose. "Until recently the almost universal prescription for persons suffering from diabetes has been a meat diet, it being well known that the leading symptom of this disease is the presence of sugar in the urine, which is aggravated by the use of starchy foods. Within the last few years, however, eminent French physicians have pointed out the fact that in the exclusive or free use of meat there is great danger of so filling the system with a class of poisons which abound in meat, and are known as leucomains and ptomains, as to produce death by a diabetic coma...

"Gluten derived from wheat, the nitrogenous principle of Soja bean, and the casein of milk, have been substituted for meats with advantage. But the patient tires of these substances, which, by their means of production, are necessarily deprived of their natural flavors, and consequently do not appeal to the palate in an appetizing way.

"As a result of a long series of expensive experiments and investigations, it has been found possible to prepare from nuts a food which answers perfectly the requirements of a person suffering from diabetes. This food, known as nuttose, closely resembles meat, both in its appearance and flavor. Its [percentage] composition is as follows:–Proteids, 15. Vegetable fat, 23.3, with a very small proportion of soluble starch and dextrin. It also contains an abundance of the salts, phosphates, etc., which accompany both vegetable and animal proteids, and hence is a perfect food. Nuttose is furnished in hermetically sealed cans, in which it will keep indefinitely."

Note: This is the earliest document seen (Oct. 2004), by or about Dr. John Harvey Kellogg, that mentions the soy bean [actually "Soja bean"]. It is also the earliest soy-related article seen in Dr. Kellogg's periodical *Good Health.* Dr. Kellogg was born in 1852. Address: M.D., Superintendent of the Battle Creek (Michigan) Sanitarium.

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107. Kellogg, John H. 1896. Food compound. *U.S. Patent* 0,567,901. Sept. 15. 1 p. Application filed 4 Nov. 1895.
• ***Summary:*** This is a patent for nut-butter, preferably peanut butter or almond butter; it is made by boiling rather than roasting the nuts. "In carrying out the invention the kernels of some form of edible nuts, preferably peanuts or almonds, are blanched and then thoroughly cooked, preferably by boiling in water for a period of four to six hours, after which they require to be dried. This cooked product is disintegrated by some suitable means, and preferably by passing it between rolls or rollers, and thus subjecting it to heavy pressure, whereby the mass is caused to separate into two products, one being a fine and comparatively dry and nearly white nutmeal, while the other is moist, pasty, adhesive, and brown, which for distinction is termed 'butter' or 'paste'... One or both of such nut products, the nut-meal or nut-butter, but preferably the former, is mixed with diastatically digested starch of wheat, barley, oats, corn, or some analogous cereal."

"What I claim is–An improved article of manufacture, the alimentary product composed of completely-digested starch, completely-emulsified vegetable oil such as described, and thoroughly-cooked and finely-divided vegetable proteids derived from nuts, as specified."

Note 1. This is the 2nd earliest document seen (June 2008) that clearly concerns peanut butter in the United States, or that clearly links Seventh-day Adventists with the invention of peanut butter. It is also the earliest patent issued to Dr. John Harvey Kellogg that mentions peanuts.

Note 2. This is also the earliest document seen (June 2003) that contains the term "nut-butter" (or "nut butter"). Address: M.D., Battle Creek, Calhoun Co., Michigan.

108. *Chicago Daily Tribune.* 1896. Live on a frugal diet. Development of a real vegetarian community in Chicago. As a rule Chicago people eat little meat–Who some of the vegetarians are–What they claim for their practice–What a strict food reform disciple considers a square meal–And. too, a vegetarian place of worship. Sept. 20. p. 47.
• ***Summary:*** Notwithstanding the nearness and business value of the Stock-Yards, people in Chicago (in general) do not eat much meat. "Vegetarians we have in large numbers, fruitarians, grainarians, nutarians–every kind of food- 'arians,' in fact. And some of the city's brightest and best known people belong to one or more of these peculiar divisions of the community." Brief biographical sketches (with portrait illustrations of the first two) are given of:

(1) J. Howard Moore, a recent student at the University of Chicago, who has just been offered the chair of sociology at the Wisconsin State University. Last year Moore won first honors at the Prohibition oratorical contest. He first became a vegetarian 10 years ago for ethical reasons, and "claims that he works better, thinks better, and is better in all ways..." (2) Albert J. Snyder, founder of the Chicago Vegetarian Society, came into his new mode of thought at an early age because he always disliked ordinary food and knew no better than a vegetarian diet. He never drinks coffee, tea, or other stimulants. (3) Miss Caroline Kofel, a native of Weiningen, Zurich, Switzerland, and now a teacher in the Chicago public schools. She exhibited her enamel china painting at the World's Fair. (4) "Frances L. Dusenberry, the Chicago publisher, and editor of the Woman's News, is also a food reformer and energetic in her praise of the good effects of her theories and practice. Miss Dusenberry eats neither pepper, salt, or any other condiments..."

Loise Foskette, the woman lawyer, is a member of the Food Reform Society; so are Addison Blakely, Clarence S, Darrow, the well-known Socialist;... Luther E. Ellison, the lawyer;..."

The Rev. Henry Clubb, an old army man and the pastor of a vegetarian church in Philadelphia [Pennsylvania], "is a good example of the force and truth of his own doctrines; at 70 years of age he is still hale and vigorous." A Chicago vegetarian newspaper will be launched within a few weeks and a vegetarian home [for the poor] has been established lately. Of the many types of vegetarians, some choose the Battle Creek [Michigan] preparations and some belong to the Ralstonite faction.

"The only thing upon which all of these dietists agree is upon the abstinence from meat."

109. *Chicago Vegetarian.* 1896. Chicago Sanitarium, 28 College Place (Ad). 1(1):3. Sept.
• ***Summary:*** "This institution is a branch of the Battle Creek Sanitarium [of Michigan]. It is favorably located near Lake Michigan... Facilities are appointed for Hydro-Therapy, Massage, Electricity, Swedish Movements, and other rational methods of treatment. Trained nurses supplied on request. J.D. Wilson, manager. Drs. E.H. Matthewson and Mary A. Wild, resident physicians."

110. E.E.K. [Ella Eaton Kellogg]. 1896. Nuttose, and some recipes for its use. *Good Health* (*Battle Creek, Michigan*) 31(9):275. Sept.
• ***Summary:*** The author is Dr. John Harvey Kellogg's wife. Nuttose "is a pure product of nuts. It is intended as a substitute for meat, which it completely replaces dietetically..." Six brief recipes are given. Soy is not mentioned.

Note: This is the earliest English-language document seen (Nov. 2003) that contains the term "substitute for meat" (or "substitute for meats,"with any combination of quotation marks).

111. Kellogg, John Harvey. 1896. Cow's milk a cause of disease: Editorial. *Modern Medicine and Bacteriological Review* (*Battle Creek, Michigan*) 5(9):220-23. Sept.
• ***Summary:*** Contents: Introduction. Milk a natural food for

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infants, but not for adults. Milk the cause of biliousness. Milk the cause of nervous headache, or migraine. Vegetable substitutes for milk.

"Cow's milk differs very materially from mother's milk, containing less sugar, more fat, and four times as much casein [protein] as mother's milk. The casein in cow's milk also differs from that in mother's milk in that it forms large, firm, tough curds, whereas those formed in mother's milk are small, soft, and friable, crumbling easily into small particles under the action of the stomach.

"It will thus be seen that that popular notion that since milk is the natural food of infants, cow's milk must be the most wholesome and easily digested of all foods for adults, is without proper foundation. When pure cow's milk is fed to infants, the child not infrequently vomits fragments of decomposing curds, which, having remained many hours in the stomach, are still hard, tough, and leathery. Every nurse is also familiar with the fact that the bowel discharges of children fed upon cow's milk often contain large quantities of tough, undigested curds."

"The writer has become thoroughly convinced that there are few persons who do not suffer sooner or later from the long-continued use of cow's milk."

"Vegetable substitutes for milk.–Some years ago Sir B.W. Richardson, the eminent London physician, prophesied that the time would come when milk, as well as all other forms of animal food, would be derived directly from the vegetable kingdom... The milk of the cocoanut furnishes a satisfactory substitute for cow's milk to the teeming millions of many tropical countries..." Most nuts, when crushed and mixed with water, give a solution "closely resembling milk... By the addition of a proper amount of sugar, preferably levulose or maltose, a very perfect substitute for milk may be produced. Such a preparation may be made from almonds..."

"In the experiments which we have made with nut milk we find it has a delicate, delightful flavor, with a suggestion of its nutty origin, but resembles cow's milk very closely indeed... Added to cow's milk in proper proportion, lac vegetal, or nut cream, prevents the formation of hard curds in the stomach, as when the cow's milk is used alone. This renders it an exceedingly valuable food for infants–vastly superior to any infant's food which has been devised."

"Nuts are unquestionably the vegetable analogue of meat and other animal foods, not only containing all the food elements to be found in animal products, but in finer and more digestible form, more delicately flavored, and wholly free from deleterious elements which abound in meat..."

Note 1. This is the earliest English-language document seen (Feb. 2012) that uses the word "vegetal" to refer to a plant-based or pure vegetarian diet. *Merriam-Webster's Collegiate Dictionary* (1998) defines vegetal (derived from the Middle Latin *vegetare*, meaning to grow), a word first used in English in the 15th century, to mean: "1: vegetable. 2. Vegetative..."

Note 2. This is earliest English-language document seen (Aug. 2013) that contains the term "nut milk" (or "nut milks" or "nut-milk") or the term "nut cream" (or "nut creams" or "nut-cream") or the term "lac vegetal" (or "lac-vegetal"). Address: M.D., Battle Creek, Michigan.

112. *Chicago Daily Tribune.* 1896. Homeless fed on a vegetable diet: Chicago's hygienic lodging-house and vegetarian restaurant where poor may live for 10 cents a day. Oct. 11. p. 46.

• ***Summary:*** About the work of Dr. John Harvey Kellogg and workers from the Battle Creek Sanitarium, Michigan. "For many years the dietists of Chicago have mourned that no such thing as a vegetarian restaurant has ever existed in Chicago, save for the briefest possible spaces of time. For years they have predicted the immense and colossal success of a venture in this direction." But now a "food apostle has appeared in Chicago..." A bowl of hygienic soup costs 2 cents and a night at the lodging house 10 cents. He "can always have a choice of cereals, and he may always decide between zwieback and toasted crackers. And for the beverages, the hygienist may have either caramel coffee or the latest sanitarium substitute for the real article." Practically all may be purchased for 1-3 cents "A five-cent order would expose a man to the charge of extravagance... Food values are carefully studied at the hygienic lunch-counter."

"The place at which all this missionary work is located at No. 42 Custom-House place,... in a building which was once a church and belonged to a colored congregation... Over 300 take their meals at the lunch-counter and nearly 175 sleep in the dormitories every night. A bed, together with use of the laundry, reading-room, baths, and medical attendance, if necessary, costs a dime."

"Work is furnished by the rug-making department upstairs" so that a man who is absolutely penniless may keep himself going. The lunch counter with its missionary diet is the strong point of the new organization. "No profits are desired, the food used being that of sanitarium manufacture almost exclusively... Every one of the 800 regular customers–who belong to nearly all grades of society–can get a plentiful and wholesome meal for 10 cents... All of which goes to show that the food mission is at least appreciated, and that the dream of the Chicago vegetarian, a restaurant devoted to non-meat eaters, is possibly not far from realization."

113. Newton, Robertson & Co. 1896. Battle Creek Sanitarium Health Foods (Ad). *Hartford Daily Courant* (*Connecticut*). Oct. 13. p. 12.

• ***Summary:*** "The great American disorder is Indigestion and its allied troubles. If you are troubled with dyspepsia in any form, ask about these Health Foods. Eat Granola, Granose. Drink Caramel Cereal. These goods are being used daily by

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thousands upon thousands of invalids with great success. The most delicate stomach can take these Cereals with relish and without distress. Ask about Health Food Goods..."

114. Lacey, D. 1896. Letter: Vegetarian missionaries. *Vegetarian Messenger* (*Manchester, England*). Oct. p. 344.
• ***Summary:*** Urges with Mrs. Pike (see *Vegetarian Messenger,* June 1896, p. 190) that members of the Vegetarian Society should not contribute to the support of missionaries to Indian, Ceylon, or Japan who are "flesh-eaters." "I would say cease to contribute to flesh-eating missionaries sent to pure living people such as Hindoos, Cingallis or Japanese." There "is at least one sect which, regarding their bodies as the temple of the Holy Spirit, refuse to defile themselves with flesh food; who also abstain from all fermented liquors, strong drinks and stimulants–even going so far as to forego the use of tea and coffee. This singularly pure sect... rejoices in the name of Seventh-Day Adventists." They "believe in and are looking forward to the Second Advent,... and they keep holy the seventh day as set forth in the Fourth Commandment of the Decalogue. To this sect then any and all vegetarians might, with a good and clear conscience, contribute of their abundance..." Address: A vegetarian and Seventh Day Advestist, Beulah, Cooranbong, New South Wales.

115. Newberry's. 1896. Caramel Cereal (Ad). *Los Angeles Times.* Nov. 11. p. 7.
• ***Summary:*** "Is a perfect substitute for Coffee. If you are nervous, stop drinking Tea and Coffee, and use Caramel Cereal: It is the greatest health drink of the age. Don't be misled to take something else. There is only one Caramel Cereal, and that is made by the Battle Creek Sanitarium Health Food Co., of Battle Creek, Michigan. Sold at 15¢. package." Address: 216 and 218 S. Spring Street.

116. Battle Creek Sanitarium Health Food Co. 1896. Foods for health (Ad). *Chicago Vegetarian* 1(3):8. Nov.
• ***Summary:*** Three products are advertised: 1. Granola. 2. Granose (a flaked cereal food). 3. Caramel-Cereal. Address: 65 Washington St., Battle Creek, Michigan.

117. Sanitas Food Co. 1896. New nut products (Ad). *Chicago Vegetarian* 1(3):8. Nov.
• ***Summary:*** Four products are advertised: 1. Nuttose. Has "the consistency of cheese, having somewhat the appearance and flavor of cold roast mutton." Prepare like meats. 2. "Bromose. Makes fat and blood. This is a product made by malting nuts, and is especially adapted to persons who cannot digest starch." 3. "Nut Butter. A substitute for ordinary butter, presenting fat in the form of a perfect emulsion; combined with water, forms a delicious cream. Used for shortening of all kinds. A pure product of nuts; can be eaten by those who cannot eat ordinary butter." [Note 1. This may well be peanut butter.] 4. "Nut Cream. A delicate, delicious nut preparation, which, properly diluted, furnishes a delicately-flavored cream or milk. It resembles milk in appearance." Note 2. This is probably made from peanuts and/or almonds.

"Send 25 cents in stamps for samples. Circulars free on application."

Note 3. This is the earliest English-language document seen (Aug. 2013) that contains the term "Nut Cream." Address: 65 Washington St., Battle Creek, Michigan.

118. Newberry's. 1896. Just arrived: Another shipment of Health Foods in today from Battle Creek (Ad). *Los Angeles Times.* Dec. 3. p. 7.
• ***Summary:*** "Bromose, Nuttose, Almond Meal, Granose, Caramel Cereal, Granose Flakes and Avanola." Address: 216 and 218 South Spring Street [Los Angeles, California].

119. Allen, James Madison. 1896. Figs or pigs? Fruit or brute? Shall we eat flesh? A comprehensive statement of the principal reasons for entertaining the vegetarian or fruitarian principle, with numerous citations from eminent authorities. Springfield, Missouri: J.M. and M.T. Allen. 39 p. 20 cm. [55 ref]
• ***Summary:*** This book (as of May 2011 digitized on the Web) strongly promotes a diet based on plant foods only [i.e., vegan diet] in a non-religious way.

Contents: Preliminary observations. 1. Anatomical. 2. Physiological and hygienical. 3. Pathological. 4. Psychological. 5. Phrenological and moral. 6. Chemical. 7. Agricultural. 8. Economical and laborial. 9. Gustatorial and sentimental. 10. Intuitional. 11. Historical. 12. Eventual.

Each of the 12 sections begins with an overview followed by 4-6 relevant quotations. The author of most quotations is given but, unfortunately, the source document is not. Many of the authors–such as Bronson Alcott, Baron Cuvier, Benjamin Franklin, Dr. John Harvey Kellogg, Linnaeus (naturalist), Plutarch, Shelley (poet), Henry David Thoreau, Dr. R.T. Trall–are still well known. The text also includes several long poems: "Civilized Cannibals," by J.O. Barrett (p. 12). "Song of the Vegetarian," by Arcadian (p. 27). Untitled, by Shelley (p. 36). "Vegetarian Life," by Emily M. Guthrie (p. 38-39).

Concerning alcohol and temperance:

"Following the disuse of animal food, it will be found that alcoholic drinks, tobacco, morphine and the like (including all drug medicines) will also cease to be used.

"'In the same line of argument lies the question of intemperance. Temperance advocates can talk until 'doomsday,' but the drinking habit will never be obliterated so long as we partake of flesh diet. A heavy drinker is invariably a heavy meat eater. The unfortunate drunkard never dreams that the feverish, poisonous germs gnawing at his vitals, first found their lodgement out of the flesh that had been killed.'

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Dr. Ditson" (p. 16).

"Thoreau observes: 'I have found repeatedly of late years, that I cannot fish without falling a little in self respect. I have tried it again and again. I have skill at it; but always when I have done, I feel that it would have been better if I had not fished'" (p. 17)

Concerning milk: "No food should be used which necessitates slaughter. Even animal milk and its products, and eggs, would better be discarded; and preparations of oat milk, etc., the sap of the South American 'cow tree,' nuts, vegetable oils, etc., substituted" (Preliminary observations, p. 2).

"The writer has abstained from flesh about forty-five years, having become convinced when a lad of fourteen or fifteen, by reading, observation, reflection and instinct, that the use of animal food tends to degrade and brutalize the human race, and keep it in subjection to the animal appetites and passions. That it is unnecessary to either health, strength or longevity, witness the ox, horse, camel, elephant, reindeer, etc., who derive their immense strength and endurance from herbage alone; witness the ancient Pythagoreans and Essenes; the great mass of the ancient Egyptians and Persians, whose physical, mental and moral superiority are well known facts of history; the Brahmins, who eschew milk and its products and eggs, as well as flesh, yet are among the most healthy, vigorous and long-lived of their race; the great bulk of the four hundred and fifty millions of Chinese, who subsist mainly upon rice and use neither butter, cheese nor milk; the negroes of Brazil, who subsist almost wholly upon farinha or mandioca [a type of cassava] flour, and yet endure the hardest labor; the Mexican Indians, according to Humboldt; the Society of Bible Christians, whose creed embraced vegetarianism, and one of whose American members was reputed to be the strongest man in Philadelphia; the bulk of the hardiest and hardest laboring class in Scotland and Ireland, whose chief reliance is upon oatmeal and potatoes; the peasantry of France, who live mostly upon bread, and the common people of Spain, who live principally upon bread and onions;... (p. 31-32).

"John Whitcomb, whose health was so good at one hundred and four years that he rose and bathed himself in cold water, even in mid-winter–whose wounds would heal like those of a child–who drank only water for eighty years, and subsisted for thirty years on bread and milk chiefly; Captain Ross, the celebrated navigator, who with his company spent the winter of 1830-31 above 70º North latitude, without beds or bed-clothing, *or animal food*, with no evidence of any suffering from the *mere disuse of flesh and fish;...* (p. 35).

A poem titled "Vegetarian Life," by Emily M. Guthrie (p. 38-39) begins:

"No skinning of eels, no chopping of hash,
"No beating of steak with rude clatter and crash;
"No frying of pork with its frizzling sound,
"In which tones more pleasant are haplessly drowned;
"No grease on the cloth and no saving of swill,
"With loathsome diseases doomed porkers to fill;
"No spoiling of meats, and no fear of the flies;
"They harmlessly buzz o'er the food of the wise;
"No stewing of oysters (the dull, sluggish things;)
"Nor turtles nor fishes–naught that bites nor that stings;
"No whiskey, no beer, no brandy or wine,
"O'er which men grow noisy, or prone as the swine;
"The sweet singing-bird is not stayed in her flight
"To glut the gross maw of some death-dealing wight [creature] -
"Nor lamb, nor the ox, nor sensual swine
"Unfeelingly slain for the human canine.
"(There's no milking of cows to rob the poor calves,
"No grumbling, no hypo, no living by halves;
"No churning, no butter, no making of cheese,
"But oh, we live quiet and nice as you please.)" (p. 38-39). Address: 233 Commercial St., Springfield, Missouri.

120. Kellogg, Ella Ervilla Eaton. 1896. Every-day dishes and every-day work. Battle Creek, Michigan: Modern Medicine Publishing Co. 184 p. Index. 24 cm.

• ***Summary:*** The wife of the famous Dr. John Harvey Kellogg discusses her system of meatless cookery–though the term "vegetarian" is not used. She lived 1852-1920. Contents: Eight pages of ads (for books, foods, and medical instruments/devices). Title page. Cereals (incl. Graham grits, Graham apple mush). Preface. Introduction. Cereals (incl. Graham grits, Graham meal). Macaroni. Fermented or yeast bread (incl. whole-wheat bread, Graham or wheat-meal bread). Unfermented or aerated bread (incl. Graham puffs, Granola gems). Fruit (cooking, canning). The leguminous seeds (incl. peas, beans, lima beans, lentils, cooked peanuts). Vegetables. Soups (incl. without milk, with milk and cream; Bran stock). Eggs (incl. cream). Desserts. Pastry. Cake. Toasts. The Battle Creek Sanitarium Health Food Company's products (discusses and contains recipes using Granola, Granose, Crystal Wheat, gluten {13 recipes}, nut butter and nut meal, Nuttose, zwieback, and caramel cereal, p. 139-52). Hints about every-day work. Every-day bills of fare.

The eight ads on unnumbered pages in the front of the book are for: (1) "Caramel-Cereal. A most delicious substitute for the Coffee Bean, and contains none of its harmful properties... Caramel-Cereal has been used for over twenty years at the Battle Creek Sanitarium, and the demand has increased daily... Try it, and you will always use it... Manufactured by Battle Creek Sanitarium Health Food Co." (2) Battle Creek (Mich.) Sanitarium Health Foods. "Eat Granola, Granose. Drink Caramel-Cereal." (3) Charcoal Tablets: Antiseptic... Absorbent. Sanitas Food Company, Battle Creek. (4) Almond Meal, from Sanitas Food Co. (5) Lac Vegetal or Nut Cream: Prepared from the choicest nuts. A perfect substitute for cow's milk. Sanitas Food Co. (6)

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Bromose: Makes fat and blood. "Consists of cereals and nuts in which the starch is completely digested... Unequalled as a tissue builder... Gain in flesh." Sanitas Food Co. (7) The natural abdominal supporter. Modern Medicine Co., Battle Creek. (8) *The Stomach: Its Disorders and How to Cure Them,* by J.H. Kellogg, M.D. Modern Medicine Publishing Co.

A table (p. 7) shows the "nutritive value of some common food substances," including sweet almonds, peanuts, five legumes, milk, and six types of meat and poultry, and eggs. Values/columns are given for: Water, albuminous elements, starch, grape sugar, free fat, salts, cellulose, proportion of carbonaceous to nitrogenous material, total nutritive value.

The chapters on cereals and breads include Graham Grits, Wheat-Meal or Graham Mush, whole-wheat breads, Graham breads, Graham Puffs, etc.–but most breads are made with white flour and milk–and fermented. The chapter on leguminous seeds contains two recipes for blanched and boiled peanuts (p. 76); soy beans are not mentioned. Milk, cream, eggs, and sugar are used in moderation throughout the book. There is an entire chapter titled "Eggs." Desserts are generally sweetened with sugar. Up to 1 cup of sugar is used in some recipes (p. 117), but fruits are often used instead; milk or cream are also widely used in desserts. The chapter on "Pastries" (mostly pies) begins by discussing the dietetic evils of pastries; recipes calls for less fat than typical recipes.

The section on "Nut Butter and Nut Meal" (p. 147-49) notes that these two foods "have been prepared as substitutes for butter and cream," which cause many persons to "suffer from biliousness, nervous and sick-headache, and various forms of indigestion." Ten recipes are given. For example (p. 149): "Nut Butter Sandwiches.–Spread slices of thinly cut graham bread with nut butter, and then with chopped dates or figs..." Note 1. Although "peanut butter" is not mentioned, this is almost certainly a peanut butter sandwich. Yet this book contains no recipe for making peanut butter at home.

The section titled "Nuttose" (p. 149-50) states: "This is a pure product of nuts. It is intended as a substitute for meat, which it completely replaces dietetically, having nearly twice the nutritive value, while it furnishes the same elements and in a form much more digestible, and wholly free from the objectionable features of meat. Nuttose may be prepared and served in the same manner as the various forms of flesh food. It so perfectly resembles meat in appearance and flavor, as well as nutritive properties, that many persons find it difficult to distinguish the difference. 7 recipes are given.

The 1¼ page discussion of Zwieback (p. 151) states: "Any one who has ever made a visit to Carlsbad [Karlsbad or Karlovy Vary in today's Czech Republic] will remember the delicious zwieback which occupies so conspicuous a place in the bill of fare... At Carlsbad, zwieback is made by exposing the sour 'schwartz brodt' to moderate heat for several hours until the starch becomes to dextrin and dextrose. For years the Sanitarium Health Food Company has manufactured for the use of the numerous patrons of the Medical and Surgical Sanitarium, Battle Creek, Mich., a superior quality of zwieback, which is not only more palatable but much more wholesome than the original article of Carlsbad manufacture... With milk or cream it is a real delicacy, as toothsome as it is nourishing and easy of digestion. Zwieback is supplied in three grades as follows:–No. 1. Made of graham flour (Sanitarium brand), containing fifteen per cent. of gluten... For recipes, see pages 145 to 138."

Note 2. This is the earliest document seen (July 2004) that contains the word "zwieback" (pronounced SWEE-bak in English). The word is also spelled like this in German, but with a capital "Z" and pronounced TSVEE-bak. The earliest occurrence of the word seen by *Merriam-Webster's Collegiate Dictionary* is 14 March 1894, *New York Weekly Tribune* (p. 5, col. 4). "These Zweiback will keep for a long time if put in a dry place." Note spelling and capitalization!

The eight ads on unnumbered pages in the back of the book are for: (1) Health Foods–Granola, a health food, an invalid food. From Battle Creek Sanitarium Health Food Co. Established 1876. "One pound more than equals three pounds of best beef." (2) Health Foods–Granose, Granola, Caramel-Cereal, Battle Creek Sanitarium Breakfast Food, Germless Oats, Germless Wheat Grits, Germless Corn Grits, Crystal Wheat, gluten preparations, diabetic foods. Send for a catalogue and price list to Battle Creek Sanitarium Health Food Co. (3) "Almond Butter–A substitute for ordinary butter. Presenting fat in the form of a perfect emulsion. Combined with water it forms a delicious cream. Used for shortening of all kinds. A pure product of nuts; can be eaten by those who cannot eat ordinary butter. Send five cents for sample. From: Sanitas Food Co., Battle Creek. (4) "Nuttose–Pure product of nuts. Perfect substitute for all flesh foods. Makes fat and blood. In their natural state nuts are difficult to digest, and cannot be eaten by many persons... Nuttose has the consistency of cheese, and much the consistency of cold roast mutton, and may be eaten cold, stewed, cooked with vegetables or other foods, made into gravies and other preparations in the same manner as meat..." "Send ten cents for a sample can... Ready to eat at once. Keeps indefinitely." From: Sanitas Food Co., Battle Creek.

(5) *Science in the Kitchen,* by Mrs. E.E. Kellogg. Published by Modern Medicine Publishing Co., 65 Washington St., Battle Creek, Michigan. (6) Universal Mercurial Dynamometer, developed by Dr. Kellogg for testing the strength of individual groups of muscles in the human body. From: Sanitary and Electrical Supply Co., Battle Creek. (7) *Home Hand-Book,* by Dr. J.H. Kellogg. Published by Modern Medicine Publishing Co. Over 1,700 pages and 500+ engravings. Describes the best means of preserving and regaining health. (8) Perfection vaporizer, from Modern Medicine Co. Address: A.M., author of

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"Science in the Kitchen," etc., Battle Creek, Michigan.

121. Smith, Ellen Goodell. 1896. The fat of the land and how to live on it. Special chapters on nuts and vegetable oils, and how to use them in cooking; milk; bakeries; feeding infants and various other subjects relating to the problem. Amherst, Massachusetts: Press of Carpenter & Morehouse. 251 + [12] p. Portrait. Illust. Index. 20 cm. At top of title page: "A practical cook and text book for general use."

• ***Summary:*** A remarkable and wholistic vegetarian (actually vegan) cookbook by a medical doctor (M.D.). A photo (frontispiece), facing the title page, shows a portrait of Dr. Ellen Smith. Dedication: "To the millions of thinkers who think in new directions, and to other millions who do not stop to think whether they should 'live to eat' or eat to live' this book is dedicated." Facing the table of contents are three quotations from Buddhist and Christian scriptures on the importance of not killing.

The Preface begins: "This book *is* because of the agitation and discussion upon the various phases of the food question. The title indicates its character to be vegetarian; this word however is a misnomer, but as none better has yet been coined, we will simply state that we are vegetarians because we think nature designed us to subsist on the 'fat of the land,' and not on the flesh and blood of beasts, or of any living, sentient creature."

"To be a health and dietetic reformer in the early days of this movement meant much sacrifice and often personal abuse" (p. 10).

"With no desire to set aside the work of the scientists, we accord 'honor to whom honor is due,' and may success attend their gigantic efforts, that seem to be heroically directed toward healing, protecting, and preparing the animal world and their products for human consumption" (p. 11).

This chapter, after listing many of America's major problems, concludes: "From a vegetarian standpoint, these unhealthful conditions of mind and body are largely propagated, nourished and developed and developed from the never ending supply of slaughtered flesh and its stimulating–not nourishing–accompaniments. The moral and physical health of millions is thus undermined, and from such material is created generation after generation of imperfect human beings;..." (p. 11).

Chapter 5, titled "Milk, cream, butter, etc." begins: "Milk, cream, butter, salt and sugar are admissible in hygienic and vegetarian dietary, but in most of the recipes here given are not included... [but] in all cases salt can be added if desired, or milk substituted for water."

Chapter 6, titled "Vegetable oils," notes: "Those at present extensively used for culinary purposes are obtained from the olive, cocoanut and cotton seed." It is almost impossible to obtain olive oil unadulterated. "The *American Analyst* tells us that 'Two-thirds of the olive oil sold in the markets of the world is born in the cotton fields of the southern states" (p. 57). "At Manheim, Germany, cocoanuts have for many years been made into butter for general culinary use... [It] keeps indefinitely and even when exposed to the air *will not become rancid* like animal fat. This butter is also manufactured in England... It is now manufactured in America by the Pure Food Co., Chicago, Illinois" (p. 58). Chapter 6 concludes prophetically: "One need not be a vegetarian or even a hygienist to use these vegetable oils, for these are thousands of families using them, who also use animal food, finding economy in health and purse by so doing." Note 1. This is the earliest document seen (March 2005) that contains the term "Pure Food," probably in connection with the growing "pure food movement" in the USA

Chapter 10, titled "Nuts, their culture and use in cooking," (p. 141-56) discusses almonds (now largely grown in California), walnuts, pecans, Brazil nuts, and peanuts. Peanut oil is largely exported to foreign countries and doubtless returns, with olive oil, under the name of "Pure Olive Oil." "It is said that America uses 4,000,000 bushels of peanuts yearly at a cost to the consumers of $10,000,000. Very rarely do we find these nuts on the table as an article of food, but they are consumed between meals by everybody, from the shoeless and hatless street waif to the gray-haired millionaire." "Unbelievers tell us that a vegetable diet lacks proteids or tissue building elements, and hence

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that vegetarians are not properly nourished. Science has demonstrated that proteids are abundant in the grains," nuts, and other foods (p. 148-49). The section titled "Nuts as food" (p. 149-53) begins: "Nuts are not only superior to flesh as an article of diet, but may be used in many forms of cookery, either whole, chopped, grated, crushed or ground into a paste or meal." "The pine nut, sold under the name of pegnolia [pignolia], is an excellent nut for cooking." Two sub-sections are titled "Nut substitute for milk" (using cocoanuts, pecans, peanuts, Brazil nuts, etc.) and "Nut butter" (one of the latest novelties). There are recipes for sandwiches with "almond nut butter," and "Peanut sandwiches" spread with a "form of nut butter which flavors so strongly of peanuts that it will make an excellent substitute for dairy butter to spread the bread and hold the crushed nuts in place." Note 2. This book contains no recipe for making peanut butter at home.

Chapter 11, "Salads," contains a long section titled "Japan Soja" (p. 164) which clearly refers to Japanese soy sauce: "A jar of the extract of Japan soja was received too late for careful testing or experiment. But coming from a German vegetarian laboratory [Dr. Lahmann's] and said to be free from injurious substances, it may prove to be a useful addition to the table. Following is a description of the Soy-bean from which it is made.

'Japan Soja, a substitute for flesh meat extracts such as Bovinine, etc. etc. The soy-bean or pea is a small erect herb, ("Glycine soja," or "soja hispida") of the bean family, "Papilionacees" of India and China, cultivated for its seeds; composed of 38% proteids, 17 to 20% fat, 5% cellulose [fiber] and 4% ashes. The hygienist loses nothing by declining flesh meat extracts of any sort, but substantially gains by adopting Japan Soja, a safe and far more palatable flavoring for various dishes. It may not only be so employed in the preparation of dishes, prior to serving, but subsequently and similarly to Worcestershire sauce, etc.'

The odor and flavor of this preparation is very delicate and may readily supply a need in the dietary of those who are making a change from an animal to a vegetable diet."

The next (and last) paragraph of Chapter 11 (p. 165) notes that commercial samples of "Bromose and nut butter... manufactured in vegetarian laboratories and guaranteed free from animal fat" were "received at 'the eleventh hour,' too late for critical experiment... Crushed nuts, nut butter and nut meal of home make were used in all preceding recipes containing nuts."

Chapter 12, titled "Condiments and seasonings" (p. 167-71) argues against the use of salt, spices (including pepper, mustard, ginger, etc.), and commercial condiments. "Salt destroys natural flavor and gives its own flavor to all food... Salt also induces unnatural thirst,..." Instead, why not grow and use "sweet herbs" and "aromatic seeds." "Why may not sweet marjoram, sweet basil, rosemary and lavender, lemon verbena, rose and geranium leaves lend their exquisite flavors to our food? Thyme, parsley, sage and mints of various kinds..." Note 3. This general attitude may explain why Japanese soy sauce, a commercial condiment, was not considered a condiment and included in this chapter.

A "Directory" (p. 246) lists 13 sources of "pure food products" including: "Health foods: Dr. J.H. Kellogg, Battle Creek, Michigan. Nut preparations: Sanitas Food Co., Battle Creek, Michigan... Vegetable milk, etc.: Hygienic Supply Co., 203-05 Park avenue, Baltimore, Maryland... Readshaw's Forest Mills Graham Flour (Original) and cereals, Dansville, New York."

A full-page ad (p. 255) describes products made and sold by the Sanitas Food Company (Battle Creek, Michigan) titled "Pure Products of Nuts." These include Bromose, Nuttose, Nut-Butter [probably peanut butter], and Nut-Meal.

A full-page ad (p. 258) is titled "Pure. Vegetable. Nutritive," by The Hygienic Supply Co. (F. Witte), 203-205 Park Ave., Baltimore, Maryland. They are "Importers of German health goods and books" including Dr. Lahmann's Japan Soja, which "Is a pure vegetable extract, which is far superior to Meat Extract. It can be used for making soups, or may be added to other foods in order to make them more appetizing. Price per jar, $1.00." (Note 4. According to *Vegetarisches Kochbuch mit Gesundheit Regeln*, by Carlotto Schultz {1886}, Dr. H. Lahmann of Stuttgart is an authority on the feeding of infants and problems related to indigestion.) Other products imported from Germany by this company include Dr. Lahmann's Vegetable Milk (for infants), Dr. Lahmann's Vegetable Extract, and Dr. Lahmann's Nutritive Cocoa.

Note 5. This is the second earliest English-language document seen (Aug. 2013) that contains the term "Vegetable Milk." This non-soy product is an emulsion made from almonds and nuts.

Page 259 contains an ad for *Health-Culture: A Journal of Practical Hygiene* by The Health-Culture Co., 341 Fifth Ave., New York.

Page 260 contains an ad for *Food, Home and Garden,* a periodical edited by Rev. Henry S. Clubb of the Vegetarian Society of America, 310 Chestnut St., Philadelphia, Pennsylvania.

Note 6. Notice that this book contains no chapter on main dishes or entrees; unleavened Graham bread (made with "entire wheat flour") was considered the best main dish. Very few the many recipes call for the use of dairy products, eggs, animal fats, or honey, and in each case they are optional.

Chapter 13, "Pudding, pastries and cakes," convincingly questions the need for this entire category of foods, but those who *must* have such sweets are encouraged (p. 176-77) to use water instead of milk, vegetable fats instead of animal fats and dairy products, reduce the number of eggs and the amount of sugar used by one-half or more, and gradually eliminate spices and salt.

Chapter 14, "Milk and the cow" makes a strong case for

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not using these animal products.

A woman cited several times (p. 68, 177) as an authority on foods is Mrs. Emma P. Ewing. Address: M.D., Pansy Park, Dwight, Massachusetts.

122. Kellogg, John Harvey. 1896? Cow's milk a cause of disease (Brochure). Battle Creek, Michigan. 18 p. Undated. 15 cm.

• ***Summary:*** Contents: Introduction. General suspicion of cow's milk. Milk a natural food for infants, but not for adults. Why milk disagrees with adults. Milk the cause of biliousness. Milk the cause of nervous headache, or migraine. A vegetable substitute for milk (Lac Vegetal, or Nut Cream, sterilized in half pound tin cans). Nuts and fruits remain man's natural diet. The advantages of Nut Cream (10 advantages). Directions for use.

Infants who cannot digest cow's milk should "add one part of Nut Cream to six parts of thin gruel made of the Sanitarium Infant Food, or Sanitarium Gluten Meal. Every one who has seen Nut Cream and tasted it, is astonished that so close an imitation of milk could be produced from nuts. It constitutes one of the most useful and interesting products of the many experiments which have been conducted by the Sanitas Food Co. Taken together with Nuttose, nut cheese, and nut butter, Nut Cream completes the list of substitutes for most common animal food substances; namely, meat and milk and their products."

Note: This brochure was probably published shortly after an article by the same title appeared in *Modern Medicine and Bacteriological Review* (Battle Creek, Michigan) (Sept. 1896, p. 220-23)–because it is longer and more detailed. Address: M.D., Battle Creek, Michigan.

123. Newberry's. 1897. Health, 'Lead in quality and quantity.' We are headquarters for Battle Creek Sanitarium Health Foods. The following is a partial list (Ad). *Los Angeles Times.* March 7. p. 27.

• ***Summary:*** "Granose Flakes–20¢ a package. Arenola–15¢ a package. Granola–15¢ a package. Bromose–50¢ a package. Nuttose–25¢ a can. Zwieback–15¢ a package. Glutin [Gluten] Biscuits–40¢ a package. Glutin Wafers–25¢ a package. Caramel Cereal, a substitute for coffee–15¢ a pound. Whole Wheat Wafers–15¢ a package.

"Just in a large shipment of shredded whole wheat biscuits, from Worcester, Massachusetts, 15¢ a package." Address: 216 and 218 South Spring Street [Los Angeles, California].

124. Kellogg, John Harvey. 1897. The nutritive value of peanuts. *Good Health* (*Battle Creek, Michigan*) 32(3):176. March.

• ***Summary:*** "It is not generally known that the peanut is one of the most nourishing of all foods." A table, prepared by Dr. König of Germany, shows the number of nutritive units per kilogram of 12 foods. Peanut meal has the most (3,134), followed by bacon (2,767), then butter (2,610).

"Dr. Fuhrbringer [sic, Führbringer], director of the Public Hospital at Berlin, Germany, has made extensive use of peanuts as a food for patients in the hospital, and speaks of them in the following commendatory terms: 'They are especially valued as a part of the diet of those suffering with diabetes or corpulency.'" Address: M.D.

125. Kellogg, John H. 1897. Process of preparing nutmeal. *U.S. Patent* 0,580,787. April 13. 3 p. Application filed 4 Nov. 1895.

• ***Summary:*** This is a patent for two products: Peanut meal and a sort of peanut butter. "It is the object of my invention to produce an improved alimentary product or products from peanuts or other nuts... I obtain a bifold or double product, namely a dry and practically white nutmeal and a pasty adhesive substance that is for convenience of distinction termed 'nut butter.'"

"The moist and brown product is soft and pasty like butter and is somewhat less digestible than the meal, owing to the greater amount of free oil it contains. It is used as a substitute for butter, either for table use or for shortening in cooking. It is, in fact, a good substitute for animal fats. It has a slightly nutty flavor and is palatably agreeable, beside being far more nutritious than butter."

Final summary: "The improved process for producing the alimentary nut product specified, which consists in blanching the nut-kernels; then boiling the same for several hours, till they are thoroughly cooked and rendered soft and pulpy; next drying such cooked products; and lastly, subjecting the dried product to heavy pressure between rollers and separating the fine meal from the roller to which it adheres, as specified.

"The process of producing the improved alimentary nut product, consisting in removing the cuticle of the nut-kernels; then boiling them in water until thoroughly cooked and rendered soft; next shredding and drying the cooked product; and lastly, passing the dried substance between rotating rollers by which it is subjected to heavy pressure, and the fine meal is separated from the roller to which it adheres, and the more oily portion from the adjacent roller, as specified."

A full-page illustration showings the rotating rollers or rollers by means of which heavy pressure is applied to the boiled, shredded, and dried peanuts "with the result that the pasty mass is separated into two quite distinct forms." One is dry and granulated, the other is dark, oily, and sticky. Address: M.D., Battle Creek, Calhoun County, Michigan.

126. Newberry's. 1897. "Lead in quality and quantity" (Ad). *Los Angeles Times.* April 29. p. 7.

• ***Summary:*** "Lincoln said: 'You can fool some of the people all the time; all the people some of the time, but cannot fool

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all the people all the time.'"

"Caramel Cereal: The great Substitute for Coffee is made only by the Battle Creek Sanitarium Health Food Co. [Michigan], and is the original goods. Sold in full 1-lb. packages at 15¢. Be sure you get the genuine Caramel Cereal." Address: 216-218 South Spring St. Phone: Main 26.

127. *Good Health* (*Battle Creek, Michigan*). 1897. Vegetarianism not at fault. 32(4):241-42. April.
• ***Summary:*** "The recent death of Mr. Charles Sorley, former president of the Chicago Vegetarian Society, from cancer of the liver and stomach, has been made the occasion of some absurd newspaper comments, and used as an argument against abstinence from flesh foods." Contains a statement made by his son.

128. Kellogg, John H. 1897. Vegetable substitute for milk. *Good Health* (*Battle Creek, Michigan*) 32(4):245. April.
• ***Summary:*** The cocoanut furnishes a satisfactory substitute for cow's milk to millions of people in tropical countries. For the past 20 years, Dr. Kellogg has been searching for a suitable substitute for milk to meet the dietetic requirements of invalids. About 18 months ago he "succeeded in producing a very palatable substitute for milk, which was termed 'Lac Vegetal.'... It can not be offered with confidence as a thoroughly satisfactory substitute for animal milk. Lac vegetal, or nut cream, is made from the choicest nuts, and is thoroughly sterilized. Its composition is such that it constitutes a perfect and symmetrical food." It is made from almonds.

"Lac vegetal, when diluted, has precisely the appearance of cow's milk; and if allowed to stand, a cream will rise upon it.

"In experiments made with nut milk it has been found to have a delicate, delightful flavor, with a suggestion of its nutty origin, but resembles cow's milk very closely indeed. It agrees with the most delicate stomach, and can be taken with perfect impunity by persons who cannot take cow's milk or cream even in the smallest quantities without suffering more or less severely in consequence. Added to cow's milk in proper proportion, lac vegetal, or nut cream, prevents the formation of hard curds in the stomach, as when the cow's milk is used alone. This renders it an exceedingly valuable food for infants,–vastly superior to any infant's food which has been devised." Address: M.D., Battle Creek, Michigan.

129. Newberry's. 1897. "Lead in quality and quantity." Health foods (Ad). *Los Angeles Times.* May 3. p. 7.
• ***Summary:*** "We are the headquarters for Battle Creek Sanitarium Health Foods [Michigan]. Granose and Granola. Are complete foods, containing all the elements required for nutrition. One pound contains three times as much nutriment as a pound of beefsteak. Granose–20¢ pkg. Granola–20¢ pkg." Address: 216-218 South Spring St. Phone: Main 26.

130. Newberry's. 1897. Avenola (Ad). *Los Angeles Times.* May 10. p. 7.
• ***Summary:*** "This is a preparation of the finest quality wheat and oats. Like Granola, it is a perfect food, meeting all the demands of the human system, having been subjected to several hours cooking at a heat above that of boiling point. Ready for use in half a minute. 1 pound packages 15¢.

"Headquarters for Battle Creek Sanitarium Health Foods [Michigan]." Address: 216-218 South Spring St. Phone: 26 and 49.

131. Kellogg, John Harvey. 1897. Nuts and fruits man's natural diet (Editorial). *Good Health* (*Battle Creek, Michigan*) 32(5):317. May.
• ***Summary:*** "Nuts are unquestionably the vegetable analogue of meat and other animal food, not only containing all the food elements to be found in animal products, but in finer and more digestible form, more delicately flavored, and wholly free from the deleterious elements which abound in meat, and which are closely associated with all forms of animal food. Nuts and fruits are stated by the most eminent comparative anatomists to be the natural diet of man, as they are of his primitive relatives, the gorilla, the orang-outang, and the chimpanzee..."

"The general prejudice against nuts on the ground of their indigestibility is the natural outgrowth of the attempt to use them in a perfectly natural state, with no preparation except such as can be given by the teeth. With an entirely healthy stomach and sound teeth, this preparation is generally sufficient, but experience has shown that the digestibility of most nuts is as much improved by artificial preparation and cookery as is that of vegetables and other food-stuffs." Address: M.D. [Battle Creek, Michigan].

132. Battle Creek Sanitarium Health Food Co. 1897. The autocrat of the breakfast table... (Ad). *Chicago Daily Tribune.* July 20. p. 12.
• ***Summary:*** "... From a liquid point of view, was long considered to be a steaming cup of coffee. This berry from the tropics shared with the leaf of the tea-plant the honor of refreshing all civilization. Both were found by experience, however, to be workers of mischief to the nerves, stomachs and brains of their admirers. In one direction or another they were simply poisons. When science was aroused to this fact, some thirty years ago, it was at the famous Battle Creek Sanitarium, the headquarters of the Pure Food movement in America, that steps were taken to make a beverage worthy of replacing coffee and tea. There, by study and experiment, was evolved the original 'Health Coffee,' Caramel Cereal, which at once became a comfort to thinkers and toilers alike. It has been used on the Sanitarium tables for over 30 years... In flavor and fragrance it is fully equal to Mocha or Java... Progressive people all use it!... In short, Caramel Cereal is

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the Autocrat of the Breakfast Table." An illustration shows the main building of the Battle Creek Sanitarium. Address: Battle Creek, Michigan.

133. Battle Creek Sanitarium Health Food Co. 1897. "The perfumes of Araby's shore..." (Ad). *Chicago Daily Tribune.* July 22. p. 7.
• ***Summary:*** "... May sound very nice in poetry, but they are not always safe." An ad for the original Caramel Cereal coffee substitute. Address: Battle Creek, Michigan.

134. Battle Creek Sanitarium Health Food Co. 1897. Immensesensation: Chicago is stirred up by the grand free distribution of "Caramel Cereal." The original health coffee is now shedding fragrance in thousands of city homes (Ad). *Chicago Daily Tribune.* Aug. 4. p. 8.
• ***Summary:*** An advertorial for the original Caramel Cereal coffee substitute. Address: Battle Creek, Michigan.

135. *Good Health* (*Battle Creek, Michigan; Seventh-day Adventist*). 1897. Some nut breads. 32(8):39. Aug.
• ***Summary:*** One recipe is for: "Nut butter puffs.–Dissolve peanut butter in five times its own volume of water. Into one cup of this cream beat one egg and sufficient sifted graham flour (part white flour if desired) to make a batter of proper consistency. Bake in a moderate oven until well dried out,–about fifty minutes.

"Almond butter may be used instead of nut butter, but in all these breads in which eggs are used the batter should be poured into warm, not hot, gem-irons."

136. Battle Creek Sanitarium Health Food Co. 1897. A drink, not a dose (Ad). *Chicago Daily Tribune.* Sept. 14. p. 3.
• ***Summary:*** An ad for the original Caramel Cereal coffee substitute. "A true health beverage." Address: Battle Creek, Michigan.

137. New York Food Co. 1897. Notice (Ad). *Indicator* (*New York Tract Society, Rome, New York; Seventh-day Adventist*) 7(37):4. Sept. 29.
• ***Summary:*** "Do you want
"Sanitarium Health Foods?
"Sanitas Nut Foods?
"Eureka Health Flour?
"Snow Flake Hominy?
"Roasted Wheat Flakes?
"Lentils? Split Peas?
"Choicest Cereals and Flours?
"Nut Butter?
Nuttose?
"Malted Caramels?
"Syrup of Malt?
"Nuts of Every Kind?
"Then send your orders to us. We make it our business. We keep posted. We have a stock on hand. Circulars and price lists free." Address: Oxford, New York.

138. Battle Creek Sanitarium Health Food Co. 1897. Housewives, beware!!! (Ad). *Chicago Daily Tribune.* Nov. 3. p. 7.
• ***Summary:*** "Caramel Cereal is a 'Health coffee, not a medicine. At all grocers. A print of the Sanitarium is on every package of Caramel Cereal. Any Cereal Coffee offered you without it is an imitation." Address: Battle Creek, Michigan.

139. Kellogg, John Harvey. 1897. Chronic poisoning from the free use of flesh foods (Editorial). *Good Health* (*Battle Creek, Michigan*) 32(11):709-11. Nov.
• ***Summary:*** The "flesh of animals as food is not a pure nutriment, but is mixed with poisonous substances, excrementitious in character, which are the natural result of animal life. The vegetable stores up energy... It is from the vegetable world that all animals, directly or indirectly, derive the energy which is manifested by animal life through muscular and mental work. The vegetable builds up; the animal tears down. The vegetable stores up energy; the animal expends energy."

"Dujardin-Beaumetz, Trastour, and other eminent French physicians called attention several years ago to the fact that in gastoptosis a flesh diet is particularly pernicious, on account of the too long retention of food in the stomach, and the consequent putrefaction of proteids, giving rise to ptomains and other toxic substances, some of which exercise an exceedingly potent and mischievous influence upon the body." Address: M.D., Battle Creek, Michigan.

140. Kellogg, John Harvey. 1897. Nuts for diabetics: Editorial. *Modern Medicine and Bacteriological Review* (*Battle Creek, Michigan*) 6(11):274-77. Nov.
• ***Summary:*** "In view of the high nutrient value of nuts, it is astonishing that they have heretofore been so little employed as a source of food by civilized nations." The ancient Arcadians in Italy used chestnuts. The Indians of California used pine-nuts. The cocoanut furnishes food for vast multitudes of people in the Pacific islands and tropical countries. The hickory-nut, the walnut, and the butternut are also valuable foods. In "their natural condition [raw] they are somewhat difficult of digestion, and so have been altogether excluded from diet lists... Even peanuts, which are perhaps the most refractory to digestion of all nuts, may be so prepared as to be acceptable to the most delicate and sensitive stomach.

The especial characteristics of nuts, from a dietetic standpoint, are the almost entire absence of starch and allied substances, and an abundance of proteids and fats... This fact is well shown by the accompanying table." It gives values for the walnut, hazelnut, sweet almonds, peanuts, and cocoanut." Most contain a much larger proportion of proteids

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than beefsteak.

"Some extensive experiments have recently been made in Germany for the purpose of determining the food value of the peanut. The material used is what is known as the 'oil-cake,' a residue of the oil industry. Some thousands of tons are annually imported to Germany for the purpose of making salad oil, a large portion of which is sold in this country as olive-oil." More than 25 factories in Germany are engaged in this process.

"Within the last few years the writer has made many experiments with nut products of various sorts in diabetes and other disorders, and has found the following preparations extremely valuable:-

"1. Nuttose.–This is a thoroughly cooked and sterilized product of nuts, chiefly peanuts. Nuttose is made into the form of a cheesey mass which readily dissolves in the digestive fluids, the nuts having been first completely disintegrated and then thoroughly cooked" [steamed or blanched].

"2. Nut meals of various sorts.–These are chiefly almond meal and nut meal, the latter consisting of an admixture of nuts." They can be added to cakes, soups, etc. or used for shortening pie crusts.

"3. A sterilized nut butter.–This preparation consists of a combination of nuts which have been first thoroughly blanched, then completely disintegrated by conversion into a paste, and finally cooked at a temperature which secures complete sterilization. This product is an excellent substitute for butter and shortening of all kinds. When mixed with water it makes a very delicious nut cream or milk, and is very readily assimilable.

"Fürbringer's examination of the fecal matters of persons fed upon nuts shows that roasted peanuts in their ordinary form are practically indigestible, coarse particles being found in about the same condition as when swallowed. When reduced to a paste, roasted peanuts are much more digestible, but, for perfect digestibility, the nut needs to be subjected to long cooking at a lower temperature than that employed for roasting.

"Luedtke has shown that the proteids of the peanut are much more easily digestible than those of beans, peas, lentils, etc..." Address: M.D., Battle Creek, Michigan.

141. Battle Creek Sanitarium Health Food Co. 1897. Granola (Ad). *Gospel of Health* (*Battle Creek, Michigan; Seventh-day Adventist*) 1(11):2. Dec.
• ***Summary:*** A ¼-page ad. "Granola is a thoroughly cooked and partially predigested cereal food prepared from the choicest grains.

"Granola has a delicate, appetizing flavor.

"Granola is an excellent food for teething babies and for older children. It is a fine food for every member of the household.

"Granola is far better than beefsteak.

"A sample package free to those mentioning *Good Health.*

An illustration shows a large package of the product. On the front panel we read: "Granola: A Health Food. Carefully blended mixture of wheat and other choice grains." Address: Battle Creek. Michigan.

142. Sanitas Nut Food Co., Ltd. 1897. Ambrosia (Ad). *Gospel of Health* (*Battle Creek, Michigan; Seventh-day Adventist*) 1(11):1. Dec.
• ***Summary:*** A 1/8-page ad. "It is a fat- and blood-making food, and may be digested and assimilated by those who can eat nothing else." Address: Battle Creek. Michigan.

143. Sanitas Nut Food Co., Ltd. 1897. Eat Bromose, Maltol, Malted Nuts (Ad). *Gospel of Health* (*Battle Creek, Michigan; Seventh-day Adventist*) 1(11):2. Dec.
• ***Summary:*** A ½-page ad. "Are you thin? Would you like to get fat? 'Laugh and grow fat' is an old adage which may have in it a grain of truth, but thousands of scrawny individuals will testify that something more than laughter is necessary to produce plump, rosy cheeks and a rotund figure. Fat- and blood-making foods are necessary. We have three new foods, all produced from nuts, which make fat faster than any other food remedies known. Send for brochure 'How to Get Fat,' for circulars; and if you wish a sample of foods, enclose ten cents." Address: Battle Creek. Michigan.

144. International Medical Missionary and Benevolent Association. 1897. Year book. Battle Creek, Michigan. 176 p.
• ***Summary:*** The chapter titled "The Battle Creek Sanitarium Health Food Company" begins (p. 137): "Early in 1877, the managers of the Battle Creek Sanitarium began the manufacture of health foods. The first product introduced was that now commonly known as 'granola.' This new food soon established itself in the confidence of the public, and has steadily grown in favor, until at the present time it is manufactured and sold by the car-load.

"From time to time various other products have been added, until forty-two different kinds of foods, including numerous varieties of crackers, biscuits, and packaged foods, are now made and offered for sale in the leading cities of the United States. The facilities, which at first consisted of nothing more than a common brick oven, have been gradually increased, until at the present time three factories are required to supply the growing demand. One of these is devoted exclusively to the manufacture of a cereal substitute for coffee; another is wholly devoted to the manufacture of breads; while the third, a large, new structure, equipped with the most modern machinery of every description useful in this line, is devoted to the manufacture of granola, crackers, biscuits, gluten, and other special preparations.

"The latest addition to this department is a complete

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milling establishment with a new and improved system, by which is manufactured flour greatly superior in quality to anything which has heretofore been made. The various cereal products of this department are, at present, made almost wholly from this flour.

"The Battle Creek Sanitarium Health Food Company is not conducted as an ordinary commercial business, but is carried on as a practical means of diffusing health principles in relation to diet, thus acting as an auxilliary to the Sanitarium in a double sense, not only furnishing the best foods for its family of more than one thousand persons, but annually sending out into all parts of the United States and to foreign countries, millions of packages of health foods, each of which acts as a practical missionary of health principles.

"During the past year this department has employed twenty agents, or food demonstrators, who have visited various points in the United States, not simply to make sales for a salable product, but to present the value of pure foods and the superiority of a well-chosen, well-prepared vegetarian dietary over one consisting of flesh foods, condiments, tea and coffee, and other unwholesome articles. These demonstrators, having received training in the Sanitarium School of Cookery and in the research laboratories of the institution, are well prepared to give the reasons for their recommendation of wholesome foods in the place of unwholesome ones, and prove themselves most efficient agents in the diffusion of health principles. During the year 1896, exhibitions were given in many of the principal cities of Michigan, Indiana, Ohio, Illinois, Wisconsin, Minnesota, Iowa, New York, Connecticut, and Massachusetts, and before many medical associations, and at numerous Pure Food Exhibits. Demonstrators are permanently located in New York City; Boston, Massachusetts; Philadelphia, Pennsylvania; Minneapolis, Minnesota; and Chicago, Illinois. Foods are shipped to many foreign countries, including Great Britain, Germany, Scandinavia, Africa, India, China, Australia, and the South Sea Islands.

"The demand for health foods is rapidly increasing. At the present time, two of the three factories of the company are obliged to run night and day to keep up with orders. The orders received and filled during the first ten days of 1897 amounted to more than forty tons. The sales of this department during 1896 aggregated more than $150,000.

"The earnings of this department, while not large, owing to the low price at which the foods are sold, compared with the cost of their manufacture, are still considerable, usually amounting to several thousand dollars annually. The total earnings of this as well as of other departments of the Sanitarium, are devoted to the charitable and philanthropic work of the institution, and to making necessary improvements."

A full page photo on the page just before this chapter shows a ground-level view of the "Manufactory of the Battle Creek Sanitarium Health Food Co." In front are four carts pulled by horses. A tall smokestack rises above the top. On the roof is a large sign that reads "Health Food Department."

The chapter titled "Missionary Nurses" states (p. 153-54): "Sister Anne Tabor has spent the last three years in the field, giving talks on healthful dress, diet, etc., holding classes in physical culture, and caring for the sick at times as occasion has required. For some time past her regular occupation has been that of demonstrating health foods in the large cities of the South and East, under the direction of Brother Barton Huff manager of the Battle Creek Sanitarium Health Food Company, who conducts his work on missionary principles, and as a genuine missionary effort."

Note: This annual began publication in 1895. Address: Battle Creek, Michigan.

145. Kellogg, Ella Ervilla (Eaton) (Mrs.). 1897. Every-day dishes and every-day work. Battle Creek, Michigan: Modern Medicine Publishing Co. 184 p. Index. 22 cm. [2 ref]

• ***Summary:*** The text of this book is identical to that of the 1896 edition, and on the same pages. However the order and location of the ads are different.

The eight ads on unnumbered pages in the front of the book are for: (1) *Science in the Kitchen,* by Mrs. E.E. Kellogg. Published by Modern Medicine Publishing Co., 65 Washington St., Battle Creek, Michigan. (2) Universal Mercurial Dynamometer, developed by Dr. Kellogg for testing the strength of individual groups of muscles in the human body. From: Sanitary and Electrical Supply Co., Battle Creek. (3) *Home Hand-Book,* by Dr. J.H. Kellogg. Published by Modern Medicine Publishing Co. Over 1,700 pages and 500+ engravings. Describes the best means of preserving and regaining health. (4) Perfection vaporizer, from Modern Medicine Co. (5) Health Foods–Granola–a health food, an invalid food. From Battle Creek Sanitarium Health Food Co. (6) Health Foods–Granose, Granola, Caramel-Cereal, Battle Creek Sanitarium Breakfast Food, Germless Oats, Germless Wheat Grits, Germless Corn Grits, Crystal Wheat, gluten preparations, diabetic foods. Send for a catalogue and price list to Battle Creek Sanitarium Health Food Co. (7) "Almond Butter–A substitute for ordinary butter. Presenting fat in the form of a perfect emulsion. Combined with water it forms a delicious cream. Used for shortening of all kinds. A pure product of nuts; can be eaten by those who cannot eat ordinary butter. Send five cents for sample. From: Sanitas Food Co., Battle Creek. (8) "Nuttose–Pure product of nuts. Perfect substitute for all flesh foods. Makes fat and blood. In their natural state nuts are difficult to digest, and cannot be eaten by many persons... Nuttose has the consistency of cheese, and much the consistency of cold roast mutton, and may be eaten cold, stewed, cooked with vegetables or other foods, made into gravies and other preparations in the same manner as meat..." "Send ten cents for a sample can... Ready to eat at once. Keeps indefinitely."

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From: Sanitas Food Co., Battle Creek.

The last 8 unnumbered pages of the book contain more ads. Foods from Sanitas Food Co. in Battle Creek include: Almond Meal, Lac Vegetal or Nut Cream ("Prepared from the choicest nuts. A perfect substitute for cow's milk. Added to cow's milk, it increases its digestibility. Especially valuable for invalids and infants"), and Bromose ("Consists of nuts and cereals, in which the starch is perfectly digested... It is the most easily digested and most fattening of all foods.").

Other terms *not* seen in this book: Bran, roughage, dietary fiber, or fiber (but cellulose is mentioned in a table on p. 7).

A slightly enlarged edition (186 p.) of this book was published in 1898, and another in 1900 (copyright 1896). Address: Battle Creek, Michigan.

146. Paulson, David. comp. 1897. Instruction related to the principles of healthful living. Compiled from the writings of Mrs. Ellen G. White. Battle Creek, Michigan: Medical Missionary Board. 170 p. Index. 29 cm. 1980 facsimile reprint.

• ***Summary:*** This book was compiled from the following writings of Ellen G. White: Christian Education (C.E.). Christian Temperance (C.T.). Facts of Faith, found in Spiritual Gifts, Vol. 4 (F. of F.). Gospel Workers (G.W.). Health Reformer (H.R.). How to Live (H. to L.). Medical Missionary (M.M.). Mount of Blessing (M. of B.). Patriarchs and Prophets (P.P.). Review and Herald (R. and H.). Solemn Appeal (S.A.). Signs of the Times (S. of T.). Steps to Christ (S. to C.). Special Instruction on Educational Work (Sp. Instr. on Ed. Work). Special Testimony to Ministers and Workers (S.T.). Special Testimony on Education (S.T. on E.). Testimonies for the Church (T.). Unpublished Testimonies. (U.T.). Youth's Instructor (Y.I.).

147. *Food, Home and Garden* (*Philadelphia*). 1898. Home department. Jan. p. 10.

• ***Summary:*** The section in this vegetarian magazine titled "Holiday menu" begins: "Breakfast–Grapefruit. Oranges. Cracked wheat mush. Granose Flakes and Granola with cream. Toast. Graham gems."

148. Kellogg, John Harvey. 1898. Nuts for diabetics. *Good Health* (*Battle Creek, Michigan*) 33(1):45-47. Jan.

• ***Summary:*** "Even peanuts, which are perhaps the most refractory to digestion of all nuts, may be so prepared as to be acceptable to the most delicate and sensitive stomach."

A table shows the nutritive value of walnuts, hazelnuts, sweet almonds, peanuts, and cocoanuts. Peanuts contain the most proteids (28.3%), followed by sweet almonds (23.5%). "The amount of proteids in a pound of peanuts is, in fact, fifty per cent. more than that in a pound of beefsteak..."

Recent experiments in Germany have shown that peanut oil-cake is a rich source of proteids; it could be used to make an inexpensive military ration.

Nuttose is "a thoroughly cooked and sterilized product of nuts, chiefly peanuts. Nuttose is made in the form of a cheesy mass which readily dissolves in the digestive fluids, the nuts having been first completely disintegrated and then thoroughly cooked. It contains about the same amount of proteids as beefsteak, and, in addition, between twenty-five and thirty per cent of easily digestible nut fat in a state of natural emulsion." Address: M.D., editor.

149. Newberry's. 1898. 'Lead in quality and quantity.' Battle Creek Health Foods are the best pure foods in the world (Ad). *Los Angeles Times.* Feb. 2. p. 7.

• ***Summary:*** "Granose Flakes–1-lb package 20¢. Granose Biscuits–1-lb package 20¢. Avanola–2 packages 15¢. Wheat Gluten–15¢ a package. Wheat Granola–2 packages 25¢. Zwieback–2 packages 25¢. Ralston Breakfast Food–2 packages 25¢. Selected Bran–4-lb package 10¢. Malted Nuts–1-lb package 65¢. Maltol–1-lb package 55¢. Bromose–1-lb package 50¢. Gluten Farina–3 packages 25¢. Caramel Cereal a fragrant and palatable drink, as a substitute for coffee–2 packages 25¢.

"The Hotel Green of Pasadena and San Gabriel Pulmonary Sanatarium are supplying their patrons with the famous Glen Rock Water." Note: An early record of selling bottled water. Address: 216 and 218 South Spring Street [Los Angeles, California]. Phone: Main 26.

150. Kellogg, J.H. 1898. Two dozen good reasons. *Chicago Vegetarian* 2(6):4-8. Feb.

• ***Summary:*** An article presenting 24 "reasons for abstaining from the use of flesh as food." A portrait photo shows Dr. J.H. Kellogg, the author. Address: Battle Creek, Michigan.

151. *Brisbane Courier* (*Queensland, Australia*). 1898. Classified ad: Miscellaneous. April 27. p. 8.

• ***Summary:*** "Drink Caramel-Cereal! Elegant, fragrant, harmless, and perfect substitute for coffee. Sanitarium Health Food and Supply Agency, Matthewson's Photographic Lobby, Queen-street."

"Eat Nut Butter, delicious, germ-free, non-bilious preparation, a necessity where meat is prohibited. Sanitarium Health Food and Supply Agency, Matthewson's Photographic Lobby, Queen-street."

Note: By May of this year, the address is given more specifically as "123 Queen-street."

152. Kellogg, John H. 1898. Process of producing alimentary products. *U.S. Patent* 0,604,493. May 24. 2 p. Application filed 16 Feb. 1897.

• ***Summary:*** "My new and improved product is made from edible nuts, preferably peanuts... and is a semisolid, having about the same consistence as hard butter or soft cheese."

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The process consists in "blanching and thoroughly cooking nut-kernels, and reducing them to a pulp, then adding water, and sealing the pasty mass in cans, and subjecting such cans to the action of steam at a temperature ranging between 213º and 240º Fahrenheit, for a considerable period, that is to say until the mass becomes changed or modified, as specified."

"The product may be cut up in thin or thick slices like cheese and served as desired." Address: M.D., Battle Creek, Calhoun County, Michigan.

153. *Food, Home and Garden* (*Philadelphia*). 1898. Nuttolene. May. p. 74.
• ***Summary:*** "This is a new product of the Sanitas Food Co., Battle Creek and is a solid substance that can be sliced like cheese which it somewhat resembles in flavor. It is also good for sauces having a rich flavor."

154. Kellogg, John H. 1898. Vegetarian song. *Cricket* 1(1):6-8. May. *
Address: M.D.

155. Sanitas Nut Food Co., Ltd. 1898. Twentieth century foods (Ad). *Gospel of Health* (*Battle Creek, Michigan; Seventh-day Adventist*) 2(5):106. May.
• ***Summary:*** A ½-page ad. The company makes the following foods: Ambrosia. Bromose. Nuttose. Nut Butter. Malted Nuts. Maltol. Address: A 25, Battle Creek. Michigan.

156. *Advent Review and Sabbath Herald.* 1898. Ontario camp-meeting [Canada]. 75(26):414. June 28.
• ***Summary:*** "The Ontario camp-meeting was held June 9-19 at St. Thomas, a city of about twelve thousand inhabitants."

"The Ontario Tract Society and the London Health Food Company had a tent for the display of books and health foods. The sales were good. The vegetarian dining tent was well patronized."

157. *Good Health* (*Battle Creek, Michigan*). 1898. The medical opinion of the Battle Creek Sanitarium Health Food Company's products. 33(6):391. June.
• ***Summary:*** The London *Lancet* is one of the leading medical publications of the world. It is recognized as an eminent authority in all parts of the civilized globe. A recent issue contains the following reference to the foods manufactured by the Battle Creek Sanitarium Health Food Company and the Sanitas Nut Food Company: -

"'There are some novel and interesting dietetic preparations in the list of this company. They consist chiefly of food prepared from cereals and from nuts.

"'Granose Flakes,' for example consists of light brown flakes resembling potato chips, which on analysis present the composition of wheaten flour of superior quality–that is, flour in which all the essential food constituents are retained. The nitrogen amounted to 2.14 per cent., which is equivalent to a total of 13.37 per cent. albuminoids. The moisture amounted to 12.02 per cent., and the mineral matter to 2.09 per cent. The microscope showed the presence of starch granules highly distorted by cooking, probably by steam. The preparation is undoubtedly nutritious, not merely on account of its composition, but also because the constituents are prepared for the digestive process.

"'Nuttose' is an oily compound prepared from nuts. The fat is in a finely divided state, amounting to an emulsified condition, while the carbohydrates and nitrogenous matter are previously treated so as to render them easy of digestion.'"

Bromose and Caramel Cereal (an alternative to coffee) are also discussed.

158. *Good Health* (*Battle Creek, Michigan*). 1898. A new bread for diabetics. 33(6):391. June.
• ***Summary:*** "There is probably no single dietetic need which has received more attention, with fewer satisfactory results, than the preparation for diabetics. Bran bread is unpalatable and irritating, and has about the same nutritive value as sawdust. Pure gluten is tasteless, unpalatable, tough, and almost inedible. The so-called gluten breads are almost without exception unmitigated frauds... Some attempts have been made in France to manufacture a bread from the vegetable casein or legumin of peas or beans, but the results have been by no means satisfactory.

"The Sanitarium Health Food Co. has at last solved this difficult problem by producing a bread made by combining pure gluten and nuts. One of the most characteristic properties of nuts is the absence of starch. Nuts, in fact, consist almost exclusively of proteids and fats. They are, in this respect, a vegetable analogue of fat meat."

"Nut Gluten Biscuit are especially adapted, not only to persons suffering from diabetes, but to those who need a rapid gain in fat and blood."

"The Battle Creek Sanitarium Health Food Co. will be glad to send free samples to any physician or trained nurse who may desire to test this new food. Others may receive a small sample by sending to the address of the company a two-cent postage stamp."

159. Kellogg, John Harvey. 1898. Re: Medical missionary work, use of the tongue in diagnosis, and work with nuts. Letter to Ellen G. White, "Sunnyside," Cooranbong, N.S.W., Australia, July 29. 5 p. Typed, with signature.
• ***Summary:*** The letter, written on ornate Battle Creek Sanitarium letterhead (illustrations show two views of the "San") and addressed to "Dear Sister White," begins with a discussion of Dr. Kellogg's views of the importance of medical missionary work by the General Conference and its president Eld. [Elder] Irwin who is "a thorough-going health reformer. At the college View Conference last year

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he showed me his tongue. It was thickly coated, about the worst looking tongue I ever saw. He complained of constant pressure and headache, and was laboring under great difficulties. I called his attention to the fact that he was using milk and cream. I advised that he discontinue them and take a diet of fruits, grains, and nuts as a source of fat and albumen, and take once in a while a meal of fruit only. He adopted this plan with most excellent results.

"We have continued our experiments with nuts until now we are able to dispense with butter, milk, and cream altogether. In our Health Food department, we no longer use any animal fat of any kind but shorten our crackers, rolls, etc. with nuts and with such excellent success every one pronounces them more palatable and excellent in every way. I feel more thankful than I can say that we are at last delivered from the Beast entirely in diet at any rate."

Note 1. The preceding paragraph suggests that Dr. Kellogg was developing peanut butter, peanut milk, and peanut cream. If so, this is the earliest 2nd document seen (Aug. 2013) that refers to peanut milk.

Note 2. The letterhead states that the medical staff at the Sanitarium and hospital includes: J.H. Kellogg, M.D.; Kate Lindsay, M.D.; Lou C. Cleveland, M.D.; David Paulson, M.D.; Ruth O. Bryant, M.D.; D.H. Kress, M.D.; G.H. Heald, M.D.; Lauretta Kress, M.D. Abbie M. Winegar, M.D.; Howard F. Rand, M.D.; C.E. Stewart, M.D.

Note 3. The original letter is in the Ellen G. White Papers, Incoming papers, Ellen G. White Estate, Inc., General Conference of Seventh-day Adventists, 12501 Old Columbia Pike, Silver Spring, Maryland 20904-6600. Address: M.D., Superintendent, Battle Creek Sanitarium, Battle Creek, Michigan. Phone: Nos. 135, 45, 188.

160. Kellogg, John Harvey. 1898. Nuts as a food. *Good Health* (*Battle Creek, Michigan*) 33(8):473-75. Aug.
• ***Summary:*** "Peanuts must be cooked longer than any other nut, because the peanut is really not a nut at all, but a legume. It belongs to a class of foods that are closely allied to peas and beans. In China there is a bean which contains eighteen per cent of fat–the 'soja' bean, which is largely used as an article of food by the Chinese. But this bean does not compare with the peanut in nutrient qualities. Peanuts are largely used for food in the German army. Thousands of tons are annually shipped from this country to Germany and France." Address: M.D.

161. Sanitas Nut Food Co., Ltd. 1898. Twentieth Century Foods (Ad). *Chicago Vegetarian* 2(12):Rear cover. Aug. Address: Battle Creek, Michigan.

162. Kellogg, John Harvey. 1898. Vegetarians got there first (Editorial). *Good Health* (*Battle Creek, Michigan*) 33(9):574-75. Sept.
• ***Summary:*** Several interesting events have recently occurred in the world of athletics. "Fourteen flesh-eaters and eight vegetarians entered up a walking contest, the course being seventy miles. Six of the eight vegetarians arrived at the goal before the first flesh-eater arrived." The other two vegetarians got lost.

"In a bicycle contest between three well-known English clubs, the Shepherd's Bush, the London Central, and the Vegetarian, the disciples of Pythagoras won in both the three-mile heats and the half-lap contests, and were easy victors, leaving the flesh-eaters in disgrace.

"These performances ought not to surprise us, however, for five years ago, in the celebrated walking contest between Berlin and Vienna, a distance of more than three hundred and sixty miles, there were entered for the race, three vegetarians, two of whom arrived at the end more than twenty hours in advance of the first of the thirteen flesh-eaters."

"The vegetarian antelope and the vegetarian horse are the fleetest of beasts; the vegetarian reindeer is the most enduring; the vegetarian elephant, the strongest. The vegetarian gorilla is the real monarch of the forest, for he has been known to kill a lion with a club." Address: M.D.

163. *Advent Review and Sabbath Herald.* 1898. Ontario [Canada]. 75(43):687. Oct. 25.
• ***Summary:*** Under London, Ontario: "The London health food factory is prospering beyond the company's expectation. The sales have been steadily increasing until for the month of September alone they reached $600. The company are fully satisfied that this enterprise was established in the providence of God, and will be an important factor in the missionary work in Canada."

164. *Kokomo Dispatch* (*Indiana*). 1898. Bucking the cow: Butter from peanuts and how it is manufactured. A Kokomo product growing in demand–locks horns with the farm cow in many markets. Nov. 12. p. 2, col. 3.
• ***Summary:*** "Out on Courtland avenue, near the Palmer school-house, stands a curious little factory. It is a modest frame edifice of one story, architecturally speaking, but it has another story but little known even in the immediate neighborhood of its location. This factory is engaged in the manufacture of butter from peanuts, a rather queer procedure one might say, but nevertheless a real, genuine occupation, started up in opposition to the saffron Jersey "sookey" [sookie, used as a call to cows] of the farm barn. The little peanut butter factory stands just across the street from a large dairy barn, which location gives evidence that the 'goober' is bearding the lion in its den [boldly confronting, opposing, and defying a powerful opponent].

"The butter made from peanuts is hairless. Like Samson shorn of his locks, the peanut butter does not attain the prodigious strength that the product of the cow is capable of, especially of the kind that frequents cheap boarding houses and depot restaurants of neighboring towns.

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"The proprietor of this new industry is George B. Lane (formerly Lane Brothers), and he is doing a thriving business. The process of manufacture is simple, but interesting. Nearly a year ago Mr. Lane began in a small way to convert peanuts into butter, using Georgia and Virginia nuts, but he soon discovered that the American grown 'goobers' did not fit the bill. He now uses the Spanish nuts grown at the Philippines, Cuba, and Porto Rico.

"At the present cost of the tropical bean the butter is made and sold at fifteen cents per pound, and if these islands become American possessions the butter will be less expensive.

"Mr. Lane makes no secret of his process, and anybody who has the machinery and understands the business can make the butter. The hulled peanuts are carefully hand-picked to remove all the imperfect grains, after which the nuts are put into a baker's rotary oven and roasted to a rich brown color. After roasting the nuts are again gone over by hand to rid them of scorched and faulty ones. They are then put into a hopper and ground to the finest of flower. The product comes from the mill looking very much like putty, the natural oil of the nut giving it that consistency. This completes that manufacture, nothing being added, not even salt. It goes into the mill a peanut and comes out butter. It never goes rancid, keeps in any climate and does not stale with age.

"The butter is put up [packed] in one, two, five, ten, twenty-five and 100-pound cans and sealed. It is used for every purpose cow butter is used and is said to be an excellent substitute for the output of the cow. Rich 'Jersey' cream is also made by reducing the butter with pure water. Sky-blue milk, if wanted, will appear through the liberal application of water in the reducing process.

"The peanut butter is in great demand at health resorts and sanitariums throughout the country. It also finds favor with camping parties. Mr. Lane recently filled large orders for the annual camp meeting of the Indiana Baptists at Logansport and Rushville, and had the Spanish war lasted a little longer the butter probably would have been in use in feeding the United States soldiers–a ration the boys would have appreciated, as no butter of any kind was issued to them. The new butter is very pleasant to the taste, and physicians say it is more healthful than that produced by the cow.

"Mr. Lane also manufactures Lane Bros.' cereal, graham crackers and other health foods, having quite a large trade in Indiana and adjoining states."

Note: Mr. Lane roasts his peanuts, whereas his mentor, Dr. Kellogg, at Battle Creek, Michigan, did not.

165. Dominion Health Food Co. 1898. Something good to eat (Ad). *Evening Star* (*Toronto, Ontario, Canada*). Dec. 15. p. 5.

• ***Summary:*** "We have opened at 320 Yonge Street a branch store for the sale of the famous Battle Creek Sanitarium Health Foods.

"We invite our friends and the public generally to call, examine and sample these delicious cereal and nut products. Nothing like them on the market."

The bottom half of the ad is taken up with the following very large white text on a black background: "Eat Granola and Granose. Drink Caramel Cereal" [a caffeine-free alternative to coffee]. Address: 320 Yonge St., Toronto. Phone: 8255.

166. Forward, Charles Walter. 1898. Fifty years of food reform: A history of the vegetarian movement in England. From its inception in 1847, down to the close of 1897, with incidental references to vegetarian work in America and Germany. With upwards of two hundred illustrations. London: The Ideal Publishing Union, Ltd. 3 + 192 p. Illust. Index. Index to illustrations. 26 x 20 cm. [75+ ref]

• ***Summary:*** The best, most comprehensive general history of vegetarianism up to this time; focuses on England, but gives some attention to the United States and Germany. Discusses the vegetarian Society of Manchester, England. It is one of the best sources of early photographs.

Contents: Dedication (to Arnold Frank Hills). Preface, by the author. 1. Introductory. 2. A group of pioneers: John Oswald, George Nicholson, Joseph Ritson, William Cowherd, Dr. William Lambe, Sir Richard Phillips, John Frank Newton, Percy Bysshe Shelley (A table shows the name of each man, the years of his birth and death, and his main publications). 3. The pilgrim fathers of vegetarianism. 4. The first vegetarian society: Details of the first meeting at Northwood Villa, Ramsgate, Kent, on 30 Sept. 1847. Discusses: Joseph Brotherton (M.P., elected chairman), George Coates, William Horsell (secretary), William Oldham (treasurer), Mr. Milner, Mr. Palmer, Rev. Scholefield, James Simpson, Jr. (elected president), Mr. Warman, Mr. Wright. The Liebig School of Chemistry, Dr. Beaumont and Alexis St. Martin's stomach.

5. From the Ramsgate meeting to the death of Joseph Brotherton: The first annual meeting was held 28 July 1848 in Manchester, England. 6. The second decade of the Vegetarian Society. 7. Some veterans and statistics. 8. Vegetarianism in relation to other reform movements.

9. "Vegetarianism" or "Dietetic reform." Table showing number of members, associates, and annual income from 1847 to 1896. Debate over the scope of the vegetarian platform: Should it advocate abstinence from flesh foods (meat, poultry, and fish) only, or should it also advocate abstinence from alcoholic beverages, tobacco, coffee, tea, sugar, etc. New societies are formed in response to this debate. 10. Vegetarian literature: Past and present. 11. The Health Exhibition and vegetarian restaurants. List of vegetarian dining rooms or restaurants (by city). 12. The vegetarian revival in London: National Food Reform Society,

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The London Auxiliary, Mr. A.F. Hills, the London Vegetarian Society, The Vegetarian Cycling and Rambling Club.

13. The Vegetarian Federal Union and the local societies, the Vegetarian Congress in Chicago [Illinois] (1893). 14. Muscular vegetarianism: The Vegetarian Cycling Club. 15. The Vegetarian Society–1886 to 1897. 16. A vegetarian's visit to the Queen, and the thrilling story of the loss of the S.S. *Elbe* (1896). 17. Annus Mirabilis: 1897. Fiftieth anniversary of the Vegetarian Society. Appendix: The Battle Creek (Michigan) Sanitarium: Dr. John Harvey Kellogg: It "is conducted almost entirely on Vegetarian lines."

A footnote (p. 63) states: "In the *Graphic* of July 4th, 1874. there appeared the portraits of four leading Vegetarians: Professor Newman, Isaac Pitman, John Davie, and W. Gibson Ward; the first occasion, apparently, that a batch of portraits had appeared merely from the fact that the individuals they represented were Vegetarians. It was remarked at the time that, on the same page there appeared the portraits of four eminent teetotalers, four noted anti-tobacco men, and four eminent opponents of compulsory vaccination, for, as in the case of many other Vegetarians, Professor Newman, Sir Isaac Pitman, John Davie, and Gibson Ward were 'anti-everythingarians,' and opposed alcohol, tobacco, vaccination, vivisection, etc., as well as flesh-eating. In recent years complaints have been made that the *Vegetarian* was not confined to Vegetarianism, but it is noticeable that, in a lesser degree, the tendency to go beyond these bounds has existed in other journals." Address: 6, Blackfriars Road, London, England.

167. Forward, Charles Walter. 1898. Fifty years of food reform: A history of the vegetarian movement in England... Photos and illustrations. II. (Document part). London: The Ideal Publishing Union, Ltd. 3 + 192 p. [75+ ref]

• ***Summary:*** Continued: Photos: Mr. T. Anderson Hanson (Vice-president of the Vegetarian Society; p. 109). Mr. W.S. Manning (p. 110). Miss F. Nicholson (Secretary of the London Vegetarian Association). Mrs. Bramwell Booth. Mrs. Sibthorp (Editor of "Shafts"; p. 115). Alderman H. Phillips, of West Ham (An earnest and popular speaker who took an active part in the campaign of the London Vegetarian Society between 1889 and 1892; p. 116). Mrs. Mona Caird. Samuel Plimsoll. James Herron (Irish Vegetarian Union; p. 118). Vegetarian Congress at Brighton (Seaside resort, East Sussex, south England), 1894–Group of Delegates: Messrs. Hanson, Prior, Slater, Hills, Doremaus, Oldfield, Richards. Misses Cole, Nicholson, A.M. Cole, May (p. 121). Dr. Anna Kingsford. William Theobald (p. 123). Some German vegetarians: Prof. Dr. Paul Förster. Lilli Lehmann Kalisch. Eugen d'Albert (p. 124). Lady Florence Dixie (Vice-President of the London Vegetarian Association; p. 125). Master Caird (originally a weakly infant, reared on a vegetarian diet; p. 126). Mrs. Annie Besant (p. 127). George Bernard Shaw (Dramatic critic of the "Saturday Review"; p. 128). Miss Esther Palliser (p. 132). Mr. W. Jeffrey (see p. 160; p. 133). Mr. Joseph Wallace (p. 134). Ernest Bell, M.A. (p. 135). Vegetarian Cycling and Rambling Club at Mr. A.F. Hills' residence, Buckhurst Hill, 1892. Group photo: The names each of the 47 people are given (p. 136-37). John Barclay (half-mile running champion of Scotland, 1896, with trophies. See p. 160; p. 138). The Bolton Vegetarian Society: Mr. and Mrs. John Naylor and children, Miss Farrington, Mr. W.M. Farrington (p. 139). Mr. J. Isaac Pengelly (of the Exeter and Devon Vegetarian Society; p. 140). The vegetarian delegates to the World's Fair in Chicago [Illinois], June 1893: Rev. P.W. Alcott, Mrs. Alcott, Elea Tubaschez, Mrs. LeFavre, J. Franks. Miss Yates (London), Mrs. Axon, Dr. J.G. Stair, E. Dixon (Cambridge), Rev. H.S. Clubb (Philadelphia [Pennsylvania]), Rev. James Clark (Manchester), W.E.A. Axon (Manchester), E. Clark (Manchester), T. Hanson (London) (p. 141). The Vegetarian Federal Union's stall [booth] at the World's Fair, Chicago, 1893 (p. 144). Mr. R. Semple and Mr. G.C. Wade, (agents for the Vegetarian Federal Union), Mr. W. Slatter (Secretary, Brighton Vegetarian Society; p. 145). Mr. Dorrington Boyle (p. 146). The Vegetarian Congress at Chicago, 1893: Frances L. Dusenbury, Adelaide Johnson, Mrs. Carrica LeFavre (Joint Secretary to the Congress; p. 147). Mr. Josiah Oldfield (Secretary of the Vegetarian Union; p. 148). Mr. Ernest Clark (see p. 465). Miss May Yates (Joint Secretary to the Congress at Chicago; p. 149). The Vegetarian Cycling Club (from a photo taken in Richmond Park [probably in London], 1896). Mr. H.E. Bryning (Club champion, 1895. Champion of India, 1897). Mr. G. Goddard Watts (Club champion, 1895). E. Parker Walker (Holds "Hull to York" and back safety record). A.R. Wyatt (100 miles on Path, 4 hours 39 minutes). C.A. Sidney. "Wal" Evans. "Sid" Nickels (Club champion 1897). J.H. Nickels (100 miles on Bath Road, 5 hours 38 minutes). J. Parsley (on tricycle; Present holder {with F. Beaver} of the world's amateur records one to 5 miles inclusive. Also holds London to Brighton and back tricycle record). H. Sharp (Sub-captain) and son on tandem bicycle. Mr. T.H. Schultess-Young. Mr. S.H. Nickels. Mr. Henry Light. Mr. H.E. Bryning with bicycle and trophies in India (p. 151, 153, 155-57, 159, 161). Mrs. C.L. Hunt Wallace (p. 163). Joseph Knight (p. 164). Mr. W.E.A. Axon (p. 165). Mrs. Humphrey Ward (p. 166). Mr. Sidney H. Beard (p. 167). Two illuminated plaques presented by the Vegetarian Society to Sir Isaac Pitman (inventor of phonography), June 1894 (p. 168). Mrs. F.L. Boult (p. 169). Mr. J.M. Skinner (p. 170). Mr. and Mrs. Abel Andrew. Fred Harrison (p. 171). Miss Anne Bocker (p. 174). H.M. Queen Victoria (p. 175). Hall and gallery, Monkhams, Woodford (the residence of Mr. Arnold F. Hills; p. 177). John Ablett (p. 178). A group of the Vegetarian Society's officials at Northwood Villa, Ramsgate, June, 1897: Mr. Longshaw, Mr. J. Wilson, Mr. T.A. Hanson, Mr. C.W. Forward, Mr. A. Broadbent, Rev. J. Clark, Mrs. Foxcroft, Mr. A. Tongue, Mr. H. Pitman, Mrs. Harrison, Mr. Harrison. Vegetarian Jubilee

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celebration, June 1897: Group of about 30 vegetarians at Victoria Hotel, Ramsgate (p. 178). Mr. Arnold Frank Hills. Monkhams: Seen from the grounds (p. 179). Mr. Charles W. Forward (Dec. 1897; p. 181). Monkhams: The drawing room. The dining room (p. 182). James Parrott (p. 183). Mrs. S.A. Birtwell (p. 184). Testimonial to Mr. A.F. Hills (p. 185). Dr. John Harvey Kellogg (p. 187).

Illustrations and maps: Lady Paget (Vice-president of the London Vegetarian Association; p. 113). The Memorial Hall, Farringdon St., London (Headquarters of the vegetarian movement [in London]). The Very Rev. Dean Farrar (p. 117). "General" Bramwell Booth (Founder of the Salvation Army; p. 119). Cover of *Some Press Opinions on The Case Against Butcher's Meat*, with a preface by Hon. Dudley Campbell. Alfred, Lord Tennyson (p. 129). Count Leo / Lev / Lyof Tolstoy / Tolstoi (Russian novelist; p. 132). The Lagoon, Chicago Exhibition, 1893 (p. 142). Dr. Kellogg's sanitarium and hospital, Battle Creek, Michigan (p. 143). Vegetarians at the Thames Iron Works: Iron puddlers at work. A steam hammer at work (p. 150). Vegetarian dinner at the Holborn Restaurant, 27 May 1897 (p. 180). Address: 6, Blackfriars Road, London, England.

168. Wiley, H.W. 1898. Foods and food adulterants: Cereals and cereal products. *USDA Div. of Chemistry, Bulletin* No. 13. Part 9. See p. 1343.

• ***Summary:*** In the section titled "Breakfast foods," page 1343 states:

"15325. Ralston Health Club Breakfast Food, indorsed [sic] by Ralston Health Club, Martyn College, Washington D.C. Manufactured by Robinson-Danforth Company, proprietors, Purina Mills, St. Louis, Missouri. 'A perfect food made from selected wheat, rich in gluten.'

"15326. Granose Flakes. Manufactured solely by the Sanitarium Health Food Company, Battle Creek, Michigan. 'Represents the entire wheat berry undeteriorated by any milling process and thrice cooked, whereby the starch is largely converted to dextrin.'

"15329. Granulated Rye. Manufactured by the Health Food Company, 61 Fifth avenue, New York. 'Made from the best rye, hulled by the wet process and reduced to a granular meal without the injurious heating of millstone grinding.'" Address: Chief Chemist, USDA.

169. Kellogg, John Harvey. 1899. Vegetarian question (Editorial). *Good Health* (*Battle Creek, Michigan*) 34(2):109-12. Feb.

• ***Summary:*** A correspondent sends a clipping from the New York *Medical Record* in which this question is discussed. It, in turn, quotes from a long article in the *Times* (London) in which Sir Henry Thompson gives his opinions about climate and food. Dr. Kellogg notes that Dr. Thompson "does not answer a single one of the numerous grave objections which have for many years been raised against the use of flesh-food, and which have, up to the present date, never been satisfactorily answered." He then lists and discusses ten of these objections at length. They are: 1. Human physiology and anatomy is similar to that of primates which are vegetarians. 2. The Bible (in Genesis 1:29) urges a vegetarian diet. 3. Most humans are presently non flesh-eaters. 4. Trappists and Carmelite Sisters have long been vegetarians; they are healthy and live to a ripe old age. 5. The characteristic food elements of flesh-food are not those (carbohydrates) required for maintaining the energy of the body. 6. Animals are increasingly contaminated by disease. 7. Flesh eating, if not practised in great moderation, gives rise to well-recognized disorders and diseases. 8. The slaughter of animals and the eating of corpses are abhorrent to human instincts. 9. All food originally comes from plants. "When a man eats an ox, he is simply eating corn at second hand, not improved corn but adulterated corn..." 10. "Animals are sentient creatures, deriving their life from God, and they have the same right to enjoy that life that human beings have to enjoy their lives, so long as they commit no violence or depredation upon the rights of human beings or other sentient creatures."

"The writer [Dr. Kellogg] started out in life a puny, sickly boy. At the age of fourteen he was expected to die of consumption, as two sisters had done; but, adopting a non-flesh dietary at that time, he finds himself to-day, after thirty years of hard work, enjoying better health than ever before, able to work more continuously, for a longer number of consecutive hours, with less sleep and with less food than the average meat eater, and on a spare diet of fruits, grains, and nuts. If Sir Henry Thompson will visit Battle Creek, the writer will take pleasure in showing him a family of nearly one thousand rosy-cheeked, bright-eyed, vigorous men and women who are living well, and who hope to live long and usefully, on a strictly non-flesh diet." Address: M.D.

170. *Chicago Daily Tribune.* 1899. Menard K. Bowen dead. Chicago City Railway President expires suddenly. End comes at a hospital after an operation for appendicitis– Sufferer had been ill two years, but disease became critical only last Friday–His connection with the South Side Line marked by the making of many improvements. April 10. p. 5, col. 1.

• ***Summary:*** "Menard Kenner [sic, Kennerly] Bowen, President of the Chicago City railway company, died at the Chicago Hospital at 8:30 o'clock last evening from an operation for appendicitis performed at 6 o'clock on Saturday morning... Mr. Bowen had been connected with the Chicago City railway company but seven years, and in that time had risen from the position of Assistant Superintendent to President... He was but little more than 40 years of age and was believed to have a brilliant future before him."

He had been ill for more than two years. "He was an extremely nervous, hard-working man, and his ailment

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was considered to be nervous dyspepsia, or neuralgia of the stomach, with recurrent inflammation of the appendix. He went to the Battle Creek sanitarium [in Michigan] for treatment last summer and had been treated from time to time by various physicians." He resided at 419 Forty-eighth street in Chicago, two blocks from the Chicago Hospital.

"Sketch of Menard K. Bowen: Mr. Bowen was born at the army post of Jefferson Barracks, Missouri, in 1858. His father was General John S. Bowen, C.S.A. [Confederate States of America], who was a graduate of West Point, and his grandfather Pierre Menard, the first Lieutenant Governor of Illinois. He was educated for a civil engineer, first at the St. Louis University [Missouri] and afterward at the Washington University at St. Louis. When he was 19 years old he entered the government service as an assistant engineer to a triangulation survey of the Mississippi River, and later was made assistant engineer of the jetty work below New Orleans. In 1880 he took charge of the survey work from Fort Smith, Arkansas, to California for the St. Louis and San Francisco railroad, and after several years at this work entered the street railway business.

"His first work in this field was in Kansas City, where he was chief engineer and superintendent of construction, and afterwards superintendent of the completed system. The Short Electric railway company of Cleveland [Ohio] next engaged him, and he went to New York as its commercial representative.

"Mr. Bowen came to Chicago as assistant to Engineer Holmes in the extension of the South Side system and in the reorganization of the work was made superintendent, which position he held until the office of general manager was created for him in 1897. On Jan. 15, 1898, upon the retirement of Mr. [George Henry] Wheeler, he was elected President of the company, and continued in that office until his death."

He made many improvements in the railway system. The whole electric system was built under his charge, and the dynograph car, for determining the condition of the tracks, was his work. "He was a thoroughly practical engineer and a man of great executive ability. He was known as a strict disciplinarian but at the same time as a man of utmost fairness, and his death is generally regretted by employees of the company.

"He was married in 1884 to Miss Allan De Berry of Jackson, Tennessee, who survives him. There are two children–a boy, Allan, aged 12, and a girl, Marion, aged 4 years. These together with his mother, whose home is in St. Louis, and a sister, Miss Annie D. Bowen, residing in Philadelphia [Pennsylvania], were at his bedside when he died. His brother, John S. Bowen, is on his way to this city from his home in Georgia.

"Tribute of fellow workers:... G.O. Nagle, superintendent of the company, said: 'He was one of the best and fairest men I ever knew. He would do anything for his employees and personally he was always our friend. I do not know how we are to reconcile ourselves to his loss."

A large illustration shows Menard K. Bowen.

171. White, Ellen G. 1899. Re: Work with health foods, including peanuts. Attitude toward nuts (1868-1876). Letter to John Harvey Kellogg, M.D., Superintendent, Battle Creek Sanitarium, Battle Creek, Michigan, April 17. 1 p. Typed, without signature.

• ***Summary:*** "As yet we have received only two hundred fifty pounds from the Echo office. Special direction was given in regard to the manufacturing of health foods, but lately we have not had money to invest in peanuts for our own family. We eat no meat or butter, and use very little milk in cooking. There is no fresh fruit in this season. We have a good yield of tomatoes, but our family think much of the nuts prepared in a variety of ways. For many months my food has been uncooked tomatoes and bread."

Note 1. This is the earliest use of the word "peanuts" see in the collected papers of Ellen G. White, co-founder of the Seventh-day Adventist church. The full text of all her letters and diary entries has been computerized and this fact is the result of a search conducted by the Ellen G. White Estate. This letter is cited as follows: Lt 73, 1899. The original letter is in the Ellen G. White Papers, Ellen G. White Estate, Inc., General Conference of Seventh-day Adventists, 12501 Old Columbia Pike, Silver Spring, Maryland 20904-6600.

Note 2. Ellen White's attitude toward nuts seems to have changed over the years. She first uses the word "nuts" in a letter to James Edson White [her eldest child/son; Willie was her youngest son] dated 27 Feb. 1868. "I have frequently asked myself what you could have done with so much money. Edson, I am answered in a dream, you are not a health reformer in principle. You do not live up to the light God has given and while you neglect one ray of light that the Lord has graciously permitted to shine upon your pathway, you will be in darkness. When you boarded yourself, did you not spend money for nuts, candies, and hurtful things and eat these between meals and at any time? I concluded that your frequent headaches were caused by the indulgence of your appetite. You gratified the taste to the injury of the stomach..." (Letter 5)

Again in July 1874, in an undated letter to Brother and Sister Abbey, she states: "You have fostered a perverted appetite by indulgence. You have allowed her to eat between meals, to fill her pockets with nuts and crackers, and to have the third meal, eating sometimes late at night. How can you expect her to have a healthy relish for coarse and healthful food? I understand her father has bought Lillie white baker's bread to tempt her delicate appetite, and at night she has eaten this baker's bread and butter in the cellar with Nellie Matthews. Is this in accordance with the principles of a health institute?" (Letter 65).

Again on 12 June 1876, in a manuscript, Ellen White

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states: "We were pained to hear the mothers' fretful chiding, as they sought to hold in check the outbursts of temper exhibited by the children. But these mothers did not control themselves; how then could they expect their children, with their perverted habits, to have tranquil tempers. Both parents and children ate at irregular intervals all through the day, after eating heartily three times a day. The boy on the cars who sold cakes, candies, nuts, and fruit was freely patronized by the indulgent parents." Address: "Sunnyside," Cooranbong, New South Wales, Australia.

172. P.W. 1899. Breakfast biscuits without soda. *Indicator* (*New York Tract Society, Rome, New York; Seventh-day Adventist*) 9(16):3. April 19.
• ***Summary:*** "'Hot biscuits raised with soda or baking-powder should never appear on our tables. 'Such compounds are unfit to enter the stomach.' Saleratus in any form should not be introduced into the stomach; for the effects are fearful. It eats the lining of the stomach, causes inflammation, and it quietly poisons the entire system."

"Try griddle cakes of this batter. If you have not cream use water and enough peanut butter to make a cream. Try corn bread. Mix half flour, using two well beaten eggs. Also try Buckwheat, ½ white flour." Address: Province.

173. Battle Creek Sanitarium Health Food Co. 1899. Announcement! The Battle Creek Sanitarium Health Food Co... (Ad). *Chicago Daily Tribune.* May 7. p. 31.
• ***Summary:*** "... Will open a Health Food Store at 178 Wabash-av., where they will carry a full line of the celebrated foods, manufactured at Battle Creek, Mich. [Michigan]. Competent demonstrators will answer all inquiries respecting the subject of Health Foods, and will have for the benefit of their patrons samples of the "Foods" so that you can judge of their merits.

"They earnestly solicit the attention of the people of Chicago to questions of healthful living, and believe they have a line of foods unequaled for purity and healthfulness and that they will be appreciated."

Note: This is the earliest English-language document seen (March 2007) that contains the term "Health Food Store" (or "Health Food Stores," regardless of capitalization). Address: [Battle Creek, Michigan].

174. Battle Creek Sanitarium Health Food Co. 1899. Health, wealth, prosperity: The Battle Creek Sanitarium Health Food Co... (Ad). *Chicago Daily Tribune.* May 14. p. 12.
• ***Summary:*** "... announce that they will open on Monday, May 15, a Health Food Store at 178 Wabash Ave., where they will give a free exhibit of all their products of all Health Foods, including the cereals and crackers, and the new Foods made from Nuts. These Foods are without question unequaled for purity and healthfulness, and as the hot weather is once more with us, probably a few suggestions respecting a suitable dietary may be acceptable to those who have not given special thought to this subject, or who have not solved the problem for themselves by practical experience. There will be at all times efficient salesmen and demonstrators direct from the Sanitarium at Battle Creek, Michigan, expert in the knowledge of Food Products, who will gladly answer all inquiries on this subject.

"We have over sixty different foods to select from, and are prepared to suit the most fastidious tastes. We cordially invite the public to call and participate in the good things that will be prepared Monday at our grand opening.

"Special. We will give away free to visitors Monday a beautiful booklet descriptive of all the Health Food, and also free samples." Address: 178 Wabash-Av. [Battle Creek, Michigan].

175. Battle Creek Sanitarium Health Food Co. 1899. What shall I eat? (Ad). *Chicago Daily Tribune.* May 21. p. 14.
• ***Summary:*** "'Eat ye that which is good.' You are invited to call at our Health Food Store, just opened at 178 Wabash-Av., and partake of the good things prepared for you. Free exhibit. Free exhibit of all the foods every day this week." Address: 178 Wabash-Av. [Battle Creek, Michigan].

176. *Chicago Daily Tribune.* 1899. Who's who and what's what: Progress of vegetarianism. May 25. p. 6.
• ***Summary:*** "That the number of people who do not eat meat is increasing is shown by the establishment of a new and handsomely appointed vegetarian café in the heart of the down-town district. This place makes a specialty of all kinds of health foods and caters chiefly to people with fads in the eating line. An omelet is the nearest approach to meat on the bill of fare."

Note: This "vegetarian café" is almost certainly the "health food store" just opened by the Battle Creek Sanitarium Health Food Co. at 178 Wabash av., Chicago, and advertised in the May 7, 14, 21, and 28 issues of this newspaper.

177. Battle Creek Sanitarium Health Food Co. 1899. Sanitarium health foods (Ad). *Chicago Daily Tribune.* May 28. p. 39.
• ***Summary:*** "New store at 178 Wabash-av. Free exhibit of all the health foods manufactured by the Battle Creek Sanitarium Health Food Co." Address: [Battle Creek, Michigan].

178. Food Reform Bureau. 1899. You can make your own nut butter at home (Ad). *Modern Medicine* (*Battle Creek, Michigan*) 8(6):Ad at rear of issue. June.
• ***Summary:*** A half-page ad on page 7 of the "Advertisements" section at rear of issue. "If you have one of our new Mills, and thus have fresh butter every day. Our mill is superior to any other mill in that -

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"It Has Twice the Capacity of any Other Mill. It Requires One-third Less Effort to Operate It. It Can not be Overfed. Is Unequaled in Point of Durability.

To introduce this mill we make the following offer, which will be good but for a limited time: -

"The price of the Mill is $5.00, but we will furnish a Mill and a copy of 'Every-Day Dishes,' by Mrs. E. E. Kellogg, for $3.50.

"Orders will be filled in the order they are received.

"We can in every way recommend this mill as represented.-Publishers." Address: Battle Creek, Michigan.

179. Sanitarium Health Food Company. 1899. Protose and Beans (Ad). *Modern Medicine* (*Battle Creek, Michigan*) 8(6):Ad at rear of issue. June.

• ***Summary:*** A full-page ad on page 5 of "Advertisements" at rear of issue. "A delicious, appetizing, and nutritious combination.

"Protose is a vegetable meat containing 25% more food value and 10% more fat-making properties than beef, with a rich, delicious, meaty flavor.

"Sanitarium Baked Beans. Are cooked three times and are easily digested. Prepared in a scientific manner, rendering them the most digestible preparation of beans on the market.

"The addition of Protose makes these porkless beans the most toothsome product imaginable. A new combination of food properties, representing the new and progressive ideas of the best food experts in the country.

"Sample free.

"Send us the name of a grocer who does not sell Sanitarium Baked Beans, with eight cents to pay postage, and we will mail you a sample can.

"Art Booklet on Health Foods for the asking."

Note: This is the earliest document seen (March 2010) that mentions "Protose," a vegetable meat made in Battle Creek, Michigan.

This same ad appeared in the next issue of this magazine, in the same place. Address: Battle Creek, Michigan.

180. **Product Name:** Protose (Meatlike Product Made of Peanuts and Cereal–No Soy).
Manufacturer's Name: Sanitas Nut Food Co., Ltd. Renamed Kellogg Food Company in mid-1906, then Battle Creek Food Co. in the spring of 1921.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1899 June.
New Product–Documentation: Ads in *Modern Medicine* (Battle Creek, Michigan). 1899. June. Full-page ads on pages 5 and 8 of "Advertisements" section at rear of issue.

Mrs. Anna L. Colcord. 1899. *A friend in the kitchen: Or, what to cook and how to cook it. Containing about 400 choice recipes carefully tested.* Oakland, California, San Francisco, New York, Kansas City: Pacific Press Publishing Company. Protose is discussed in detail on pages 108-09. "Protose. This is also a nut product and is intended as a substitute for meat. It may be prepared and served in much the same way as flesh foods, which it resembles somewhat in both appearance and flavor. While it possesses nearly twice their nutritive value, it is free from their objectionable features. Protose makes a good flavoring for soups, and is excellent cooked with vegetables." Recipes are given for: Stewed Protose. Roast Protose. Protose sandwiches.

Ad for Protose by Sanitas Nut Food Co., Ltd. 1900. July. *Good Health* (Battle Creek, Michigan). Protose is described as an easy to digest, perfect substitute for meat.

Good Health. 1904. Jan. (Insert after p. 48) "Chart of food elements." Protose (0.5 pint or 4.2 oz) contains 21.3 [units not given] protein, 10.2 fat, 2.8 carbohydrates, and 60 food units per oz.

Lenna Frances Cooper. 1923. *The New Cookery.* 8th ed., revised. The section titled "Unusual foods referred to in this book" (p. 462-64) states: They are made by the Battle Creek Food Company, Battle Creek, Michigan: "Protose (a meat substitute made from cereal and nuts)."

John Harvey Kellogg. 1930. Good Health (Battle Creek, Michigan). Dec. 5, p. 5-7. "Soybeans as human food. I." "I was wholly unacquainted with it [the soybean], and so naturally sought to find in nuts, especially the peanut, a solution to the problem, and succeeded in producing a vegetable meat, Protose, of which several thousand tons have been since made and consumed." Note: It is not known when gluten was first used in this product, but "wheat protein" was the main ingredient in Protose made by Granose Foods in England in 1940.

Ad in *California Health News.* 1937. Feb. 19. p. 13. "For meatless days and for a delicious change. Protose: A satisfying vegetable meat." Illustrations show (each on a plate): Protose croquettes. Protose steak with onions. Protose salad. A can of "Protose: Vegetable meat." "Protose is made of grains and nuts."

Ad for Protose: Vegetable Meat by Battle Creek Food Co., Ltd. 1939. *Good Health* (Battle Creek, Michigan). July, p. 380. "Protose, a vegetable meat, may be prepared in any of the ways in which meat is served." A small photo shows the Battle Creek Sanitarium.

Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 18. "Battle Creek Health Products: Vegetable Meats–Protose Vegetable Meat. 1 lb. $0.50. ½ lb $0.30.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Protose contains 22.30% protein, ?% fat, and 22.70% carbohydrate.

Richard W. Schwarz. 1970. John Harvey Kellogg, M.D. p. 122, 209-14, 216, 218. "In 1896 [Dr. John Harvey] Kellogg announced that he had perfected the ideal substitute for meat in Nuttose, a nut product which he could prepare to taste much like beef or chicken." This was his first meatlike

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product. Later he developed Protose. "Shortly after the production of Granola for patients at the sanitarium began in 1877, Dr. Kellogg organized the Sanitarium Food Company as a subsidiary of the Battle Creek Sanitarium." But when Dr. Kellogg wanted to expand the business, other sanitarium doctors refused to vote the funds. So Dr. Kellogg launched the private Sanitas Food Company, relying heavily on his younger brother, Will Keith, who had served as his personal accountant and business manager since 1880. "John Harvey's new flaked cereals and vegetable meats became the property of the Sanitas Company." In mid-1906 Dr. Kellogg decided to change Sanitas' corporate name to the Kellogg Food Company. Then: "In the spring of 1921, to avoid further difficulties with Will Kellogg's manufacturing business [Battle Creek Toasted Corn Flake Company], Dr. Kellogg changed his concern's name to the Battle Creek Food Company."

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Protose (Battle Creek)." Note that in 1960 Worthington Foods had acquired Battle Creek Food Co.

181. Sanitas Nut Food Co., Ltd. 1899. The Dujardin-Beaumetz antiseptic dietary (Ad). *Modern Medicine* (*Battle Creek, Michigan*) 8(6):Ad at rear of issue. June.

• ***Summary:*** A full-page ad on page 8 of the "Advertisements" section at rear of issue. "It is universally recognized by European physicians as essential to the successful treatment of Disorders of the Stomach and Liver. This dietary excludes flesh, fish, and shell-fish of all kinds. The chief difficulty in enforcing the non-flesh regimen is the lack of a suitable variety of foods rich in proteids in the ordinary bill of fare.

"The Sanitas Nut Food Co. has discovered how to make all sorts of delicious meat dishes from nuts, by newly discovered processes, which have proved so successful that thousands of invalids are already daily regaling themselves with the most delicate and tasty meat 'stews,' 'roasts,' 'potted meats,' meat 'soups,' 'broths,' and other savory and blood-enriching viands, without the slightest fear of 'hepatic congestion,' 'uric acid diathesis,' or any thing of the sort.

"'Vegetable Meat–in the form of 'Protose,' 'Nuttose,' 'Bromose,' 'Nutta,' And their congeners, is as much more toothsome than 'bloody beefsteaks,' as Bartlett pears are superior to crabapples. Address for circulars and further information,-

"Sanitas Nut Food Co., Ltd., Battle Creek, Michigan." Address: Battle Creek, Michigan.

182. *Mercury* (*The*) (*Hobart, Tasmania, Australia*). 1899. Vegetarianism. July 25. p. 3.

• ***Summary:*** "[From a correspondent.] The delegates and visitors to the biennial Union Conference of Seventh Day Adventists, recently in session at Avondale College, Cooranbong, N.S.W., were much interested in the vegetarian dietary as practised at the college, and in which the delegates, visitors, and students equally participate. In order to give a good idea of the dietary in question, a week's menus at the college are appended: -

"Sunday.–Breakfast–Rolled oats, granola, milk, bread, rolls, honey, stewed quinces, caramel coffee. Dinner–Tomato soup, crutons, mashed beans, squash, corn, nut sauce, bread, zwieback, bread and fruit pudding, lemon dressing.

"Monday.–Breakfast–Oatmeal, granola, fruit toast, bread, rolls, buns, stewed apples, honey, milk, caramel coffee. Dinner–Pea soup, crutons, mashed beans, scalloped tomatoes, boiled rice, nut sauce, bread, zwieback, quince pie.

"Tuesday.–Breakfast–Oatmeal, granola, maccaroni [macaroni], nut butter, bread, rolls, gems, stewed quince, honey, caramel coffee, milk. Dinner–Bean soup, crutons, green peas, potatoes, squash, milk sauce, bread, zwieback, bread pudding.

"Wednesday.–Breakfast–Breakfast meal porridge, granola, milk, milk toast, nut butter, bread, rolls, gems, stewed peaches, jam, caramel coffee. Dinner–Tomato soup, crutons, split peas, fresh corn, squash, nut sauce, bread, zwieback, lemon pudding.

"Thursday.–Breakfast–Breakfast meal porridge, grape toast, granola, nut butter, stewed peaches, honey, bread, rolls, milk. Dinner–Potato soup, crutons, baked beans, pumpkin, fresh corn, nut sauce, bread, zwieback, apple pie.

"Friday.–Breakfast–Rolled oats, granola, maccaroni baked with granola, bread, rolls, gems, stewed apricots, honey. Dinner–Bean soup, crutons, peas puree, mashed potatoes, turnips, sauce, bread, zwieback, sago pudding.

"Saturday.–Breakfast–Oatmeal, granola, fruit toast, bread, biscuits, buns, peaches, honey, milk, caramel coffee. Dinner–Pea soup, crutons, savoury beans, sliced tomatoes, nuttose, bread, zwieback, peach pie.

"The dietary is not only thoroughly wholesome, but also exceedingly appetising."

Note: Parr and Litser (1995, p. 18-19) state that the first Seventh-day Adventist health food factory in Australia, at Melbourne, began to make its first foods in Jan. 1898. Edward Halsey, the master baker, produced the first batch of Granola on 27 Jan. 1898. It was made at St. George's Bakery, 46 Clarke St., Northcote, Melbourne, Victoria. The next day he roasted his first tray of peanuts and produced the first batch of Caramel Cereal. But it was soon realized that Melbourne was not the best location. On 5 Oct. 1898 (in a meeting at Summer Hill, a suburb of Sydney), G.W. Morse was elected "president of the Sanitarium Health Food Company," and it was decided "that he should supervise the transfer of the manufacturing of health foods from Melbourne to Cooranbong (the newly established SDA College in New South Wales was at Avondale in Cooranbong).

On 29 May 1899 the new SDA food factory at

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Cooranbong, began to make its first product (Peanut Butter, made Edward Halsey, manufacturing wizard). "By June 16 he had turned out two batches of Granola; bread and wholemeal biscuits had come from the oven by July 5/6. And when, later in July of that year, the Union Conference session was held at Avondale, Mr. Halsey's toothsome delights of sound and sensible food were more than enough to awaken the enthusiasm of the delegates. More than this, the delegates bought over £80 worth of Halsey's special goodies during the conference."

Therefore it seems likely that most or all of the special Adventist foods mentioned above (such as granola, caramel coffee, nut butter, nuttose, etc.) were made in Cooranbong, New South Wales, Australia, and no longer imported from Battle Creek, Michigan.

183. Sanitas Nut Food Co. 1899. Sample can free (Ad). *Forum* (*The*) (*New York City*). July. Ad on p. 7 at rear of issue.
• ***Summary:*** A ¼ ad on p. 7 of "The Forum–Advertiser" section at rear of issue. "Protose is the latest addition to food science. A vegetable meat containing 25 per cent, more food value and 10 per cent, more fat making properties than beef or mutton, with a taste that can hardly be distinguished from meat. The result of exhaustive experiments by food experts. A palate pleasing, nutritious delicacy.

"For six cents (to pay postage) and name of dealer who does not sell Sanitas Nut Foods, we will send free a sample can and booklet telling how to prepare 60 delicious dainties from Sanitas Nut Foods, the original nut foods prepared in a scientific and digestible form." Address: 80 Washington St., Battle Creek, Michigan.

184. Sanitas Nut Food Co. 1899. Dainty sand wiches. Can Free (Ad). *Forum* (*The*) (*New York City*). July. Ad on p. 7 at rear of issue.
• ***Summary:*** A ¼ ad on p. 7 of "The Forum–Advertiser" section at rear of issue. "For picnics, luncheons and parties can be made of Protose, the vegetable meat containing 25 per cent. more food value and 10 per cent. more fat-making properties than beef. A score of delicious dishes can be made with Protose. Cook book free.

"Send us the name of a grocer who does not sell Sanitas Nut Foods, and six cents to pay postage, and we will send a can free." Address: 80 Washington St., Battle Creek, Michigan.

185. Sanitas Nut Food Co. 1899. Pic nic luncheons (Ad). *Forum* (*The*) (*New York City*). July. Ad on p. 7 at rear of issue.
• ***Summary:*** A ¼ ad on p. 7 of "The Forum–Advertiser" section at rear of issue. Should include dainty, delicious sandwiches made with Protose, the vegetable meat, containing 25 per cent. more food value and 10 per cent. more fat-making properties than beef. Our free cook book gives a score of appetizing ways to prepare Protose.

"Send us the name of a grocer who does not sell Sanitas Nut Foods, and six cents to pay postage, and we will send a can free." Address: 80 Washington St., Battle Creek, Michigan.

186. Battle Creek San. Health Food Co. 1899. Look! Read! and then drop us a postal for a free health food book (Ad). *Chicago Vegetarian* 3(12):Rear cover. Aug.
Address: Battle Creek, Michigan.

187. Sanitas Nut Foods Co., Ltd. 1899. Sanitas Nut Foods: Nature's foods (Ad). *Chicago Vegetarian* 3(12):Rear cover. Aug.
Address: 20 Washington St., Battle Creek, Michigan.

188. *Vegetarian Messenger* (*Manchester, England*). 1899. Vegetarian Society of Victoria. Sept. p. 302.
• ***Summary:*** "The annual report of this society speaks of a considerable amount of work having been accomplished. Forty-five meetings have been held, mostly in the halls of the temperance associations in Melbourne and its suburbs. The secretary of the society has been in correspondence with several of the great shipping companies urging them to introduce wheat-meal bread among their passengers and crews, and has met with sympathetic responses. Perhaps the most important event in the history of Australian vegetarianism during the year, was the establishment by the Battle Creek [Michigan] Seventh Day Adventists of a manufactory [factory] at Sydney, for the production of health foods. The Adventists have launched a monthly vegetarian journal called the 'Herald of Health,' and have also established a cheap restaurant and lodging house for the poorest classes, which is run on pure vegetarian lines. The Vegetarian Society of Victoria congratulates itself on this addition to the forces of vegetarianism in Australia, and has elected as its president Dr. Caro, the superintendent of the Adventist propaganda. The report also notes with satisfaction the establishment of a sister Vegetarian Society in South Australia."

This is the earliest document seen (March 2009) in *Vegetarian Messenger* that contains the term "health foods" (or "health food" or "health-foods").

189. *Los Angeles Times.* 1899. Care of the body: Valuable suggestions for acquiring and preserving health. Oct. 29. p. 29.
• ***Summary:*** The section titled "Vegetarian restaurants" states: "Referring to a suggestion recently made in this department that there is a good opening for a vegetarian restaurant, a correspondent writes a somewhat lengthy communication, in which he takes the ground that, from a financial point of view, no comparison can be made between

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the prospects of such an establishment here and in London or Liverpool, for the reason that our regular restaurants furnish so much in the vegetarian line that is not found at English eating places. The latter, he says, are mainly supported by non-vegetarians, who take a vegetarian meal in the middle of the day by way of a change.

"At the same time, there are plenty of vegetarian restaurants which do well in this country, and since the previous article was published The Times notes that such an establishment is shortly to be opened in Los Angeles, by a company which owns a number of sanitariums in various parts of the world, and has a vegetarian restaurant in San Francisco."

190. Woods, Chas. D.; Merrill, L.H. 1899. Cereal breakfast foods. *Maine Agricultural Experiment Station, Bulletin* No. 55. p. 93-106. Nov.

• ***Summary:*** "The general use, at the present time, of cereals on the breakfast table is largely due to the improved condition in which these foods are now offered. Twenty years ago uncooked decorticated oats, (sold under the name of oat meal), graham flour, corn meal, and hominy, all of which required long cooking, made up nearly the entire list of breakfast cereals available to the average housekeeper. Today it is possible to purchase at a moderate price cereal foods which have been previously thoroughly cooked, and subsequently dried so they will keep indefinitely."

This report gives a chemical analysis and the "fuel value per pound" of 41 of America's leading precooked cereal breakfast foods, found in the Bangor (Maine) market, including 3 gluten preparations. The chemical composition of the three gluten foods most commonly used in New England is analyzed. These are widely prescribed for diabetic patients by local physicians. The foods were Cooked Gluten, and Whole Wheat Gluten (both made by the Health Food Company of New York), and Dr. Johnson's Glutine (made by Johnson Educator Food Store, Boston, Massachusetts). A table shows that they contain only a little more protein (16.88%, 17.89%, and 15.31% respectively), and a little less carbohydrates (76.80%, 73.85%, and 82.53%) than ordinary bread flour (which contains 15.02% protein and 82.91% carbohydrates).

"Gluten preparations, containing as high as 70 per cent of protein, were on the market five years ago, and there are now preparations carrying from 30 to 50 per cent of gluten which can be used with reasonable safety by persons suffering from diabetes... Samples of flour made from the hard spring wheat of the Northwest not infrequently carry more protein than the sample of Dr. Johnson's Glutine and nearly as much as the two other samples here reported upon. Too much can hardly be said in condemnation of the foisting, by false statements in advertising such materials upon diabetic patients, imposing upon physicians as well as the public."

Another interesting wheat-based product is Ralston Health Club Breakfast Food, made by the Robinson-Danforth Company. It contains 12.16% protein, 85.36% carbohydrates, and 1.56% fat. The report says of this product: "Ralston Breakfast Food, 'a perfect food made from selected wheat rich in gluten,' is also apparently made from soft winter wheat. The sample examined carries 10.70 per cent of protein, and hence could not have been made from a 'wheat rich in gluten.' It is a well made preparation, but its cost of 8 cents a pound is too high."

Other interesting observations: "There is probably no other cereal food on the market so widely and extensively advertised as Shredded Wheat Biscuit. For the most part its advertising matter is free from exaggerated statements." Grape Nuts are manufactured by the Postum Cereal Company. "The claims of the makers are preposterous." Note the very early use of the term "Health Food" in a company name; Cooked Gluten and Wheatena were both made by the Health Food Company. This was probably the Battle Creek Sanitarium Health Food Co. (located in Battle Creek, Michigan; incorporated 1898, yet its forerunner, the Sanitarium Food Department, was making Wheatena and gluten products by 1882), which merged with the Sanitas Nut Food Co. (founded 1899) to become the Kellogg Food Co. in 1908. Note also that no company with "Kellogg" in its name is listed.

Mazama is made by the Mazama Health Food Co. (p. 94). Address: Orono, Maine.

191. *Union Conference Record* (*Australia*). 1899. The health food factory. 2(10):8. Dec. 1.

• ***Summary:*** "After a long but most determined and persevering effort the Sanitarium Health Food Factory is well fitted up, and able to turn out many of our health foods rapidly. This has required much longer time than was expected by anyone, but the work has been well done..." "They are now manufacturing granose biscuits, granose flakes, bromose, nuttose, antiseptic tablets [charcoal tablets], granola, caramel cereal, nut butter, wheatmeal biscuits, gluten biscuits, gluten meal, and still other foods are in the experimental stage. White and brown bread, for the school and the immediate neighbourhood, are also made at the factory. We are thankful to see this enterprise at last on its feet, and we believe it will be appreciated in proportion to the effort it has cost."

Note 1. This is the earliest document seen (Feb. 2010) concerning the Sanitarium Health Food Factory (or Company) in Australia, or stating explicitly that foods with names such as "granose biscuits, granose flakes," etc. are being made in Australia. Formerly foods with these names were made only in Battle Creek, Michigan, then some were imported to Australia.

Note 2. Ellen G. White, co-founder of the Seventh-day Adventist Church, apparently never used the word "gluten"

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in her own writings. However the above passage appears in her biography, *Biography of Ellen G. White,* 6 vols., by White, Arthur L. 1981-86. He cites it to show what products are being made by the Sanitarium Health Food Factory in Australia. Ellen White was almost certainly aware of all these products (including gluten) since she was in Australia during the 1890s; she arrived in Dec. 1891 and stayed until about 1900.

Note 3. As of May 1997, this Seventh-day Adventist church paper is still published under the title *Record.*

192. Smith's Cash Store. 1899. Prices are for this week (Ad). *San Francisco Chronicle.* Dec. 11. p. 4.
• ***Summary:*** In this ad, one food section with a large bold heading is "Health Foods–Come next–Demonstration permanently of St. Helena and Battle Creek goods–Only fully equipped Health Food Department in city."

Note: Both St. Helena (in St. Helena, California) and Battle Creek (in Battle Creek, Michigan) are makers of vegetarian health foods, owned by the Seventh-day Adventist Church.

This ad also appeared in the Dec. 3 (p. 6) issue of this newspaper. Address: 25-27 Market St., near Ferry, San Francisco, California.

193. **Product Name:** Malted Nuts (Non-dairy Product Made from Malted Cereals and Nuts and Resembling Malted Milk).
Manufacturer's Name: Sanitas Nut Food Co. from 1899. Renamed Kellogg Food Company in mid-1906, then Battle Creek Food Co. in the spring of 1921.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1899.
Nutrition: Water 2.6%, protein 23.7%, fat 27.6%, carbohydrate (malt sugar and dextrin) 43.9%, and ash 2.2%. Calories per ounce: 140.
New Product–Documentation: Mrs. Anna L. Colcord. 1899. "A friend in the kitchen: Or, what to cook and how to cook it. Containing about 400 choice recipes carefully tested." The next to last page of the book (unnumbered) lists foods available from the St. Helena Sanitarium Health Food Company [California], including "Malted Nuts."

Sanitas Nut Food Co., Ltd. 1900. *Good Health* (Battle Creek, Michigan). 35(7):July. Ad section in back of issue. Unpaginated. "20th century foods" (Ad). Products include "Malted Nuts."

John Harvey Kellogg. 1921. The New Dietetics–What to Eat and How... Battle Creek, Michigan: Battle Creek Modern Medicine Publishing Co. p. 359. "Nearly thirty years (1892-93) the writer, in seeking to supply the needs of invalids unable to eat cow's milk, conceived the idea of combining malt-digested cereals with nuts to prepare a substitute. The result reached after many experimental efforts was the product known as 'Malted Nuts,' which much resembles malted milk in appearance, while having a delicate and very agreeable nutty flavor. This product has been produced in considerable quantities and has come to be somewhat widely used." 'Malted Nuts' is an excellent source of food iron and it increases the milk secretion in nursing mothers.

In: Richard W. Schwarz. 1970. John Harvey Kellogg, M.D. Nashville, Tennessee: Southern Publishing Assoc. 256 p. See p. 121. "In 1896 he [Dr. Kellogg] patented a product labeled 'Bromose,' which he claimed to be a vegetable equivalent of malted milk... At about the same time, John Harvey originated a similar product which he named Malted Nuts. Derived principally from peanuts and almonds, one could mix Malted Nuts with water to form a vegetable milk which Kellogg maintained looked 'exactly like milk, and tastes so nearly like it that it is a very satisfactory substitute.' He designed the latter product primarily for infants who could not tolerate cow's milk..."

194. Colcord, Anna L. (Mrs.). 1899. A friend in the kitchen: Or, what to cook and how to cook it. Containing about 400 choice recipes carefully tested. Oakland, California, San Francisco, New York, Kansas City: Pacific Press Publishing Company. 126 + v p. Illust. 19 cm.
• ***Summary:*** A Seventh-day Adventist vegetarian cookbook. The subtitle continues: Plain directions for healthful cookery; How to can fruit; A week's menu; Proper food combinations; Rules for dyspeptics; Food for infants; Simple dishes for the sick; Wholesome drinks; Useful tables on nutritive values of foods, time required to digest foods, weights and measures for the kitchen, etc.

Pages 105-09 discuss "Specially Prepared Health Foods" which may be obtained from the St. Helena Sanitarium Health Food Company (St. Helena, California), of the Battle Creek Sanitarium Health Food Company (Battle Creek, Michigan). They include Granola (thoroughly cooked and partially digested; may be eaten with milk, cream, or fruit juice), Granose (light, crisp flakes; serve like Granola), Nut Butter (a substitute for butter and cream), Protose ("This is also a nut product and is intended as a substitute for meat..."), and Caramel Cereal (a "harmless and nutritious substitute for tea and coffee, both of which are now generally recognized by the best physicians as harmful beverages, and the cause of many nervous disorders. It is made wholly from grain products...").

Page 120 gives a week's menu and page 121 discusses the Sabbath and Sabbath dinners ("The Sabbath is the day of rest In order that it may be devoted by all to religious exercises, holy meditation, and spiritual delight, it should be as free as possible from the ordinary duties and cares of life... With proper planning, very little, if any, cooking need ever be done on the Sabbath...").

A full-page ad on the next to last page of the book (unnumbered) lists foods available from the St. Helena Sanitarium Health Food Company (which has a San

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Francisco branch at 1422 Market St.): Granose ("The Queen of cereal foods"), Granola, Granose biscuit, Caramel cereal, Whole wheat sticks, Graham sticks, Pure gluten biscuit, Whole wheat zwieback, Whole wheat wafers, Nut butter, Nucose, Nutlet, Bromose, Malted nuts, Protose, Maltol, Ambrosia, Almond butter, Manno, Fruit coco. "Unfermented breads aid digestion: Most of our crackers and sticks are unfermented."

Note: This is the earliest document seen that mentions Protose (which was Dr. John H. Kellogg's first meat alternative product), or that mentions "Malted Nuts" (a nondairy product made principally from peanuts and almonds; when mixed with water it resembled malted milk).

195. Kellogg, John Harvey. 1899. Shall we slay to eat? Battle Creek, Michigan: Good Health Publishing Co. 173 + iii p. Illust. 19 cm.

• ***Summary:*** This is a comprehensive study of vegetarianism. Contents: Historical: The Golden Age, the Pythagorean philosophy, the healthy city of Socrates, Seneca a believer in the natural dietary, Plutarch's "Essay against Flesh Eating," early Christian defenders of the natural dietary, Buddha a diet reformer, vegetarianism not a modern innovation, celebrated modern vegetarians, vegetarianism in America, vegetarian periodicals, associations, etc. Man's natural diet considered from a scientific point of view. The testimony of physiology respecting the natural dietary of man. diseases resulting from the use of flesh foods. The testimony of human experience. The testimony of eminent man against flesh eating. The ethnics of diet. Address: M.D., Battle Creek, Michigan.

196. Lambert (Joseph) & Co. 1899. We manufacture nut grinders and blanchers, also peanut roasters (Ad). In: Almeda Lambert. 1899. Guide for Nut Cookery: Together with a Brief History of Nuts and Their Food Values. Battle Creek, Michigan: J. Lambert & Co. 452 p. See last page (unnumbered).

• ***Summary:*** This full-page black-and-white ad (on the unnumbered last page of the book) contains a large illustration showing a hand-powered grinder that "Makes fine nut butter."

"Our favorite family nut grinding mill. Ball bearing–easily operated. To operate by hand and power. A full equipment for preparing nut foods. We have for sale a large stock of all kinds of nuts, shelled and unshelled. We also make a fine variety of pure and wholesome Nut Foods. For further information, descriptive illustrated catalogue, and price list, address–Joseph Lambert & Co., Battle Creek, Michigan." Address: Battle Creek, Michigan.

197. Lambert, Almeda. 1899. Guide for nut cookery: Together with a brief history of nuts and their food values. Battle Creek, Michigan: J. Lambert & Co. 452 p. Illust. Index. 22 cm.

• ***Summary:*** Published in 1899, this book was copyrighted in 1898 by Mrs. Almeda Lambert (of Battle Creek, Michigan), who was almost certainly a Seventh-day Adventist. She quotes from Genesis 1:29 and on pages 60-65 she quotes extensively from the writings of Ellen G. White, the founder of the Seventh-day Adventist religion; she likewise advocates a vegetarian diet–indeed a pure vegetarian diet, free from milk and dairy products.

In the Introduction (p. 6) she states: "In the last few years there has been a great awakening in regard to healthful living and great strides have been made in the methods of emulsifying nuts into a paste or butter,–a convenient form for cooking purposes and much easier to digest. But the majority of those who have adopted nut butter, use it instead of the dairy product only to spread on bread. It is the object of the author to place before the public a book treating upon the use of nuts as shortening, seasoning, etc., to be used in every way in which milk, cream, butter, or lard can be used, and fully to take their place."

Chapter 1, "Nuts and Their History" (p. 7-58) includes many species of nuts arranged alphabetically including almonds, beechnut, chufa (earth almond), cocoanut, groundnut (*Apios tuberosa*, common in low, wet grounds), hickory-nut, litchi (leechee nut), peanut, pecans, sapucia-nut, souari-nut, pine-nut, walnut, and water chestnut.

The section on the peanut (*Arachis hypogœa*, p. 37-42) states that it is also "known in different localities as the earthnut, ground-pea, goober, pindar, jar-nut, and Manila nut. Strictly speaking it is not a nut at all, and should be more properly called the ground-pea." About 3½ pages of extracts are given from *Farmers' Bulletin* No. 25 titled "Peanuts: Culture and Uses," by Robert B. Handy (1895). Mrs. Lambert then comments: "Thus we see that over thirty years ago, peanuts were not only used as titbits [sic, tidbits] between meals, but also for culinary purposes. But since the invention of machinery for family use, for grinding the nuts into a butter, their use has spread over a greater territory. This is partly due to the fact that the expense is thus lessened, and not only this, but because the nut as it comes from the mill is in a much healthier condition to eat, being easier of digestion than the oil or the raw residue that remains after the oil is taken out. The nut butter can be easily mixed with water, forming an emulsion, and by thinning it sufficiently, it makes an excellent substitute for cream and milk. It can also be made into various nut foods."

A table compiled by Prof. König (p. 41) shows that peanut meal has the largest number of nutritive units per pound of twelve principal foods listed, and the cost of 1,000 nutritive units in the form of peanut meal is the lowest. For this reason the German army now uses peanuts, peanut flour and peanut meal extensively in its diet (p. 6).

In the chapter titled "Nuts: Their properties and food values" she states (p. 68-69): "The purest and most easily digested of all meats is the meat of nuts. In nutritive value

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they far exceed all flesh meats." "Nuts are more digestible if they are first emulsified, as very few can masticate them fine enough to be acted upon by the digestive juices. The question of emulsifying nuts has been practically settled in the last few years by the invention of machinery for that purpose, both for family and factory use. It is sincerely hoped and believed that the time is not far distant when nuts will fully take the place of animal flesh, fats, and products."

The chapter titled "Nut butter" (p. 70-75) describes how to make the following at home: "Peanut butter, raw peanut butter, almond butter, Brazil-nut butter, peanut cream, peanut milk, raw peanut milk and cream, almond milk, hickory milk, pine-nut milk, chufas milk, and cocoanut milk."

Note 1. This is the earliest document seen (Aug. 2013) that mentions coconut milk, which it calls "cocoanut milk."

Concerning homemade "Peanut butter" (p. 70-71): The introduction states: "The Spanish peanut makes the best peanut butter. The first essential thing is to have a nut-grinding mill" [such as the one made by Joseph Lambert & Co.]. The recipe itself states: "The first step is to roast the peanuts to a nice brown, being careful not to over-brown or scorch them, as too much cooking spoils the flavor. They can be roasted in an ordinary oven, but can be better done in a peanut roaster made especially for this purpose. As soon as they are roasted and cool, the skins or bran should be removed by rubbing them in the hands, or what is better, a coarse bag; or take a square piece of cloth and fold the edges together, forming a bag of it. The chaff can then be removed by the use of an ordinary fan, or by pouring from one dish to another where the wind is blowing. The process of removing the skins is called blanching. Next look them over carefully, remove all defective nuts and foreign substances, and they are ready for grinding. If a fine, oily butter is desired, adjust the mill quite closely, and place in the oven to warm. Feed the mill slowly, turn rapidly, and always use freshly roasted nuts; after they have stood a day or two they will not grind well nor make oily butter. If the butter is kept in a cool place in a covered dish, and no moisture allowed to come in contact with it, it will keep several weeks; and if put in sealed jars or cans, will keep indefinitely."

Note 3. This is the earliest document seen (Dec. 2007) that contains a recipe for homemade peanut butter.

When making peanut cream and milk, roast the peanuts less than when making peanut butter. "They should have a light straw color."

Note 4. This is the earliest document seen (Oct. 2004) that mentions Joseph Lambert in connection with peanut butter. Unfortunately it provides little information on the history of peanut butter or the history of his work with it.

Note 4. This is the earliest document seen (Sept. 2000) that mentions almond butter (resembling the modern product) or gives a recipe: "Almond butter is more difficult to make than peanut butter because the skins can not be so easily moved. Roasting does not loosen the skins of the almond as it does of the peanut. They have to be soaked in boiling water from two to five minutes; then the skins become loose and can be pinched off by pressing on the nut with the thumb and finger; the skin will crack and the kernel pop out. But by this process the nuts have soaked up some water and become tough. They must then be dried in the oven until quite crisp, but the oven must not be hot, or they will brown. Then run them through a loosely adjusted mill or a sausage grinder, and place on a cloth stretched over the stove until perfectly dry; then grind them in the nut-butter mill, quite tightly adjusted. This makes excellent butter if the almonds are first-class, and sweet."

Note 5. This is the earliest U.S. document seen (Sept. 2000) that mentions "Almond milk" which is prepared as follows: "Dissolve 1 tablespoonful of almond butter in 1 pint of warm water, adding a little at a time.

Note 6. This is the earliest English-language document seen (Aug. 2013) that contains the term "peanut milk." Continued. Address: Battle Creek, Michigan.

198. Lambert, Almeda. 1899. Guide for nut cookery: Together with a brief history of nuts and their food values (Continued–Document part II). Battle Creek, Michigan: J. Lambert & Co. 452 p. Illust. 22 cm.

• ***Summary:*** Continued from p. 76. Other chapters include– Nut meal (p. 76-78): To make peanut meal, heat the nuts sufficiently to remove the skins, but do not brown them. Blanch (remove skins), then boil in water until very tender. Drain until perfectly dry, then grind in a mill that is loosely adjusted. If desired, rub through a flour sieve. A very rich meal can also be made by grinding raw peanuts. Meals can also be made from almonds, pine-nuts, etc.

Sausages (p. 79-81): For peanut sausages mix 1 tablespoon peanut butter, 2 tablespoons water, 3 tablespoons gluten or dry bread-crumbs, a little salt, sage, and parsley. Form into small cakes and bake on an oiled tin. Serve topped with Peanut Gravy No. 1.

Nut oil (p. 82-83): Boil ground cocoanuts or peanuts with water in a kettle for 1 hour. Set in a cool place and the oil will rise to the top. Nutmeatose, Nutora, etc. (p. 84-90): These foods are best cooked under high-pressure steam to make them quite solid. For Nutora of peanuts: Mix 2 cups raw nut butter or nut meal with 1 cup water and salt to taste. Beat with an egg beater for 5 minutes or more, then put into cans and cook (in a steam cooker) for 3 or 4 hours. For "Nut cheese," see p. 90.

Note 7. This is the earliest document seen (Aug. 2002) in the Western world concerning a meatless sausage.

Nutmeato (p. 91-127): This chapter contains many nut-based recipes for meat alternatives. The main ingredient is usually nut butter, but "nutmeatose" gluten, zwieola or toasted bread crumbs, and legumes are also used, along with corn starch and a little salt. The mixture is usually sealed in a can and steamed for 3-5 hours. Recipes include: Mock

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Nutmeato roast, Nutmeato steak, Nutgrano No. 1-10 (No. 1 and No. 8 use 1 cup raw peanut butter), Nutmeatose No. 1-7 (p. 97-98; No. 1 uses 2 cups peanut butter), Frutose, Frutosia, Butter for table (butter whipped with an equal quantity of water ["Better Butter"]), Roast goose (with full-page photo, based on zwieola {see p. 399} and eggs), Turkey legs, Chicken legs, Roast turkey (with photo, based on zwieola, gluten, pecan meal, almond meal, peanut butter), Nut lobster, Baked trout (with photo), Mock fish stuffed and baked, Sauce for baked fish (with photo), Mock turkey, Mock fish-balls, Vegetable nut roast, Mock salmon, Mock chicken croquettes, Mock fried oysters, Mock oyster patties, Mock chip beef. Includes many photos of the finished dishes.

Unleavened breads (p. 156-67): These are "made light without the use of yeast, baking-powder, or soda. Since they are the most healthful of all breads, it would be of benefit to mankind if they were in more general use." For best results "run the dough through the nut-butter mill twice or more, instead of kneading by hand as directed in the recipes." Recipes include: Graham gems, Raw peanut-butter gems, No. 1 gluten (made from best grade white flour which is rich in wheat gluten–such as Pillsbury's Best). Yeast breads (p. 168-82) incl. Graham bread.

Legumes (p. 246-52) incl. Nut meatose beans, Vegetable turkey, boiled peanuts. Gravies for vegetables and toasts (p. 311-17) incl. Mock milk gravy (from peanut butter), raw peanut milk gravy. Pies (p. 320-32) incl. Peanut meal pie crust, Chufa cream pie crust.

Puddings (p. 333-43): "Puddings made with dairy milk and sugar combined are apt to ferment in weak stomachs. They are much better prepared without dairy milk." Incl. Custard No. 1 (from raw peanut milk). Sauces for puddings (p. 344-49) incl. Almond cream sauce. Cakes (p. 354-75): "Cakes and pies are filled with animal fats, irritating spices, and are raised with baking-powder or soda, are certainly very unwholesome; to use them in our bill of fare could work nothing but injury to all who partake.

"Animals are becoming so diseased that it is no longer safe to use their flesh as food, and even if they were not diseased, free fats are hard of digestion." (p. 354).

"Spices and condiments, which usually enter into cake making, are equally injurious. The effect that they have upon the stomach can be illustrated by putting them upon a raw surface or in the eye; inflammation immediately takes place. They irritate the nerves, cause irritability and peevishness, and create a craving for something more highly spiced, which often leads to grosser forms of intemperance."

Drinks (p. 381-83) incl. Peanut and cereal coffee (with wheat bran, corn-meal, and malt), Peanut coffee No. 1-2 (roast peanuts until dark brown), Chufa coffee. Food for the sick (p. 400-01) incl. Almond milk, Graham gruel, Plain gluten gruel, Nut gruel (with almonds and peanuts), Egg nog (made from cocoanut cream, eggs, and sugar).

Note: This is the earliest document seen (Dec. 2012) that mentions or contains a recipe for a nondairy egg nog.

Creams, ices, etc. (p. 411-14) incl. Ice-cream No. 1-3 (made from almond or peanut cream, sugar, and eggs), Ice-cream made of peanut milk, Almond ice cream, Sherbets (from frozen fruit juices). To blanch nuts (p. 415-16); blanch peanuts dry and almonds by pouring boiling water over them. To salt nuts (p. 417-18). Confectionery (p. 419-24) incl. Peanut candy (with 1 lb each sugar and peanuts). Menus (p. 425-33) incl. Thanksgiving dinner: This "has been a great puzzler to the vegetarian housewife... I propose that we do have a turkey for Thanksgiving, not the corpse of a bird whose life was sacrificed to satisfy our perverted appetites, but something which... is only one made of nuts and grains... "With painstaking we shall have a better dinner than our sisters who have their platters ladened with the remains of a barn-yard fowl, and with cakes and pies filled with animal fats and spices. Besides this, we shall have a clearer mind, as well as a clear conscience; while those who eat meat are taking poisons into the system which benumb the brain, cloud the conscience, and render man unfit to meet the vesper hour and hold communion with his God."

Thanksgiving dinner menu (8-course meal), Christmas dinner. Composition of foods (p. 434-39) incl. Dietetic tables by Atwater and Woods of USDA. See p. 439 for composition of nuts.

On the last page is a full-page ad for nut grinders, blanchers, and peanut roasters made by Joseph Lambert & Co., Battle Creek, Michigan.

Note 8. This is the earliest U.S. document seen (March 1999) that mentions almond milk.

Note 9. This is the earliest document seen (Sept. 2013) that mentions a non-dairy non-soy ice cream; it is based on almonds or peanuts.

Note 10. This is the earliest document seen (June 2007) that gives a recipe for a meatless turkey and the 2nd earliest that mentions meatless turkey. However soy is not mentioned.

Note 11. This is the earliest document seen (Dec. 2003) that mentions or gives a recipe for a meat alternative resembling beef: Mock Nutmeato roast, and Nutmeato steak. These were made with nuts rather than soy. Address: Battle Creek, Michigan.

199. Leadsworth, J.R. (Mrs.). 1899. The natural food of man, and how to prepare it. 3 parts. Oakland, California, New York City, Kansas City, Missouri: Pacific Press Publishing Assoc. 96 p. *

• ***Summary:*** An 1899 ad for the book (published by "Pacific Press Publishing Co." in Oakland, California) states: "A thoroughly hygienic cook-book. It discards not only meat, but all animal productions, such as milk, butter, eggs, etc., as well." Address: USA.

200. Richards, Benjamin Franklin. 1899. Health: How to

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find it when its lost, how to keep it when its found. Oakland, California, New York, N.Y., Kansas City, Missouri: Pacific Press Publishing Company. 3 + 9 + 222 p. 19 cm.
• ***Summary:*** About vegetarianism and hygiene. Pages 65-66 contain a section on uric acid.

201. *Vegetarianeren.* 1899-?? Serial/periodical. Copenhagen, Denmark. [Dan]*
• ***Summary:*** "This is the name of the Danish Vegetarian journal, which is published at Kopenhagen [Copenhagen], and has just entered upon its second year. Its editor is a young physician, who conducts a sanatorium at Skodsborg, near Kopenhagen, and is a pupil of Dr. Kellogg" (*Vegetarian Messenger* (UK), June 1900, p. 180). Address: Copenhagen, Denmark.

202. Dr. John Harvey Kellogg answering questions about health and biological living at Battle Creek, Michigan (Photograph). 1899? Undated.
• ***Summary:*** See above, Image courtesy of the Ellen G. White Estate. In a book he wrote in 1920 titled *The health question box, or a thousand and one health questions answered.* 2nd ed., Dr. J.H. Kellogg wrote: "Foreword: For more than forty years, the writer of this volume has each week stood before an audience of invalids at the Battle Creek Sanitarium to open a popular question box."

203. *Los Angeles Times.* 1900. Care of the body: Valuable suggestions for acquiring and preserving health. Jan. 7. p. IM27.
• ***Summary:*** The section titled "A vegetarian restaurant" states: "Los Angeles has now a first-class vegetarian restaurant and it appears to be well patronized. The restaurant, which also keeps health foods for sale, is connected with a well-known hygienic institution [Battle Creek Sanitarium] in Michigan, which manufactures these foods on a large scale, and has branch sanitariums all over the world. For those who are not acquainted with the wide range of dishes at the command of the modern vegetarian in the United States, the following dinner bill of fare of the restaurant above referred to, on a recent Sunday, will be of interest:

"Bayo beans and tapioca soup, celery, cabbage salad, onions, nut and vegetable roast, egg macaroni, boiled potatoes with gluten sauce, lima beans and nut stew, carrots, vegetable stew, ambrosia, bromose tablets, shaved nuttose, sliced nucose, protose.

"Boiled eggs, plain omelet, scrambled, poached, poached on toast, and poached on granose.

"Rice with raisins, granose, granola, gluten mush with milk, nut cream or dairy cream.

"Steamed figs, pear sauce, baked apples with cream, sliced bananas with cream, stewed prunes, apple sauce, apples, oranges, and bananas. Apple charlotte, cream rice pudding.

"Cereal coffee, hot malted nuts, cold milk, hot milk,

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unfermented wine, glass one-half cream and one-half milk, lemonade, hot or cold orangeade, distilled water.

"Whole-wheat bread, graham bread, zweiback [zwieback], graham sticks, whole-wheat sticks, mixed wafers, oatmeal wafers, graham wafers, granose biscuit, gluten wafers, and whole-wheat wafers."

Note: This is the earliest document seen (March 2007) worldwide that mentions a health foods restaurant.

204. Bucknum, Evora. 1900. An experience with nuts as food. *Good Health* (*Battle Creek, Michigan*) 35(1):28-30. Jan.

• ***Summary:*** "While the peanut, or goober pea, or monkey nut, as it is variously called in different localities, is not a true nut but a legume, and is so classed by leading authorities on foods, its composition is almost identical with that of the sweet almond, being a little richer in proteids, although not containing so much oil."

"Some years ago the German army began to use them. Professor Dabney has experimented extensively with them, as have many other scientists. I have known several cases of insomnia of long standing to be cured by the use of peanut butter."

205. *Food, Home and Garden* (*Philadelphia*). 1900. A college for vegetarians. Jan. p. 1.

• ***Summary:*** "The importance of securing educational advantages away from the artificial stimulation of flesh, alcohol and unwholesome beverages cannot be overestimated." "The Walla Walla College was built in 1892 to furnish college privileges especially to the Seventh Day Adventists (though many others attend) in the Northwest. The first president was Professor E.A. Sutherland, who is now president of the college at Battle Creek, Michigan."

"This college was the first, I believe, in the denomination, to start out on the Vegetarian diet: none of the animal products being used, except eggs, milk and butter, and the latter only in cooking." An illustration shows Walla Walla College, College Place, Washington.

206. Hammond (Harry N.) Seed Co. 1900. Annual catalogue (Mail-order catalog). Fifield, Michigan. 49 p. See p. 35. January 1, 1900. 22 cm.

• ***Summary:*** Page 35 is titled "Hammond's selected northern-grown farm seeds." Here we read: "Soza Beans or Soy Beans. The dry beans, roasted and ground, *closely resemble and taste* very much like coffee. Its great value, however, is as a forage crop and for fertilizing the soil, and for pasturing, or feeding of the green fodder, of which it yields eight to ten tons per acre. Sow broadcast one-half bushel to the acre, or it may be planted in drills three feet apart and one foot between plants. My seed grown in latitude of Augusta, Me. [Maine], will ripen in any State. Pkt. 10 cts., lb 25 cts., 3 lbs. 60 cts., post-paid; peck 65 cts., bu. $2.25 by freight or express."

Across the top of the page is printed: "Following Seeds are grown, cleaned, and tested under my supervision. I guarantee them the best seeds that can be grown. Bags free with all farm seeds." Other seeds described on this page include: Hammond's success beardless barley, new Japanese buckwheat, chufas or earth almonds, kaffir corn, teosinte, mammoth Russian sunflower, dwarf Essex rape, Spanish peanuts, and Japanese millet.

The cover of this catalog states: "Fresh, pure seeds–sure to grow. Harry H. Hammond seedsman. Fifield, Saginaw County, Michigan. Seed potatoes. Vegetable and flower seeds. The largest seed farm controlled by any one seedsman in America." An illustration showing many fields, farmhouses, and buildings is titled "Partial view of Hammond's Saginaw Valley seed farm. 1200 acres devoted to growing and producing the best seeds that grow. Buy seeds direct from the grower." Many vegetables and grains are also illustrated on the cover and below them is written: "Hammond's $1.00 vegetable seed collection of 50 packets of the choicest northern-grown vegetable seeds comprises all the above and many others not illustrated on this page." This catalog was printed by the Review & Herald Publishing Co. [Seventh-day Adventist], Battle Creek, Michigan. At the top of page 1 the date "January 1, 1900" is printed.

Note 1. This is the earliest Hammond seed catalog seen in which the soybean is listed. It is owned by the Bentley Historical Library at the University of Michigan (Ann Arbor).

Note 2. Fifield (pronounced FAI-feeld) is in Saginaw County, Michigan, just east of the Saginaw River and northwest of the center of Saginaw city today; it is a station on the Pierre-Marquette Railroad in Bueno Vista township "serving a sawmill settlement of which Harry M. Hammond became the first postmaster on August 19th, 1898. The office operating until February 15th, 1900." The place is named for Eugene Fifield (Source: *Michigan Place Names*, by Walter Romig–1986. Wayne State Univ. Press, p. 196).

Note 3. Hammond also lived (and published catalogs in) in Decatur, Michigan (far away in the southwest corner of the state), and Bay City (which is now about 20 miles north of Saginaw, near Saginaw Bay). Address: Fifield, Saginaw Co., Michigan.

207. *Advent Review and Sabbath Herald.* 1900. News and notes. 77(9):141-42. Feb. 27. See p. 142, col. 1.5.

• ***Summary:*** "The Detroit *Christian Herald* reports that 'Battle Creek [Michigan] is becoming noted as the headquarters in the United States for the manufacture of peanut butter. Thirty car-loads of peanuts were contracted for in Virginia, which will be made into butter.'"

208. *Review and Herald* (*Battle Creek, Michigan; Seventh-day Adventist*). 1900. The Detroit *Christian Herald* reports that... 77(9):142, col. 1. Feb. 27. Whole No. 2365.

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• ***Summary:*** "'Battle Creek is becoming noted as the headquarters in the United States for the manufacture of peanut butter. Thirty car-loads of peanuts were contracted for in Virginia, which will be made into butter.'"

209. Kellogg, John H. 1900. Vegetarian view of cosmetics. *Literary Digest* 20:275. March 3. *
Address: M.D.

210. Lee, Clayton Donald. 1900. Joseph Lambert. *Battle Creek Daily Moon.* April 4. Art Souvenir Edition.
• ***Summary:*** "We present herewith exterior views of the two establishments of Joseph Lambert, one of the progressive manufacturers of Battle Creek [Michigan]. Mr. Lambert is a native of South Nattick, Massachusetts, and he came to this city in 1885, and until 1890 was engaged in the manufacture of buggies. In the later year he started a small machine shop for the manufacture of printers' supplies. In 1895 he made a beginning in his present line of business, and two years later he opened a small retail store on West Main Street for the sale of nut foods. The demand for these goods increased to such an extent that Mr. Lambert erected the large block at 235 West Main street, which was occupied by his retail business.

The manufacturing and wholesale business is located in the building shown in the accompanying illustration at the corner of Washington and Kalamazoo streets, where Mr. Lambert first began the manufacture of nut grinding machinery, and the wholesaling of peanuts. The business has gradually extended and this building is now used for the manufacture of several kinds of machines for special purposes. Among them are: Nut butter mills, for making butter from nuts; blanching machines, for removing the hulls from peanuts; peanut roasters, etc. The trade in these special machines has developed to a remarkable extent, so that now the concern ships its products to Japan, China, Australia, Egypt, Palestine, to other foreign countries, and throughout the United States.

In addition to the articles mentioned, Mr. Lambert manufactures several varieties of nut foods, among them Nut Butter, Malted Caramels, Fruit Nuts, Crystal Nuts, etc. He is making a specialty of salted peanuts prepared by a new process, and ships large quantities of this article to the wholesale trade." Photos show: (1) "One of the factory buildings"–a large, two-story wooden building. (2) Lambert's retail store.

Note 1. Jean Davis, a Seventh-day Adventist historian from Battle Creek, Michigan, writes of the first photo: "This building was originally the first *Review & Herald* building, in which the Seventh-day Adventist periodical was published.

Note 2. This Art Souvenir Edition is subtitled "Historical, industrial, and social record of Michigan's queen city." "Issued as a special edition of the Battle Creek Daily Moon, Wednesday, April 4, 1900." Address: Battle Creek, Michigan.

211. Broadbent, Alfred. 1900. Battle Creek work in England. *Vegetarian Messenger* (*Manchester, England*). April. p. 117-18.
• ***Summary:*** "I had recently the pleasure of visiting the sanitarium at Dunedin, Cronks Hill Road, Meadvale, Redhill, in Surrey. It is about two miles walk from Redhill, is pleasantly situated, and has excellent views. There is only room for ten patients, and so far the sanitarium has been full.

"Dr. Kress, who is in charge of the work in this country, is now anxious for the sanitarium to become better known, and says it is intended to build an institution at Redhill to accommodate forty or fifty patients. When that is filled, another will be started at some other point where an equal number can be dealt with."

"The sanitarium at Redhill, is under the supervision of Dr. Kress and his wife–Dr. Lauretta Kress, and under their superintendence the work must prosper, they are so impressed by its righteousness and truth.

"Dr. Kress is a specialist for diseases of the stomach, and has had many years experience in the treatment of indigestion.

"Dr. Lauretta Kress is skilled in the treatment of diseases of women, &c. She is an excellent speaker and lecturer, and a great believer in dress reform for ladies, being most anxious to promote it in this country. She has designed some garments which sit very tidily, and are not at all sloppy. She says that any garments can be adapted to the patterns she uses.

"There are only two meals during the day in the sanitarium, one at 8 o'clock morning, the other at 3 o'clock afternoon. No liquids are allowed at meals.

"No physic or drugs are used, the treatment consists of massage, electricity, electric baths, diet and hydropathy being made special features of the treatment, which is highly successful."

"For a few years the foods sold by the London Food Co., have been imported from Battle Creek, Michigan, U.S.A., but now a factory is established at Horley, Surrey, where several kinds are already manufactured.

"The foods from now are to be sold in this country under the name of 'Life and Health Foods.'

"I have visited the factory and though the machinery was not working, I was struck with the elaborate machines required for producing the foods. Some of them go through more than twelve processes, Granose especially requiring a very long time to make.

"I was informed that the price of all the foods is being gone into, and a reduction on them all–it is hoped–will be eventually made. I hope this will come about, for I have long considered it a great pity that these valuable foods should–because of their high price–be placed beyond the reach of

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many whose accession to them would leave the path of food reform made easier.

"The Vegetarian Society, which has always sought to popularise food-products of a genuine nature, was the first to introduce these foods into this country, and has done much to make them so well known as they are today."

Note: This is the earliest document seen (Dec. 2013) that discusses the origins of Granose Foods (a Seventh-day Adventist company) in England.

212. Stewart, Charles E. 1900. Chronic constipation, a symptom resulting from a disordered state of the sympathetic nervous system. Its causes and cure. *J. of the American Medical Association* 34:1306-10. May 26.
• ***Summary:*** "Nuts, in order to be of service, should go through a special process of preparation. At the present time such specially prepared nut foods as protose, nuttolene, malted nuts, granuts, bromose, and a number of others can be found on the market. A careful analysis of these nut foods has been made in our laboratory, and they have been found to be sterile and wholesome, and to contain nitrogenous and fatty material to meet the demands of the human economy. A diet consisting of granose, browned rice, protose, steamed figs, prune marmalade, and ripe fresh fruits..., almond butter, and cream [almond cream], is so palatable, nourishing, and easy of digestion that the most fastidious epicure could find no fault with it" (p. 1309). Address: M.D., Battle Creek, Michigan.

213. U.S. Department of the Interior, Census Office. 1900. Joseph Lambert in the 1900 U.S. Census in Battle Creek, Michigan. Battle Creek, Calhoun County, Michigan. p. A-79. Home No. 229.
• ***Summary:*** This census record, enumerated on 1-2 June 1900, shows that Joseph Lambert is living alone in Battle Creek, Michigan. He was born in April 1860, is age 40, married, and has been married for 8 years–but his wife, Almeda, is not with him. He was born in Massachusetts. His father was born in Canada (French) and his mother in Ireland. Occupation: Merchant. He is renting the place where he lives. There are four separate apartments in this house.

Note 1. Jean Davis, a Seventh-day Adventist historian from Battle Creek, Michigan, writes: "Almeda's obituary says they were married in 1890. They must have separated and later divorced as Joseph is in Cincinnati, Ohio, in 1920, with wife Daisey [Daisy]; Almeda did not die until 1921. I did not find Almeda in Michigan in 1900." Note 2. Almeda Lambert died in Escondido, California, in March 1921.

214. *Vegetarian Messenger* (*Manchester, England*). 1900. "Vegetarianeren." June. p. 180.
• ***Summary:*** "This is the name of the Danish Vegetarian journal, which is published at Kopenhagen [Copenhagen], and has just entered upon its second year. Its editor is a young physician, who conducts a sanatorium at Skodsborg, near Kopenhagen, and is a pupil of Dr. Kellogg."

215. *Poverty Bay Herald* (*Gisborne, New Zealand*). 1900. Sanitarium health foods (Ad). July 6. p. 3.
• ***Summary:*** "Supply on hand: Caramel Cereal [a coffee substitute]. Granola (packets and bags). Granose Biscuits. Nut Butter. Nuttose. Bromose. Gluten. Charcoal Tablets.

Note 1. No company name [Sanitarium Health Food Company] or address is given.

Note 2. This is the earliest document seen (Dec. 2013) concerning "Sanitarium health foods" in New Zealand.

216. Sanitas Nut Food Co., Ltd. 1900. 20th century foods (Ad). *Good Health* (*Battle Creek, Michigan*) 35(7):July. Ad section in back of issue. Unpaginated.
• ***Summary:*** "We manufacture the most unique, delicate, and toothsome line of foods on the market. While these foods are so prepared as to be perfectly adapted to the stomach of the feeblest invalid, or the youngest child, they are at the same time of the greatest value in forming the healthy tissue of the vigorous man or woman. They are prepared with the greatest care from the choicest edible nuts. Perfect substitutes for meat, butter, and milk. Possessing none of their objections." Products include: "Malt Honey, Bromose, Protose, Nut Butter, Malted Nuts, Maltöl. Ask your grocer for samples, and if you fail to get them, write us, giving his name, and you will hear of something to your advantage."

Note: According to Stoltz (1992) Sanitas Nut Food Co. was legally founded in 1899. Address: Battle Creek, Michigan.

217. *San Francisco Chronicle.* 1900. Awards at Paris fair: United States received nearly two thousand prizes... Full list of those receiving the higher recommendations. Number of medals captured nearly double those won at the previous French exposition [of 1889]. Aug. 18. p. 3.
• ***Summary:*** "Paris, August 17.–The list of awards to American exhibitors at the Paris Exposition was made public to-day."

"Department of agriculture, food products, Group X–Libby, McNeill & Libby;... Battle Creek Sanitarium Health Food Company;..."

218. *Star* (*Canterbury, New Zealand*). 1900. Jubilee Exhibition: The exhibits. Charlotte Jane Avenue. Nov. 17. p. 6.
• ***Summary:*** "... and beside it are the Sanitarium Health Food Company's exhibits of health foods. The commodities shown in this bay are farinaceous foods intended to promote easy and thorough digestion. The caramel cereal is intended as a substitute for tea and coffee, and by its use, it is claimed, the evils resulting from long-continued or excessive tea or coffee drinking are avoided, as caramel cereal contains neither

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theine [a stimulant found in tea] nor caffeine, the harmful elements of the beverages of the breakfast table. Granose is a preparation of wheat, in which all the elements of the grain are preserved. Granola is another health food, made from a combination of grain, and it is claimed for it that it is an ideal breakfast food. There are other preparations from nuts, specialties in glutens and antiseptic charcoal tablets, wheatmeal and oatmeal biscuits, etc."

219. Catalogue of exhibitors in the United States sections of the International Universal Exposition, Paris, 1900. 1900. Paris: Société Anonyme des Impremieries Lemercier. 560 + 31 + [23] p. See p. 288. 20 cm.
• ***Summary:*** "Class 56, Farinaceous products and their derivatives," includes two health food companies (p. 288): (1) "Battle Creek Sanitarium Health Food Company, Battle Creek, Michigan.–Cereal products and health foods."

(2) "Health Food Company, 61 5th Avenue, New York. Wheatena, infants' and invalids' food."

220. Kellogg, Ella Ervilla (Eaton) (Mrs.). 1900. Every-day dishes and every-day work. Battle Creek, Michigan: Modern Medicine Publishing Co. 206 p. Index. 21 cm. [1 ref]
• ***Summary:*** The wife of the famous Dr. John Harvey Kellogg discusses her system of meatless cookery. She lived 1852-1920. This book was copyrighted 1896.

Contents: Preface. Cereals. Macaroni. Fermented or yeast bread. Unfermented or aerated bread. Fruit. The leguminous seeds (soy is not mentioned). Vegetables. Soups (without milk, with milk), Eggs. Desserts. Pastry ("Dietetic evils of pastry–General suggestions for making pies"). Cake. Toasts (incl. Zwieback). The Battle Creek Sanitarium Food Company's Products (recipes using them; including Granola, Granose, Crystal Wheat, Gluten, Zwieback, Caramel-Cereal).

Sanitas Nut Food Company's Products (recipes using them; including Nut Butter, Nuttolene, Nut Meal {"Many persons suffer from biliousness, nervousness, sick-headache, and various forms of indigestion, from the use of butter, milk, and cream, without being aware that these substances are harmful to them. Persons suffering from dilatation of the stomach, a condition which is exceedingly common, must avoid milk and butter in all forms. Nut butter, nut meal, and nuttolene have been prepared as substitutes for butter and cream. In nut butter, the fat is in a state of perfect emulsion, so that it mixes well with water. Thus it does not interfere with digestion}," Protose, Granose, Almond Meal). Hints about every-day work (Economizing time, system in work, daily program of kitchen work, economizing money, economy of material, uses of stale bread, left-overs, waste of fuel, general suggestions for economical housework, order of clearing the table, washing the dishes, dish-cloth and towels, cleaning silver, care of table linen, disposal of garbage).

Peanut butter is called for as an ingredient in recipes on pages 166 and 170 ("An icing for the peanut cake may be made in the same way by using the peanut butter").

Note: This is the earliest English-language document seen (Nov. 2013) that mentions a non-dairy icing.

Almond butter is called for as an ingredient in recipes on pages 140 (one well-rounded tablespoonful in an icing for Almond pound cake), 155 (twice), 156 (twice), 166 (twice), 170, and 172 (twice).

The term "nut butter" appears on 32 pages; see p. 201 in Index.

The word "Vegetarian" appears in this book only once, in the titled of a recipe, "Vegetarian Boiled Dinner" (p. 164).

Bran (including wheat bran) is mentioned on pages 98 and 99 (3 times each in the section on soups), 100, 144, 169, and 197.

Near the end of this book are full-page ads for: Bromose (p. 207), Malted Nuts ("presented in the form of a fine granular powder," p. 208), Protose–vegetable meat ("This truly wonderful food product is, without question, the most remarkable discovery in dietetics which has been made within the last half century... Protose is a Perfect Substitute for flesh food... Send 10 cents for a sample can," p. 209), Battle Creek Sanitarium Health Foods (Granose, Granola, Caramel-Cereal, Battle Creek Sanitarium Breakfast Food, Germless Oats, Germless Corn Grits, Crystal Wheat {sterilized, ready cooked}, Gluten Preparations, Diabetic Foods, A large variety of crackers and biscuit and other wholesome preparations. Superior canned goods. Warranted pure. Send for catalog and price list, p. 210).

Antiseptic charcoal tablets–antiseptic, absorbent. "Charcoal Tablets are not a panacea, but they have proved to be the moat valuable remedy we possess for morbid conditions arising from fermentation or decomposition of food in the stomach and intestines. They consist of a special form of vegetable charcoal, much superior to willow, freshly prepared, to which is added sulphur, one of our most valuable intestinal antiseptics, and diastase, a starch-digesting ferment. This will at once be recognized as a happy combination for combating the action of microbes in the alimentary canal," (p. 211). *The Stomach: Its Disorders and How to Cure Them,* by J.H. Kellogg, M.D. (p. 212). *The Home Hand-Book,* by J.H. Kellogg (p. 213). *Science in the Kitchen,* by Mrs. E.E. Kellogg, A.M. (p. 214). Address: A.M., Battle Creek, Michigan; Author of *Science in the Kitchen,* etc.

221. *Battle Creek Daily Moon* (*Michigan*). 1901. Another improvement: The Sanitas Nut Food Company's building nearing completion. Jan. 2. p. 6.
• ***Summary:*** "The Sanitas Nut Food company's new building, on the corner of Aldrich and Lincoln streets, is rapidly nearing completion and will be ready for occupancy about the last of next week. The structure is one of the most substantial factory buildings in America and when completed

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will be practically fireproof...

"The building is 50 by 100 feet in size and three stories in height. The walls are massive, twenty-two inches in thickness below and eighteen above the second story floor... this building will cost in the neighborhood of $20,000...

"When the new building is completed it will be used by the Sanitas Nut Food company (Ltd.) as a factory where nut foods will be manufactured. One of the features of the new factory is an immense revolving oven two stories in height."

222. *Vegetarian Messenger* (*Manchester, England*). 1901. Of health foods and vegetarian specialties: Write for the latest and most complete price list in the Kingdom (Ad). Jan. p. [4].

• ***Summary:*** This ¼ page ad (on an unnumbered page near the front) continues: "... and Xmas and New Year Novelties. 'Pitman' Health Food Stores, Birmingham.

Note 1. This is the earliest English-language document seen (Sept. 2009) in England or the UK that contains the term "Health Food" or "Health Food Stores" (or Store, regardless of capitalization).

Note 2. This is the earliest document seen (Sept. 2009) that mentions "Pitman" or "Pitman Stores" in Birmingham, England, in connection with healthy foods. Pitman seems to be much less involved with making such foods than the International Health Food Association [International Health Association], also of Birmingham. IHA seems to have been the first importer of and then the first manufacturer of health foods in England and Pitman seems to have started the first health food stores. Yet it is not clear whether or not Pitman carried health foods made by IHA in its stores; it seems likely that they would have (in part since IHA apparently owned no retail stores), yet we have been unable to find any evidence to confirm this.

223. White, Ellen G. 1901. Manufacture of health foods. In: Testimony for the Church. Vol. 7. See p. 127-31.

• ***Summary:*** This talk, said to be under Divine Guidance, was presented on 16 Feb. 1901 at St. Helena, California. "I have a most earnest desire that in every place the work shall be carried forward in accordance with His commands. I see trouble ahead as high as mountains for our people in the way in which some things are now being done, and especially in regard to the health food business...

"With great skill, and with painstaking effort, Dr. Kellogg and his associates have prepared a special line of health foods. Their chief motive has been to benefit humanity, and God's blessing has rested upon their efforts... The Lord will teach His servants how to make food preparations that are more simple and less expensive. There are many whom He will teach in this line if they will walk in His counsel, and in harmony with their brethren."

"In all our plans we should remember that the health food work is the property of God and that it is not to be made a financial speculation for personal gain. It is God's gift to His people, and the profits are to be used for the good of suffering humanity everywhere.

"Especially in the Southern States of North America many things will be devised and many facilities provided, that the poor and needy can sustain themselves by the health food industries..."

"... No one has a right to engage in the manufacture of these foods in any selfish way..." Address: St. Helena, California.

224. Kellogg, John Harvey. 1901. Vegetable-food compound [made from wheat gluten and peanuts]. *U.S. Patent* 0,670,283. March 19. 2 p. Application filed 3 June 1899.

• ***Summary:*** "My invention relates to an improvement in vegetable-food compounds; it consists in combining gluten of wheat or other cereals and water with a meal prepared from peanuts or other oleaginous nuts... The object of my invention is to furnish a vegetable substitute for meat which shall possess equal or greater nutritive value in equal or more available form for digestion and assimilation..."

Wash wheat gluten until it is practically free from starch, then mix it with dry peanut meal in the proportion of 1 part of the nut meal to one or more parts of the raw moist gluten. To mix, pass the gluten and meal one or more times through a vegetable shredding or other suitable mixing machine. Then carefully mix in the proper quantity of water. Cook for 1-3 hours or more at a temperature of 212-230ºF. Cooking not only preserves the product (in the way ordinary canned foods are preserved) but modifies "its consistence [consistency] and flavor, both of which are changed in a very remarkable way... By proper regulation of the temperature and proportions of the ingredients various meat-like flavors are developed, which give to the finished product very characteristic properties."

Note: This is the earliest English-language document seen (Nov. 2003) that contains the term "meat-like" (or "meat like").

"My product is purely vegetable in character. It contains no animal substance or extract. In color and appearance it resembles potted veal or chicken. It has a distinctly meaty odor and flavor. When a bit is torn off and chewed, it shows a distinct fiber. It is of such consistency that it may be masticated like tender meat and when cooked retains its form as does meat. As is the case with animal flesh, its color varies somewhat according to the temperature to which it is subjected in cooking, the higher the temperature the darker the color... It may be cut into slices and served cold. It may be broiled like meats of all sorts and lends itself to the various culinary manipulations in a manner altogether resembling meat. Laboratory digestion experiments demonstrate that is it digestible in less time than meat-pulp. This is due to the well-known fact that the digestibility of vegetable proteids is increased by cooking, while animal

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proteids are rendered less digestible by cooking."

Advantages: "It is more digestible than flesh meats. It is free from danger of contamination with the disease germs or putrefaction products, and hence may be freely employed in many disorders in which physicians find it wise to prohibit the use of flesh foods, such as rheumatism, gout, Bright's disease, various disorders of the liver, myxoedema, and exophthalmic goiter. It is an economical substitute for flesh food, as it can be commercially produced at a price less than that usually charged for flesh meats. Its use obviates the necessity of slaughtering animals, against which in certain countries, as India, there are many millions of people who entertain a deeply-rooted prejudice. It may be freely used without incurring many of the risks which are involved in the free use of flesh meats."

Note 1. This is the earliest patent seen issued to Dr. John Harvey Kellogg that mentions wheat gluten. Note 2. The process described in this patent was probably used to make Protose.

Note 3. This is the earliest English-language document seen (Nov. 2003) that contains the term "meat-like" (with any combination of quotation marks), or the term "vegetable substitute for meat." Address: M.D., Battle Creek, Calhoun Co., Michigan.

225. Parlin, E.E. 1901. Vegetarian restaurants in San Francisco. *California Missionary* 6(12):3. March 25.
• ***Summary:*** Seventh-day Adventists established some of the first vegetarian restaurants in San Francisco. "The first restaurant began in a very modest way in the rear of the food store at No. 1438 Market Street, and was confined to the family of sanitarium nurses and helpers. In December 1898, upon the removal of the health food store to No. 1436 Market Street, arrangements were made by which the restaurant was opened to the public, and a trained cook was secured from the St. Helena Sanitarium. About thirty-five persons, I am told, patronized the restaurant the first day it was opened. The idea of existing without the use of meat was a novel proposition to almost every one; but by means of lectures, demonstrations, and judicious advertising, an interest was awakened, which has steadily grown from that time to the present. 'Vegetarian cranks,' as they were frequently called, became more numerous...

Many of the customers were from down-town San Francisco. They "urged over and over again that a similar establishment be opened nearer the business portion of the city." But rents were very high there. "Finally, however, the present place, at 755 Market Street, was secured at a monthly rental of $150. Although it has dining accommodations for 60 persons at a time, "almost daily many persons go away because of inability to find a place at the tables.

"From the very beginning the class who have patronized the 'Vegetarian Cafe,' as it is now called, have been the professional and business men of San Francisco."

226. *Good Health* (*Battle Creek, Michigan*). 1901. Dainty summer dishes prepared from the celebrated foods that have made Battle Creek famous (Ad). 36(7): July.
• ***Summary:*** This page consists of three large, horizontal photos and their detailed captains. They show: (1) Roast of Protose. "Serve with brown gravy, the recipe for which may be found in the Recipe book which may be had from the Sanitas Nut Food Co., Ltd." Note: Protose is a meatlike product made of peanuts and cereal (no soy) introduced in 1899 by the Sanitas Nut Food Co.

(2) Croquettes of Protose. "Form into croquettes, roll in granola, then in beaten egg, and again in granola. Bake until brown and serve hot, garnished with parsley." (3) "Malt honey balls.–Over freshly toasted granose flakes pour sufficient malt honey to hold the flakes together. Form into balls, and serve with fresh fruit of any kind.

At the bottom of the page is written: "Samples of the foods that are used in these dishes may be obtained by addressing the Battle Creek Sanitarium Food Co., or Sanitas Nut Food Co., Battle Creek, Michigan."

Note: This is the earliest document seen (May 2004) that mentions the Battle Creek Sanitarium Food Co.

227. Sanitas Nut Food Co., Ltd. 1901. Cow's milk kills babies: Malted nuts cures babies (Ad). *Good Health* (*Battle Creek, Michigan*) 36(7):Unpaginated. July.
• ***Summary:*** "By the thousand every year. The manure germ is always present in milk, and is now known to be the cause of *Cholera Infantum*, and other gastro-intestinal disturbances which are the bane of infant life, especially during the warm months. Cow's milk forms tough and indigestible curds. Cow's milk develops ptomaines which cause rickets. Cow's milk causes coated tongue and biliousness [peevish and ill-natured in disposition]. Cow's milk constipates.

"Cow's milk may be improved by mixing with malted cereals (malted milk or cream), and in various other ways, but it is cow's milk still, and often causes rank poison to the babe, and is not much less unwholesome for adults, often gastric catarrh, biliousness, periodical headache, and obstinate constipation.

"Malted nuts cures babies and adults of the mischiefs which milk creates, and is the one perfect substitute for mother's milk, a delicious and wholesome substitute for cow's milk." An oval photo on this full-page ad shows a baby. Address: Battle Creek, Michigan.

228. *Vegetarian Messenger* (*Manchester, England*). 1901. Spanish America. Sept. p. 198.
• ***Summary:*** "A temperance and vegetarian propaganda is now being carried on in Latin America. Señor Ed. F. Forga has translated into Spanish a score of tracts and articles on food reform, including versions of Dr. Nichols's 'How to live on sixpence a day,' Dr. Kellogg's 'Relation of

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physiological chemistry to vegetarianism' and others. The latest addition is a translation of Dr. Paul Foerster's German essay on 'Vegetarianism as the basis of a new life.' Amongst other publications which Señor Forga has in preparation is 'Algunos datos sobre el vegetarismo in Hispano-America.' This will be looked for with interest as so little is known here of what has been done in the South American republics to spread rational ideas on the right method of living. Kneipp's books have been turned into Spanish among a score of languages. The writings of Jorge Klickmann and Simón B. Rodriguez may also be mentioned. We congratulate Señor Forga (whose address is Arequipa, Peru) on the courage and enterprise shown in his attack on the evils resulting from flesh-eating and intemperance."

229. Battle Creek Sanitarium Food Co. 1901. Toasted Wheat Flakes (Ad). *American Kitchen Magazine* 16(1):p. xxv. Ads section at end. Oct.

• ***Summary:*** A ½-page ad. "Made by the world-famed Battle Creek Sanitarium Food Company of Battle Creek, Michigan. At last the work of achievement is accomplished, and Ceres offers the world the one of all whole wheat foods that is most acceptable to the palate and most healthful. By natural process, exclusive with us, starch, the chief element of all wheat foods, is transformed into dextrine by cooking, drying, recooking, and then hot air toasting, this preparing the way for ready digestion and perfect assimilation. No other food is completely cooked or can begin to compare with Toasted Wheat Flakes..."

An illustration shows a statue of Ceres, the Greek goddess of grain, holding a box of Toasted Wheat Flakes in her left hand. A youth, sitting on the floor, looks on.

Note 1: This is the earliest ad or document seen for "Toasted Wheat Flakes."

Note 2. A different half-page ad, titled "Toasted Wheat Flakes" and featuring another lovely woman, appears in this same volume, at the end of the Nov. 1901 issue, on page xxxi. Address: Battle Creek, Michigan.

230. Battle Creek Sanitarium 1901. Battle Creek Sanitarium

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(Ad). *Bulletin of the American Medical Temperance Association* 8(4):Last page (unnumbered). Oct.
• ***Summary:*** In the top third on this full-page ad is an illustration of the huge Battle Creek Sanitarium. It is described as "The oldest and most completely equipped establishment of its sort in the world. Beautifully and healthfully located.

The 2nd third is "Branch institutions," those "which are conducted under the same general management as the Sanitarium at Battle Creek, Michigan. Each possesses special advantages due to locality or other characteristic features." They are: Colorado Sanitarium, Boulder, Colorado. St. Helena Sanitarium, or Rural Health Retreat, St. Helena, California. Nebraska Sanitarium, College View (Lincoln), Nebraska. Portland Sanitarium, Portland, Oregon. New England Sanitarium, South Lancaster, Massachusetts. Chicago Branch Sanitarium, Chicago, Illinois (David Paulson, M.D., Superintendent). Cleveland Branch of the Battle Creek Sanitarium, Cleveland, Ohio. Branch of St. Helena Sanitarium, San Francisco, California. Honolulu Sanitarium, Hawaiian Islands. Medical and Surgical Sanitarium, Guadalajara, State of Jalisco, Mexico. Institut Sanitaire, Basel, Switzerland. Claremont Sanitarium, Cape Town, South Africa. Skodsborg Sanitarium, Skodsborg, Copenhagen, Denmark. Sanitarium, Apia, Samoa. New South Wales Medical and Surgical Sanitarium, N.S.W., Australia.

Directory of health food factories: Battle Creek Sanitarium Food Co., Battle Creek, Michigan. Nebraska Sanitarium Food Co., College View, Nebraska. Colorado Sanitarium Food Co., Boulder, Colorado. Portland Sanitarium Food Co., Portland, Oregon. St. Helena Sanitarium Food Co., St. Helena, California. Basle Sanitarium Food Co., Basle, Switzerland. London Food Co., 70-74 Legge St., Birmingham, England.

Note: The correct name (as of Dec. 1901) of the "London Food Co." in Birmingham was probably either the "London Health Food Company" or the "International Health Association." Address: Battle Creek, Michigan.

231. *Meriden Daily Journal* (*Meriden, Connecticut*). 1901. The miseries of mush: It makes bad tempers and worse stomachs. Dec. 14. p. 18. [1 ref]
• ***Summary:*** "All mushes should be discarded from the bill of fare and a well-dextrinized cereal, such a qwieback [sic, zwieback] or twice-baked bread, toasted or brown rice, granose, granola, granut, and especially to be commended is a new and exceedingly popular food, Toasted Wheat Flakes, sweetened with Malt Honey, nature's health-sweet. This new food originated at the Battle Creek Sanitarium, where, as well as at the sixty branches of their world-famous institution, it is in great demand as a food remedy for indigestion and constipation. Every package bears the picture of the Battle Creek Sanitarium."

Note: This is the earliest English-language document seen (April 2011) that contains the term "brown rice."

232. *Good Health* (*British*) (*England; Seventh-day Adventist*). 1901. A Christmas dinner. 1(2):25-26. Dec.
• ***Summary:*** Gives a menu with recipes. The main dish is: "Protose roast.–Use one-half pound of protose as it comes from the tin. Press into the sides of this one large onion which has been sliced thin, and sprinkled with salt. Place in a baking dish, and surround with a nut cream made by dissolving one-fourth cup of peanut butter in one and one-half pints of water, and salt to taste. As it bakes in a hot oven, baste often with the dressing until the protose and onion become a rich brown. The time usually required for baking is from one and one-half to two hours."

233. Rich, Burdett A.; Farnham, Henry P. 1901. The lawyers' reports annotated. Book LI. Rochester, New York: The Lawyers' Co-operative Publishing Company. 1013 p. Index.
• ***Summary:*** Page 332: "United States Circuit Court of Appeals, Second Circuit." Frank Fuller v. Barton Huff et al. Better known as "Fuller v. Huff." Basic findings: "1. The term 'health food' cannot be a technical trademark, either with or without the word 'company,' as the term is descriptive of quality.

2. "A mark, name, or phrase that has been so used by a person in connection with his business, or articles of merchandise as to become identified therewith and indicate to the public that such articles emanate from him cannot be used by others so as to lead purchasers to believe that the articles for sale are his, or so as to obtain the benefit of the market he has built up thereunder.

"3. The use of the name 'health food' to describe foods which the manufacturer had previously called "sanitarium foods" may be prevented by injunction at the suit of another manufacturer which had used the name for eighteen years before, even if the defendant may have been innocent in adopting the same name, where, after it had learned of the complainant's prior use, it continued to use the term in spite of remonstrance, with a guaranty to its purchasers against suits, though the packages plainly state the name of the manufacturer, and do not imitate or resemble in external appearance the packages of the complainant.

Ruling of July 5, 1900.

"The use of the prefix 'sanitarium' or the name 'Battle Creek,' in connection with the complainant's tradename, 'Health Food Co.,' does not enable the defendants, under the law, to escape infringement."

Page 333: "The addition of the word 'company' or its abbreviation 'Co.' to 'Health Food' does not make the phrase a legitimate trade-name capable of exclusive appropriation."

"Shipman, Circuit Judge, delivered the opinion of the court: The complainant, Frank Fuller, a citizen of New Jersey, commenced in the year 1875, under the name of

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'Health Food Company,' to sell in the city of New York cereal products prepared for food, and has continued to the present time in that business and in the use of the same name, under which he has extensively advertised his goods by circulars, and in newspapers and magazines, at a cost of from $75,000 to $100,000. He has established agencies in Brooklyn, Chicago, Boston, Washington [DC], Philadelphia [Pennsylvania], St. Louis [Missouri], and Oakland [California]. The name 'Health Food Company' is displayed prominently upon the packages in which the various articles are presented to the consumers. About fifty different articles have been thus placed upon the market. The business has become large, and the name is unquestionably valuable to the complainant. In October, 1876, John H. Kellogg took charge, and has continued to be in charge, of the institution popularly known as the 'Battle Creek Sanitarium,' but incorporated in pursuance of the laws of the state of Michigan, in 1867, under the name of the 'Health Reform Institute.' This corporation is the owner of a large sanitarium, having branch institutions at various places, and has established in this country and elsewhere sub-organizations for the promotion of charitable and missionary work. The Battle Creek Sanitarium recommended to its patients particular kinds of cereal foods, and entered upon the business of manufacturing and selling these articles under the name of 'Sanitarium Foods.' In 1881 nineteen different articles were made. In 1888 the business of food manufacture was made a separate department, under the name of 'Sanitarium Food Company,' which advertised itself in April, 1893, as 'Sanitarium Health Food Company.' The reason for this, and a subsequent change of name, which preserved the words 'Health Food Company,' is stated by Kellogg in his deposition as follows:

"In April, 1893, our advertisement appears in *Good Health* [magazine] over the business name of 'Sanitarium Health Food Company.' This name we were led to adopt by the action of one of our old employees [Charles W. Post, developer of Postum {1895} and Grape Nuts {1897}. In 1929 the Postum Cereals company changed its name to General Foods Corporation], who, leaving the institution, set up in business in the same town, advertising himself under the name of the 'Battle Creek Health Food Company.' As quite a large proportion of our mail had for years been addressed to us as the 'Battle Creek Health Food Company,' we found this action a serious annoyance, and objected to it, with the result that an arbitration was agreed upon, the result of which was that the party referred to was required to change his name, which he did, adopting the title the 'Battle Creek Bakery Company.' We then added the word 'Health' to our business announcement, making it 'Sanitarium Health Food Company.' Our salesmen, however, in introducing our foods, so constantly made use of the term 'Battle Creek Sanitarium' in describing our foods, to distinguish between our institution and numerous other sanitariums, we finally, some two or more years ago, still further extended the business title of our food department to its present form,– the 'Battle Creek Sanitarium Health Food Company.' Our purpose in adopting the words 'health food' in our name was to protect ourselves against parties who sought to pirate the extensive business which we had built up, by assuming a name similar to ours, and making similar goods in the same town."

"In October, 1896, a retail grocers' food exhibition was held at the Grand Central Palace in New York city. The complainant exhibited his products at a booth, under the prominently displayed name, 'Health Food Company.' About 15 or 20 feet distant the defendant, Barton Huff, a citizen of the state of New York, as agent of the Health Reform Institute, exhibited its wares, and upon its booth was a placard containing the words 'Health Food Company,' in large letters, under the words 'Battle Creek Sanitarium.' The complainant remonstrated with Huff against the use of 'Health Food Company' as an infringement of the complainant's right, and threatened a suit. Huff said that he would bring the representation to the attention of the officers of the Health Food Department, but the use of the name did not cease. The food business of the defendant under its last name is extensively advertised, and, when the testimony was being taken, was said to amount to from $260,000 to $300,000 annually. The circuit court dismissed the bill upon the ground that the defendant's name was clearly distinguishable from the complainant's business name, and was not an unlawful appropriation. 99 Fed. Rep. 439."

"The decree of the Circuit Court is reversed, with costs, and the cause is remanded to that court with instructions to enter a decree for injunction against the defendant Barton Huff in accordance with the prayer of the bill, with costs."

Note: In short, J.H. Kellogg and the Battle Creek Sanitarium were ordered to stop using the words "Health Food Company" or "Health Food Co." in its company name. Use of these words constituted "unfair competition." Address: 1. Editor; 2. Asst.

234. Sanitas Nut Food Co. 1901. The Court of Awards of the Paris Exposition (Ad). In: Charles B. Reynolds. 1901. Washington: A Handbook for Visitors. The Standard Guide. New York, NY: Foster & Reynolds.

• ***Summary:*** A half-page ad near the rear of this book. "... recognizing the merits of the unique foods manufactured by the Sanitas Nut Food Co., granted them a medal.

"The thousands of persons, both in this country and in the Old World, who are daily using these products of forest and field, furnish a stronger proof, if possible, of their intrinsic value.

"Chief among these foods is Protose, the Vegetable Meat, which is more than a substitute for flesh, fish, and fowl.

"Protose Steaks with tomato sauce are delicious. That flesh meats are productive of disease is fast becoming

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recognized by intelligent people everywhere. Eminent scientists in both hemispheres are charging to the account of meat eating such diseases as cancer, Bright's disease, epilepsy, gout, rheumatism, and a host of other afflictions of mind and body.

"'As a man soweth so shall he also reap,' is a principle as true in our habits of eating as in any other phase of human experience. The poisons contained in flesh foods when taken into the human stomach are sure to produce disastrous results. Why do we slay to eat, and make graveyards of our stomachs when there is a better way?

"Protose which resembles meat in appearance and taste, and whose nutritive value is twenty-five per cent greater, may be baked, boiled, stewed, or broiled, or served in the hundred and one other ways known to the skillful cook for the preparation of flesh foods.

"If you can not procure Protose of your grocer, send us three two-cent stamps, and we will mail you a sample, together with the address of our nearest agent.

"Booklet 'Nut Foods' free on application."

Illustrations show the front and back of a circular medal / medallion from the 1900 Exposition Universelle Internationale. Address: Battle Creek, Michigan.

235. *Naturopath and Herald of Health* (*The*) (*New York City*). 1902. Our exchanges. 3(1):44-45. Jan.
• ***Summary:*** When two periodicals have an exchange, they send each other, free of charge, every issue published. In this article is given the name of each magazine, its place of publication, and a few lines about its subject / content. *Physical Culture* (New York City, Bernarr Macfadden). *Health* (NY). *Health Culture* (NY). *Nature Cure* (NY). *The Mental Advocate* (NY). *The Phrenological Journal* (NY). *The Scientific American* (NY). *Arena and Mind* (NY). *Public health Journal* (NY). *The Clinic* (Syracuse, NY). *Chicago Vegetarian* (Illinois). *Good Health* (Battle Creek, Michigan). *Health* (Altruria, California). *Thought* (Alameda, Cal.). *Pacific Health Journal* (San Francisco, Cal.). *Journal of Hygeio-Therapy* (Kokomo, Indiana). *The Searchlight* (Appleton, Wisconsin). *Vaccination* (Terra Haute, Indiana; the official organ of the Anti-Vaccination Society of America). *American Inventor* (Washington, DC). *Freedom* (Seabreeze, Florida). *Philosophical Journal* (San Francisco, Cal.). *Suggestion* (Chicago, Ill.). *Journal of Magnetism* (Chicago; magnetic healing). *Practical Physiology* (Boston, Massachusetts). *Capitol of Health* (Atchison, Kansas). *The Nautilus* (Holyoke, Mass.; Elizabeth Towne). *American Osteopath* (Memphis, Tennessee). *Osteopathic Success* (Wilkes-Barre, Pennsylvania). *The Psychic Healer* (Oswego, Kansas). *Out Home Rights* (Boston, Mass.). *Weltmer's Magazine* (Nevada, Missouri). *The Breath of Life* (Battle Creek, Mich.). *Psychic Review* (Toledo, Ohio). *Journal of Osteopathy* (Kirksville, Missouri). *Journal of the Science of Osteopathy* (Chicago, Ill.).

236. *Vegetarian Messenger* (*Manchester, England*). 1902. Price list. Jan. p. 12.
• ***Summary:*** Lists prices for foods; beans, peas, lentils; prepared foods; biscuits; Plasmon; tea and coffee substitutes; nuts; jams; bottled fruit; oils; butter and lard substitutes [margarines and shortenings]; soaps; and cookery appliances, etc.

All are available for purchase from the Vegetarian Society's Food Stores at 19 Oxford St., Manchester, England.

The foods in the category "Prepared foods" are of special interest, since most are meat alternatives and would soon be called "health foods." Those known to be made (or imported) by the International Health Association Ltd. (renamed Granose Foods Ltd. in 1926). are followed by an asterisk: Dr. Nichol's Food of Health, Dr. Allinson's Food (packed it tins), Fromm's Extract (jar), Maggi's Soups (packet), Granose Flakes* (packet), Granose Biscuits* (packet), Avenola (packet), Bromose* (tin), Falona (tin), Meatose*, Nutmeatse* (tin), Vejola (tin), Nutvejo (tin), Malted Nut Caramels (tin), Nut Butter* (tin), Carnos, Golden Grain Meal (packet).

Cookery appliances include several Nut Mills, and "The Pitman Spoon."

Note: There are apparently no foods made by Pitman sold at this vegetarian store.

237. Carr, Homer W. 1902. West Salamanca. *Atlantic Union Gleaner* (*South Lancaster, Massachusetts; Seventh-day Adventist*) 1(10):106. March 12.
• ***Summary:*** "The school opened here November 23 [1901], with an enrolment of seventeen pupils. This has steadily increased. Now we have twenty-nine."

"In manual labor the boys have cut wood, and all have helped in making peanut butter which sells readily."

238. Kellogg, John Harvey. 1902. Vegetarianism and evolution. *Good Health* (*Battle Creek, Michigan*) 37(3):150-52. March. [1 ref]
• ***Summary:*** Discusses an article in *The Literary Digest* by Prof. Ferdinand Hueppe. Address: M.D.

239. Battle Creek Sanitarium Food Co. 1902. Toasted Wheat Flakes: A rational food (Ad). *Modern Medicine: A Journal of Physiological Therapeutics* (*Battle Creek, Michigan*) 11(5):[36]. May.
• ***Summary:*** "By virtue of its wheat origin and careful preparation, Toasted Wheat Flakes is a rational food. It supplies the elements of sustenance, repair, and growth to the body in a delicious, easily digested form."

"Served hot or cold: Toasted Wheat Flakes is always crisp and dainty,..." Address: Battle Creek, Michigan.

240. Kellogg, John Harvey. 1902. Vegetable proteids. *Good*

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Health (*Battle Creek, Michigan*) 37(5):248-49. May.
• ***Summary:*** "Proteids are perhaps the most important of the three indispensable food elements, carbohydrates (starch and sugar), proteids, and fats." Albumen, casein, fibrin, and gelatin are found in both animal and vegetable substances. Nuts are very rich in vegetable albumen. Vegetable casein is found in legumes. Wheat contains gluten or vegetable gelatin. Yet the cost of vegetable proteids is much less than that of animal proteids. Address: M.D.

241. R.S.T. 1902. The solving of the meat problem: What has been accomplished at the Battle Creek Sanitarium during the past thirty-seven years. *Chicago Daily Tribune.* June 5. p. 7.
• ***Summary:*** "Just now, when the price of meat is so high as to make it an expensive luxury even to the well-to-do classes, it strikes me that it is a good time generally for people to learn the fact that meats are not the best foods obtainable to contribute to either health or strength."

"I was surprised to learn that the patients treated at this great institution were not only not given drugs for the cure of their ailments but were fed on a 'meatless' or vegetarian diet. At first I said these people are 'cranks,'... Gradually I sampled the 'vegetarian' dishes, and found them so temptingly prepared and served, that I soon learned to prefer them to the flesh foods. I was surprised at the great and pleasing variety of substitutes for meats in the line of cereal and nut preparations."

Dr. Kellogg, whom the writer has known intimately for about 6 years, "has been a vegetarian for 35 years or more [i.e., since at least 1867]. He is the hardest and most persistent worker that I know of." He works at least 14 hours a day. "He is a human dynamo of wonderful energy. Recently, when he was engaged almost night and day planning and working for the rebuilding of the Sanitarium [destroyed by fire on 18 Feb. 1902], I asked him how he could endure so much work. He answered in his uniformly courteous and cheerful way: 'O, that is simple; I live right.'"

He has developed scientifically prepared foods from cereals and nuts for his thousands of patients. In "this line he is certainly the most prolific as well as the most successful inventor in the world."

These food products were primarily "for use in the Battle Creek Sanitarium, but as the thousands of patients who have been cured or benefited, learned the better way of living, they demanded that these foods be supplied to them at their homes, and as a result the Battle Creek Sanitarium Food Company and the Sanitas Nut Food Company came into existence, the former about 3 years ago [i.e., about 1899], and the latter about 7 years ago [i.e., about 1895].

"Dr. Kellogg is not the only living example of the superiority of a vegetarian over a meat diet. There are, I should judge, no less than 2,000 people in Battle Creek who do not eat meat, and who claim as a consequence that they enjoy better health on account of their method of living, and they certainly look healthier than the average persons who are meat eaters."

The Sanitarium "corps, numbering about 800, are all vegetarians, and the amount of work that they do, always with cheerfulness, amply demonstrates the fact that the 'Battle Creek Idea' is correct."

It is important to know that neither "the Battle Creek Sanitarium nor the Battle Creek Sanitarium Health Food Company is conducted for the purpose of making money." They are "wholly philanthropic in nature."

There follows a long column giving menus on specific days, starting with breakfast, 4 June 1902. Items preceded by an asterisk (*) are made by one of the two food companies. These include: Almond Cream, Bromose, Caramel Cereal, Cocoanut Crisps, Crystal Wheat, Gluten Biscuit No. 1, Gluten Wafers, Graham Crackers, Granola, Granut, Granose Biscuits, Granose Flakes, Malted Honey, Malted Nuts, Nuttolene. Protose, and Zwieback. Categories: Dextrinized grains. Unfermented breads. Eggs and milk are served, but no meat, fish, or poultry–except at the "sinners" table. Two photos show the Sanitarium, old and new.

242. *Good Health* (*London*). 1902--. Serial/periodical. London. Published for the Proprietors (Good Health, 451 Holloway Rd.) by Simpkin, Marshall, Hamilton, Kent & Co., Ltd., 23 Paternoster Row, London, E.C.
• ***Summary:*** Continues: Health Reformer: 1(1867)-13(1878). Dr. Kellogg, a Seventh-day Adventist and head of the Battle Creek Sanitarium, was one of America's most prominent and respected doctors. This was his most important serial publication. On the title page of the Jan. 1879 edition is written: "Pure air, water, food. Health is wealth. A sound mind in a sound body. Proper clothing, ample exercise, adequate rest. A journal of hygiene devoted to physical, mental and moral culture. Cleanliness next to godliness. Temperance in all things." The magazine at this time is strongly opposed to the use of alcoholic beverages and tobacco. It supports vegetarianism, temperance, bread made from unbolted flour, and a healthful lifestyle. In 1879 there are many more articles about the dangers of alcohol and tobacco than about the benefits of a vegetarian diet, but by 1904 vegetarian articles predominated. In 1904 pneumonia was the most deadly disease in America. By the 1900s the cover of many issues stated that *Good Health* was established in 1866.

Richard Schwarz in his excellent book *John Harvey Kellogg, M.D.* writes of *Good Health:* By 1916 Dr. Kellogg estimated that more than 5 million copies of the magazine had been printed (p. 87). "Several years after he assumed the editorship of the *Health Reformer,* Dr. Kellogg decided that it needed a new name if the magazine and its teachings were to gain wider acceptance. He reasoned that public reaction to the word *reform* had changed. No longer did it call up visions of progress, advancement, and the substitution of truth for

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error. Rather, kellogg felt, the average person associated reform with revolution, controversy, discord, and radicalism. A more positive name was essential. He decided to rechristen the periodical *Good Health* and make it into a journal which would tell its readers how to find and maintain their health. A year after the name change [it changed in Jan. 1879], the Battle Creek Sanitarium officially acquired *Good Health* from the Seventh-day Adventist Publishing Association. Thus what had begun as a Seventh-day Adventist publication remained under Dr. Kellogg's control even after his separation from the church. Within a few months after he began his program of rejuvenating *Good Health*, he had succeeded in increasing its circulation to 20,000 copies a month... apparently the subscription list never grew much beyond 25,000, and it probably stayed considerably below that number most of the time" (p. 90-92). *Good Health* was always plagued by chronic deficits. Eventually the American Medical Missionary Board contributed more than $100,000 to keep the Kellogg journal alive (p. 220). After Dr. Kellogg's death, the Race Betterment Foundation published *Good Health.*

Excellent sets of this periodical are owned by both the National Library of Medicine and the Loma Linda Univ. Library Heritage Room (Loma Linda, California). The magazine ceased publication in Aug. 1953. Address: 451 Holloway Rd., London, N.

243. *Vegetarian and Our Fellow Creatures* (*Chicago*). 1902. Vegetarian directory. Sept. 15. p. 273.

• ***Summary:*** "Vegetarian restaurants and homes where vegetarians are catered for. United States (22):

California, Los Angeles: 317 W. Third St.

California, San Diego: Vegetarian Cafe, Corner 4th and C St.

California, San Francisco: 755 Market St.

Colorado, Colorado Springs: Pure Food Cafe, 322½ Tejon St.

Colorado, Denver: Vegetarian Cafe, 1635 Champa St.

DC, Washington: Restaurant, 1929 14th St., N.W.

Illinois, Chicago: Hygienic Dining Rooms, 58th St. and Drexel Ave.

Illinois, Chicago: Mortimer Pure Food Cafe, 53 Washington St.

Iowa, Des Moines: 607 Locust St.

Louisiana, New Orleans: New Orleans Health Restaurant, 305 St. Charles St.

Massachusetts, Boston: Vegetarian Dining Rooms, 17 Broomfield St. (Elevator at No. 21), second floor.

Michigan, Battle Creek: Hygienic Dining Hall, 271 Main St.

Nebraska, College View: Restaurant, Nicola block

Nebraska, Lincoln: 310 So. 12th St.

New York, Brooklyn: Restaurant, 170 Fulton St.

New York, New York City, Vegetarian Restaurant, 34 West 18th St.

Ohio, Cleveland: The Hygienic Cafe, 230 Euclid Ave.

Oregon, Portland: Vegetarian Restaurant.

Tennessee, Nashville: Vegetarian Restaurant.

Washington, Seattle: Good Health Restaurant, 616 Third Ave.

Wisconsin, Madison: Hygienic Cafe, 426 State St.

England (39): Name and address are given for each in Ampleforth, Bath (2), Birmingham (2), Blackpool (3), Bournemouth, Bradford, Bridge of Allen, Brighton, Broadway, Bromley, Cornwall, Coventry, Douglas (Isle of Man), Derby, Derbyshire, Felixstowe, Gloucester, Harrogate, Hythe, Ilkley, Ilfracombe, Killarney, London (4), Malvern, Manchester, Margate, Okehampton, Paris (Mrs. Tumner {English}, 10 Rue Gustave Courbert, Paris {near Trocadero}, France). Southport, Torquay (2), Weymouth.

Italy, Pisa: Via Carraia, 2 Pensione Diprete.

New Zealand, Auckland: Health Food Cafe, Strand Arcade.

244. Bilson (T.J.) & Co. 1902. T.J. Bilson & Co. (Ad). *Good Health* (*London*) 1(4):125. Sept.

• ***Summary:*** A ¼-page ad. "Supplies of the best dried fruits and nuts of all kinds.

"Also a full stock of the foods of the International Health Association [IHA], such as Bromose, Protose, Granose, Toasted Wheat Flakes, etc.

"Special offer made with respect to Welch's Grape Juice, a most delicious food-drink, and real tonic.

"Send stamp for full price list, in which you are sure to be interested."

Note 1. This small ad (3 inches high by 2.5 inches wide) is the earliest document seen (July 2009) (one of two ads on the same page) that mentions the "International Health Association," a Seventh-day Adventist organization, which was renamed Granose Foods in 1926. The IHA was an early (perhaps the earliest) manufacturer of health foods in England and the UK.

Note 2. This is the earliest document seen (July 2009) giving the name of a retail store that carries products manufactured by the International Health Association. Note that this retail store is located in London.

This same ad appeared in the Dec. 1902 (p, 228) and Jan. 1903 (p. 260) issues of this magazine. Address: 86 Gray's Inn Road, London, W.C. [England].

245. Miles (W.T.). 1902. Agent for the food products of the International Health Association... (Ad). *Good Health* (*London*) 1(4):125. Sept.

• ***Summary:*** "... and the Good Health Supply Department. All orders given prompt attention. Call and view samples.

Note 1. This small ad (1.75 inches high by 2.5 inches wide) is the earliest document seen (Dec. 2013) (one of two ads on the same page) that mentions the "International

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Health Association" or that gives the name of an agent that promotes and sells those products.

Note 2. As of July 2009, Croyden is near the outskirts of Greater London, about 7 miles directly south of the city center. Address: 24 Lower Coombe St., Croyden.

246. *Good Health* (*London*). 1902. The International Health Association of Legge Street, Birmingham,... 1(5):156. Oct.
• ***Summary:*** "... have added two new foods to their list of products during the last few months; namely Toasted Wheat Flakes, and, very recently, Malted Nuts. These foods are not eminently wholesome and nourishing but also very palatable. Toasted Wheat Flakes bids fair to out-rival the famous Granose Flakes, from which it differs in affording more resistance to the teeth, and in its rich, sweet taste. The Association richly deserves the increased patronage which it is enjoying."

Note: Toasted Wheat Flakes was on the market by Oct. 1901, and widely publicized by 1902. Granose Flakes was on the market by 1898. Both products were first launched in the USA by Seventh-day Adventists in Battle Creek, Michigan.

247. *Good Health* (*London*). 1902. It is surprising how many different health foods are on the market nowadays. 1(7):220. Dec.
• ***Summary:*** "Evidently the public interest in the diet question is growing. We have been pleased to learn that the factory of the International Health Association at Birmingham, is running night and day, and even then finds it difficult to supply the demand. Its leading products, Granose Flakes and Biscuit, and Toasted Wheat Flakes, have, in common with the well-known Shredded Wheat Biscuit, a definite status at the breakfast table in thousands of homes. Thoroughly cooked cereals of this general class are decidedly superior to soft, sloppy foods."

Note: This is the earliest English-language document seen (June 2009) that contains the term "health foods" in connection with Europe or England.

248. Miles, Eustace Hamilton. 1902. Avenues to health. London: Swan Sonnenschein & Co, Ltd.; New York, NY: E.P. Dutton and Co. 438 p. Illust. Index.
• ***Summary:*** In Chapter 15, "Diet and feeding," Miles gives a full-page list of protein foods that he believes are nourishing and free from harmful elements. "I certainly find them pleasant to the taste." These include:

"Foods of the International Health Food Association (70-74 Legge Street, Birmingham; Battle Creek, Michigan, U.S.A.). Besides Protose, Nuttose, and Malted Nuts or Bromose (over 20 per cent. of vegetable Proteid), Granose is a excellent Grain product."

"Pitman's Vigar Oil (for Salads, etc.)."

"These and other food products can be ordered through the Pitman Stores, Corporation Street, Birmingham."

Note 1. The "International Health Food Association" was probably correctly named the "International Health Association"; in 1926 it became Granose Foods. It may have been the earliest known company in England that used the term "Health Food" or "Health Food Co." in its company name.

Note 2. On the last (unnumbered) page of the book is a long list of "Works [mostly books] by Eustice Miles, M.A." A summary of the prizes he won in racquets, tennis, and squash, etc. appears at the top of the list. He was a fine, well known athlete. Eustace Miles lived 1868-1948, and was at his peak of athletic performance in about 1897-1902. Address: Author, England.

249. *Good Health* (*London*). 1903. Our advertisers are perhaps entitled to a few words of praise. 1(8):252. Jan.
• ***Summary:*** "We need only say what the readers have already observed, that we put up the bars pretty high and only really meritorious enterprises are able to get in at all. In fact, we consult our readers' interests in the matter. Thus we advertise the food products of the International Health Association, not only because it is a first-class British firm worthy of hearty support in its efforts to put good foods on the market, but also because these particular foods possess special value for those who are adopting a reformed dietary. The same general statement would apply to the Hovis Co., Briggs Indian Food Co., the Natural Food Co., and other firms we might mention.

"Confirmed flesh-eaters sometimes say, 'If we give up meat and fish, what is there left to eat?' A good answer to such a question would be to hand the person one of the price lists of the three well known firms who cater especially for food reformers. We refer now to the Pitman Stores, Corporation Street, Birmingham; Mr. T.J. Bilson, 86 Grays Inn Road, London, W.C.; and Mr. Frederick Bax and Son, 35 Bishopsgate Street Without, London, E.C."

250. Kellogg, John H. 1903. Constipation: Editorial. *Good Health* (*Battle Creek, Michigan*) 38(1):41-42. Jan.
• ***Summary:*** This early editorial on constipation begins: "This condition is usually the result of indigestion, errors in diet, sedentary habits, or neglect to attend properly to the call of nature for evacuation of the bowels. A too concentrated diet, especially the use of condiments, mushes, and sweets, are frequent causes of constipation. It is necessary that the food should have a certain bulk in order that intestinal activity may be normally stimulated. Fruits, wholemeal bread, spinach, green peas, nuts, and nut preparations, granose cakes and flakes, malted nuts, and similar preparations, are highly conducive to intestinal activity."

Note: This is the earliest document seen (June 2013) concerning Seventh-day Adventists and dietary fiber ("bulk"). Address: M.D., editor.

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251. *Vegetarian Messenger* (*Manchester, England*). 1903. Notes: Battle Creek restaurants. Jan. p. 2.
• ***Summary:*** "The extent of the vegetarian propaganda carried on in America by the Seventh Day Adventists of Battle Creek may be gauged by the fact that they conduct restaurants and eating-houses in Boston, Massachusetts; Cleveland, Ohio; Detroit, Michigan; San Francisco, and Los Angeles, California; Des Moines, Iowa; Chicago, Illinois; Madison, Wisconsin; Lincoln, Nebraska; Portland, Oregon; Denver, Colorado; and Seattle, Washington. At all these eating-houses the food is prepared in accordance with the principles of rational dietetics and scientific cookery. This vegetarian work is in addition to their extensive propaganda in other directions."

252. *Good Health* (*London*). 1903. Malted Nuts, the new food which the International Health Association is putting on the market,... 1(9):285. Feb.
• ***Summary:*** "... affords the best hot, nourishing drink that we know of. A cup of hot malted nuts may be prepared in a moment, and is in such form that it is ready for immediate assimilation into the system. It is not only far superior to tea, coffee, or cocoa, but contains a great deal more nourishment than bovril or any other meat extract, as well as being free from the harmful extractives contained in these animal foods."

253. International Health Association. 1903. Health foods (Ad). *Good Health* (*London*) 1(10):319. March.
• ***Summary:*** A full-page 2-column ad with a large bold title. The introduction, spanning both columns, states: "The foods included in the following list are called 'Health Foods' because they are entirely free from all that is injurious, and contain just the elements required to build up the human system, both in health and disease. They are made from the purest materials, combined in the proper chemical proportions, and so perfectly cooked as to be easily digested by all."

Under the fairly large words "Price list" (also spanning both columns), the name of each of 14 foods appears underlined in large bold letters, followed by a detailed description and the price in regular size type. The foods are:

Granose Flakes (crisp flakes in packets containing about 13 ounces, 7½*d.*) Granose Biscuits ("The same as Granose Flakes but pressed into biscuit form." Sold in boxes). Toasted Wheat Flakes ("Sweetened with Malt Honey (Nature's Health Sweet)," Makes a "delicious breakfast dish." Serve warm or cold)."

Avenola (A combination of grains. "Makes porridge in one minute." Also tasty puddings. Packed in an air-tight canister). Nut Rolls (Made from "whole meal and finely ground nut meats, shortened with sweet nut oil. Very suitable for those who have to put their dinners in their pockets"). Gluten Meal (Made from wheat gluten for "diabetics and people who cannot digest starch").

Nut Butter ("Made from cooked nuts only. Can be used for shortening, flavouring soups, or for table purposes. When diluted with hot water it forms a delicate cream. In 1 lb tin"). Caramel Cereal ("A healthful and fragrant substitute for tea and coffee, prepared from cereals... One pound makes nearly 100 cups. Packed in air-tight canister. 8*d.*). Protose ("Vegetable Meat... It provides the same elements of nutrition that are found in the best meat, without any impurities. Liked by almost everyone from the first... In ½ lb. tin" 8*d.*). Bromose ("A combination of malted cereals and pre-digested nuts"). Fruit Bromose ("The same food as Bromose, combined with figs"). Wheatmeal biscuits. Oatmeal biscuits. Fruit wafers ("Made from the best flour and dried fruits, shortened with nut fats").

Across the bottom: "A package of assorted samples of the above foods will be sent, post paid, one receipt of One Shilling. Can also be obtained from your *Good Health* agent. Recipes furnished."

Note: This is the earliest ad seen (June 2009) for the various foods made or sold by the International Health Association of Birmingham. A few of these foods may be made in Battle Creek, Michigan, and imported into the UK. Address: Birmingham [England].

254. Paulson, David. 1903. Nonflesh eating and physical endurance. *Good Health* (*Battle Creek, Michigan*) 38(3):108-09. March.
• ***Summary:*** Eustace Miles, the world's champion tennis player at Cambridge, England, tells the story of how he gave up flesh foods to get rid of many health disorders and his desire for alcohol. Mr. Allen, a vegetarian from London, a few months ago walked 100 miles in a little over 20 hours to set a world record.

"The winners in one of the most famous long-distance walking matches in Germany were all vegetarians. The champion long-distance bicycle rider of several years ago, lived upon a strictly natural dietary.

"If athletes, and others who have to undergo surprising tests of bodily endurance, find it advantageous to abstain from flesh foods, is the plan not worthy of a trial by those who wish to use either their intellectual or physical strength and endurance in the service of God and humanity?"

255. Axon, William E.A. 1903. Some Chinese arguments for vegetarianism. *Good Health* (*Battle Creek, Michigan*) 38(4):162-66. April.
• ***Summary:*** "It is said that in no part of the world is the consumption of flesh meat so small as in China. For this there are varied reasons. Buddhist influence will count for something, and the greater cost of animal food will also contribute to the result. But there are also the precepts of the ancient emperors who forbade the *daily* use of flesh meat. This, while in form only a precaution against excess, shows

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that the dangers arising from animal food were recognized, and considered of sufficient importance to demand royal notice."

The author quotes various Chinese writers from as long ago as the Song dynasty (+960-1279). Dr. Robert Morrison translated a tract against beef eating in which the speaker is an ox; it is quoted in full.

Vegetarians comprise an estimated 5 to 10% of the population of China. "That would mean that between twenty and forty millions of the people of China abstain entirely from flesh meat, while a proportion of the remainder of the population of that country use it only sparingly. From the strength and power of endurance of the Chinaman a powerful argument may be drawn in favor of vegetarians." Address: L.L.D.

256. International Health Association. 1903. Radical temperance. Health foods (Ad). *Good Health* (*London*) 1(11):348. April.
• ***Summary:*** A 1-column half-page ad. The health foods advertised are: Caramel cereal (A "health beverage" for use in place of nerve stimulants like tea and coffee). Malted nuts (Use in place of stimulating Beef Tea and Meat Extracts). Protose (Use in place of animalising flesh foods). Address: Birmingham [England].

257. *Good Health* (*London*). 1903. Directory of sanitariums (Ad). 1(12):377. May.
• ***Summary:*** A ¼-page ad. "The following institutions are conducted under the same general management as the Sanitarium at Battle Creek, Michigan, which has long been known as the most thoroughly equipped sanitary establishment in the United States. The same rational and physiological principles relative to the treatment of disease are recognized at these institutions as at the Battle Creek Sanitarium, and they are conducted on the same general plan. Both medical and surgical cases are received at all of them. Each one possesses special advantages due to the locality or other characteristic features. (This is only a partial list)."

"Battle Creek Sanitarium, Battle Creek, Michigan. J.H. Kellogg, M.D., Superintendent.

"Surrey Hills Hydropathic Institution, Caterham, Surrey [England]. Alfred B. Olsen, M.D., Superintendent.

"Belfast Sanitarium, 30 Antrim Rd., Belfast [Ireland]. J.J. Bell, M.D., Superintendent.

"Skodsborg Sanitarium, Skodsborg, Denmark. Carl Ottosen, M.D., Superintendent.

"Friedensau Sanitarium, Post Grabow, Bez. [Bezirk] Magdeburg, Germany. A.J. Hoenes, M.D., Superintendent.

"Institut Sanitaire, Basle, Switzerland. P. De Forest, M.D., Superintendent.

"Calcutta Sanitarium, 51 Park St., Calcutta, India. R.J. Ingesoel (?), M.D., Superintendent.

"New South Wales Medical and Surgical Sanitarium, 'Meaford,' Gower St., Summer Hill, N.S.W., Australia. D.H. Kress, M.D., Superintendent.

"Guadalajara Sanitarium, Apartado 138, Guadalajara, State of Jalisco, Mexico. J.W. Erkenbeck, M.D., Superintendent."

258. International Health Association, Ltd. (The). 1903. Spring is here. Make the most of it while it lasts (Ad). *Good Health* (*London*) 1(12):377. May.
• ***Summary:*** A half-page ad. "Avoid heavy, indigestible foods that clog the system, and keep you from enjoying the sunshine.

"Use our Health Foods, pure, light, perfectly cooked, quickly digested, and share the abundance of life and health around you. If you feel well, our Foods will make you feel better.

"If you are ill, try our Foods. They are cheaper than medicine, and will help you as they have helped others.

"One shilling sample package sent, post free, to any address, on receipt of Postal Order.

"In answering advertisement kindly mention 'Good Health.'" Address: Birmingham [England].

259. Curtis, Atherton. 1903. The moral basis of vegetarianism. *Good Health* (*Battle Creek, Michigan*) 38(6):290-92. June.

260. *Good Health* (*Battle Creek, Michigan*). 1903. A remarkable Canadian [vegetarian]. 38(8):414. Aug.
• ***Summary:*** A Canadian newspaper states: "Hon. R.W. Scott, of Ottawa, could have had the nice fat job of lieutenant-governor of the province of Ontario the other day, but declined it for the most remarkable reason ever known in political life. He is a vegetarian, and refused the job because he would be compelled to give banquets as lieutenant-governor at which viands carved out of the animal kingdom would necessarily be served."

261. *Good Health* (*Battle Creek, Michigan*). 1903. A substitute for leather. 38(8):414. Aug.
• ***Summary:*** "An English inventor has devised a perfect substitute for leather which can be used for boots, shoes, and for every other purpose for which leather is employed. The new tissue is called wolft. It is being extensively used in England, having been adopted by the London Shoe Company especially for walking shoes on account of its coolness and its lightness. Wolft is more durable than leather and is much more waterproof while at the same time more porous, which makes it a non-conductor, and to a large degree obviates the necessity for wearing rubbers which are needed by one whose feet are clad with leather only when the slush and mud is so deep that the feet are half buried at every step."

262. Paulson, David. 1903. "Its all dead." *Good Health*

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(*Battle Creek, Michigan*) 38(7):324-25. Aug.
• ***Summary:*** A child of age four, on being seated at a table upon which was an uncarved chicken, cried out in evident distress, "It's all dead, mamma! It must have hurted it," and he could not be persuaded to remain at the table until the dead bird was carved past recognition.

"Children are naturally tender and sympathetic, not only toward each other but also solicitous for the welfare of the lower animals. The parents of this child will probably congratulate themselves when his tender nature becomes so calloused that the sight of a dead animal being devoured will seem to him entirely consistent, and will no longer excite his pity." Address: M.D.

263. *Los Angeles Times.* 1903. Some good recipes. Oct. 29. p. A4.
• ***Summary:*** These are home-made recipes for commercial products. "Home-made Protose: As most of our readers know, 'prostose' is a favorite upon vegetarian bills of fare. Soak two cupfuls of fine bread crumbs in one cupful of hot water, in which dissolve a teaspoonful of butter, a saltspoonful of salt, and a dash of paprika. Mix in a cupful of chopped nut kernels. Beat one egg and add to bind the whole together. Make into a loaf and bake for an hour.

"You can bake it in a buttered mould and turn it out, if you prefer. Or mould [mold] croquettes, roll in cracker crumbs and raw egg, and set on ice for two hours before frying in deep fat."

264. Fletcher, Horace. 1903. The A. B.-Z. of our own nutrition. New York, NY: Frederick A. Stokes Company. xxxv + 428 p. Nov. Experimentally assisted by Dr. Ernest van Someren & Dr. Hubert Higgins. Illust. Index. 19 cm.
• ***Summary:*** The author, a food reformer, lived 1849-1919. He advocates both a vegetarian diet and prolonged chewing of one's food. Reprinted in 1905, 1906, 1910. An Italian edition was published in 1909.

265. Ferrier, John Todd. 1903. Concerning human carnivorism. Paignton, England: The Order of the Golden Age. 116 p.
• ***Summary:*** Contents. 1. The records of history: Aristophagy. Tertullian's writings. The Clementine Homilies. Marcion's Antitheses. Clement of Alexandria on the physical and moral value of pure, natural diet. K.O. Muller. The first Apostles. Origin [Origen]. The Gnostics fruitarians on moral grounds. Chrysostom of Constantinople on the degrading effects of flesh-eating and its hindrance to spiritual growth. Hesiod's Golden Age. Buddha.

2. The testimony of science: Against flesh-eating and in favor of fruits and vegetable products as man's natural diet. Anatomists, chemists, physicians, surgeons. Darwin. Baron Cuvier. Professor Lawrence. Sir Charles Bell. Sir Richard Owen. Dr. W.B. Carpenter. Ed. Smith. Gassendi. The doctor's failure to arrest the encroachments of disease. Dr. Spencer Thompson. Sir Henry Thompson. Sir Benjamin Richardson. Alexander Haig. Professor Jonathan Hutchinson. Milner Fothergill. Josiah Oldfield. J.H. Kellogg. Bell. Roger Williams. Frank Madden. Robert H. Perks. The force of all this testimony. Edward Carpenter.

3. Some economic problems: The land question to be settled by a return to the land on the part of the people, and a national return to pure diet. William Paley. Arthur Arnold. Professor Newman. Jeremy Bentham. John Stuart Mill. Lord Playfair. Dr. Edward Smith. Eustace Miles. Deserted villages and crowded towns. The land could support in abundance 80,000,000. The only true remedy. The Christian Church must lead the way. Shelley.

4. The dynamics of natural food: Whatever benefits the individual benefits the nation. Vegetarian fare the most healthful and economical. Dr. Goodell Smith. Alex. Haig. John Wesley. The way to the highest life. Michelet. Struve. The drink problem. Its relation to diet. Dr. [James Caleb] Jackson's experience and evidence. Dr. Haig. Maeterlinck. The failure of temperance societies and the churches to solve the drink problem. Can be done only by a return to pure living, in which no unnatural thirst is created.

5. A plea for humaneness: Cruelty to children and animals. Its cause and its cure. Not by societies of prevention. The moral law. Locke on education. Rousseau. Oliver Goldsmith. The Brahmins nobler in this than nominal Christians. Animal torture a return of the Inquisition. Strauss. Jean Paul Richte. The failure of modern evangelicism to awaken compassion. 1,000,000 animals killed for food every day. Cowper. Milton. Some lame excuses. The ethics of Rome. Jos. Rickaby. Catholic dictionary. Rome's arrogant assumptions. Pope's 'Essay on Man'. Smith. Schopenhauer. Wagner. Voltaire and Newton. Animals have souls. Michelet on birds. The highest law of life. The aims of our order. Jean Antonie Gleizes.

6. The voice of religion: Natural and moral law. The Bible seems to teach flesh-eating. Its various planes of teaching. No human carnivora in the story of creation. When the descent began, and the inspirational expediency to meet the people's lower tastes. Noah. Clean and unclean animals and the meaning of restriction. The evolution of life. Godward seen in the prophets. Isaiah, Hosea, and Daniel. Eusebius and the Apostles. The Essenes. The council at Jerusalem and Paul. Paul's mistake. The Epistle's private letters, not teaching for all. Pauline theology and the gospels. The Bible an esoteric book. Purity in food as essential to spiritual attainment. The four great religious castes and the four spiritual planes of being. The True Divine Man must minister as an angel to the races beneath him. Address: Rev., Late pastor of Park Green Congregational Church, Macclesfield, England.

266. Hopkins, Timothy. 1903. The Kelloggs in the Old World

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and the New. 3 vols. San Francisco, California: Sunset Press and Photo Engraving Co. Index in Vol. 3. 28 cm. *

267. Kellogg, John Harvey. 1903. The living temple. Battle Creek, Michigan: Good Health Publishing Co. 568 p. *
• ***Summary:*** Gives a clear presentation of the principles relating to simple, wholesome living and the rational treatment of the sick. Advocates a vegetarian diet. Dr. Kellogg presents the ethics of flesh-eating in the following light: "The basis for the ethical argument against flesh-eating is to be found in the fact that the lower animals are, in common with man, sentient creatures. We have somehow become accustomed to think of our inferior brethren, the members of the lower orders of the animal kingdom, as things;... We are wrong in this; they are not things, but *beings*... A horse or a cow can learn, remember, love, hate, mourn, rejoice, and suffer, as human beings do. Its sphere of life is certainly not so great as man's, but life is not the less real and not the less precious to it; and the fact that the quadruped has little is not a good and sufficient reason why the biped, who has much, should deprive his brother of the little that he hath. For the most part it must be said that the lower animals have adhered far more closely to the divine order established for them than has man.

"The divine order, as clearly shown by nature as well as by revelation, and by the traditions of the ancient world, and illustrated by the present practice of a great part of the human race makes the vegetable world the means of gathering and storing energy and making it into forms usable by the sentient beings that compose the animal world, the one gathering and storing that the other may expend. When animal eats vegetable, there is no pain, no sorrow, no sadness, no robbery, no deprivation of happiness. No eyes forever shut to the sunlight they were made to see, no ears closed to the sweet melodies they were made to hear, no simple delights denied to the beings that God made to enjoy life–the same life that He gave to his human children. (p. 184-185.)"

The word "vegetarian" appears on pages 162, 540, 551, and 567. Address: Medical Director, Battle Creek Sanitarium, Battle Creek, Michigan,.

268. *Good Health* (*Battle Creek, Michigan*). 1904. Directory: Sanitariums. Vegetarian cafes and restaurants. 39(1):Unpaginated. Jan.
• ***Summary:*** Gives the name and address of 33 Sanitariums, including 23 in the United States, and 10 overseas (Guadalajara, Mexico; Basle, Switzerland; Skodsborg, Denmark; St. Johns, Newfoundland, Canada; Wahroonga, NSW, Australia; Magdeburg, Germany; Caterham, Surrey, England; Calcutta, India; Papanui, Christchurch, New Zealand; and Kobe, Japan). These "institutions are conducted under the same general management as the Sanitarium at Battle Creek, Michigan, which has long been known as the most thoroughly equipped sanitary establishment in the United States.

There are 29 vegetarian cafes and restaurants in the United States (with names like Hygienic Cafe, Pure Food Cafe Sanitarium Rooms, etc.) including the following:

The Laurel, 11 W. 18th St., New York City.

J.B. Stow, 105 E. 3rd St., Jamestown, New York.

W.L. Winner, 1017 Walnut St., Philadelphia, Pennsylvania.

Sanitarium Rooms, 1809 Wallace St., Philadelphia, Pennsylvania.

Hygienic Company, 1209 G St., N.W., Washington, D.C.

Sanitarium Rooms, 224 E. Broadway, Louisville, Kentucky.

Sanitarium Dining Room, corner Church and Vine Sts. Nashville, Tennessee.

Restaurant, 305 St. Charles St., New Orleans, Louisiana.

Ellen V. Vance, 307 Madison St., Fairmount, West Virginia.

Hygeia Dining Room, 54 Farrar St., Detroit, Michigan.

North Mich. Tract Society Rooms, Petoskey, Michigan.

Hygeia Dining Rooms, 5759 Drexel Ave., Chicago, Illinois.

Hygienic Cafe, 426 State St., Madison, Wisconsin.

Hygienic Cafe, 164 Wisconsin St., Milwaukee, Wisconsin.

Pure Food Cafe, 607 Locust St, Des Moines, Iowa.

Pure Food Cafe, 410 E. 12th St., Kansas City, Missouri.

Pure Food Store, 2129 Farnum St., Omaha, Nebraska.

Sanitarium Dining Room, corner Church and Vine Streets, Nashville, Tennessee.

Vegetarian Cafe, 322½ N. Tejon St., Colorado Springs, Colorado.

Vegetarian Cafe, 1543 Glenarm St., Denver, Colorado.

Vegetarian Cafe, 4th and C Streets, San Diego, California.

The Vegetarian, 1482 Market Street, San Francisco, California.

Vegetarian Dining Rooms, 317 W. 3rd St., Los Angeles, California.

Portland Sanitarium Rooms, Mt. Tabor. Oregon

Good Health Restaurant, 616 3rd St., Seattle, Washington.

White Rose Restaurant, W.H. Nelson, Proprietor, 36 W. 18th St., New York City.

Health Restaurant, Alexander Martin, 555 Boylston St., Boston, Massachusetts.

269. *Good Health* (*Battle Creek, Michigan*). 1904. Chart of food elements. 39(1):Insert after p. 48. Jan.
• ***Summary:*** This table lists 64 foods, both processed and unprocessed, with a standard serving size for each (both volume and weight), and the amount of proteid, fat, and carbohydrate per serving, plus the number of "food units"

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[apparently similar to calories] per ounce. Processed foods include: Granola, Granose, Graham crackers, Whole wheat wafers, Graham bread, Whole wheat bread, Gluten mush, Wheatose, Malted nuts, Bromose, Nuttolene, Protose, Stewed Nuttolene (½ water), and Kumyss. For example, Protose: 0.5 pint (4.2 oz) contains 21.3 [units not given] protein, 10.2 fat, 2.8 carbohydrates, and 60 food units per oz. Butter has the highest number of food units per oz (217.6), followed by shelled almonds (189.6). Lettuce is lowest (5.2).

270. *Good Health* (*Britain*) (*Seventh-day Adventist*). 1904. Formal health dinners: Suggestions for a somewhat elaborate meal on reform lines. 2(8):243. Jan.
• ***Summary:*** Contains a menu plus recipes. "Mock chicken Cutlets.–Run through the nut-mill two cupfuls of bread crumbs, and one cupful of shelled walnuts. Mix together in a basin, with a tablespoonful of grated union juice, and a little salt. Heat in a saucepan a cupful of rich milk to which has been added a dessertspoonful of peanut butter or almond butter rubbed smooth in a few drops of water. When this boils, add the other ingredients, salt to taste, a well-beaten egg, and when removed from the fire, a little lemon juice. Stir well; allow to cool, then roll into balls dipped in bread crumbs and eggs, and bake."

"Nut Gravy.–Heat to boiling a pint of water in which a tablespoonful of peanut butter has been dissolved. Thicken with one tablespoonful of browned flour and a half tablespoonful of Paisley digestive lentil flour. Cook thoroughly for five or ten minutes."

271. International Health Association, Ltd. 1904. Our health foods reach to the ends of the earth: Have they reached you? (Ad). *Good Health* (*Britain*) (*Seventh-day Adventist*) 2(8):255. Jan.
• ***Summary:*** A full-page ad. This company sells (and perhaps makes) the following foods. A description and price of each is given. Granose flakes. Toasted wheat flakes. Avenola. Nut rolls. Whole wheatmeal biscuits. Oatmeal biscuits. Fruit wafers. Peanut butter. Pure almond butter. Caramel Cereal [a coffee substitute]. Protose. Nuttolene. Bromose. Malted nuts–in fine powder form.

"Send us One Shilling for a package of samples and cookery book, or ask your Good Health agent for these foods."

Note: Most or all of these products were first developed by Dr. John Harvey Kellogg at Battle Creek, Michigan, and sold by Sanitas Nut Food Co. Address: Birmingham [England].

272. *Vegetarian Messenger and Health Review* (*Manchester, England*). 1904. "Fletcherizing" food. Jan. p. 4.
• ***Summary:*** "The name is new but the thing is old. Mr. Horace Fletcher, of Venice, has been making experiments respecting the increased value of food when thoroughly masticated. In a recent number of *Good Health* (Battle Creek), Dr. J.H. Kellogg gives a résumé of Mr. Fletcher's researches. Mr. Fletcher finds that everyone eats too much, and that the proper daily ration has been fixed by the scientific authorities at least 50% too high. According to his observations, a pound of water-free food daily is ample for anybody, and if care is taken to masticate the food thoroughly, the amount actually required is considerably less. Mr. Fletcher's experiments show that if care is taken to chew the food four or five times as long as usual, it is utilized to so much better advantage that its sustaining power is wonderfully increased, and hence the amount required is considerably diminished, and a large proportion of the energy now wasted in digesting unnecessary food is released for other purposes. The United States Government has thought Mr. Fletcher's results of so much importance that it has detailed 20 men to give their entire time for several months to an exhaustive series of researches, the aim of which will be to subject Mr. Fletcher's views to the crucial test of exhaustive experimentation. Dr. Kellogg, whose experience as a dietist is second to none, has no doubt that the result of this test will be the revision of views which have heretofore been held by most physiologists respecting the quantity of food required for the maintenance of weight and working power, and also respecting the amount of proteids required for daily consumption."

273. *Good Health* (*Battle Creek, Michigan*). 1904. A substitute for leather. 39(2):104. Feb.
• ***Summary:*** A reader from Nebraska writes: "In your August magazine you wrote of shoes made of a material called wollft." She requests more information. Answer: "Wolft shoes are made in England. They are not now manufactured, the company having gone out of business, but we understand it is being re-organized. They are not on sale in this country."

274. *Australasian Good Health* (*Wahroonga, NSW, Australia; Seventh-day Adventist*). 1904. Fruit and nuts as food. 7(3):11. March 1.
• ***Summary:*** "The results of the investigation recently carried out by the United States Department of Agriculture as to the value of different foods, emphasise the fact that both fruit and nuts should be considered as true foods rather than food accessories."

"The fare given in the experiments was in every case one that would appeal to any normal appetite. It embraced honey, tomatoes, apples, bananas, cantaloupe, grapes, verdal, cornichon, tokay, muscat, scarlet haws, pears, pomegranates, persimmons, oranges, strawberries, watermelons, figs, almonds, and peanut butter. The only animal foods allowed were cottage cheese and eggs, and these in limited quantities."

275. *Good Health* (*Battle Creek, Michigan*). 1904. The

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Sanitarium era. 39(3):134-38. March.
• ***Summary:*** The word "Sanitorium," coined in England, referred originally to a health resort for invalid soldiers. The term "Sanitarium" was coined about 25 years ago to represent an idea, "first embodied in the Battle Creek Sanitarium, an institution which had for its fundamental idea a return to nature in diet, dress and all habits of life, and the adoption of natural methods and natural agencies in the treatment of the sick." Photos show: The Tri-City Sanitarium of Moline, Illinois. Dr. and Mrs. Stewart, who helped finance its construction. The dining room. A cozy corner.

276. Mendel, Lafayette B. 1904. Some historical aspects of vegetarianism. *Popular Science Monthly* 64:457-65. March. [5 ref]
• ***Summary:*** Dr. Mendel, at Yale University, was one of the world's leading authorities on all aspects of proteins in the early 1900s. Here he discusses ethical and philosophical arguments for vegetarianism as expressed in literary works, including quotations from or comments on Pythagoras, Rousseau (*Return to Nature*), Tolstoy (*The First Step*), Shelley (*Queen Mab, VIII*), Lord Byron (*Don Juan*, Canto II), John Frank Newton (*The return to nature, or, a defence of the vegetable regimen*), Benjamin Franklin (Autobiography), Dr. Luther V. Bell (*A dissertation on the Boylston prize question for 1835*), Dr. W.A. Alcott (*Vegetable Diet*), J.A. Gleizes (*Thalysie, 3 vols*), and J.H. Kellogg (*The Living Temple*).

"The early literature of the vegetarian movement in this country indicates a greater tendency toward the substitution of arguments based on scientific observation in place of purely sentimental considerations than do the trans-Atlantic [European] publications of similar date."

The "individual who probably did more than any other in this country to reduce the subject of vegetable dietetics to a system was Sylvester Graham. This eccentric reformer, remembered to-day in connection with the bread which familiarly bears his name, was an enthusiastic temperance advocate, who insisted that the craving for drink can only be combated by the use of a judicious diet in connection with correct habits of living. His belief that 'an exclusively farinaceous and fruit diet is best adapted to the development and improvement of all powers of body, mind and soul' was set forth for many years both in public lectures and in writings, among which the 'Graham Lectures on the Science of Human Life' (2 vols., 1839) were perhaps most widely quoted in vegetarian literature. About 1837 there was formed an American Physiological Society of two hundred members, nearly all of whom, as well as their families, abstained from animal food."

Dr. Mendel concludes by stating that his article "has aimed merely to point out some little known historical aspects of a movement which is unique, if not progressive. A position so long and stubbornly held can not be entirely devoid of some resources, and may well offer an occasional helpful suggestion for the improvement of our plans of nutrition. By the physician and hygienist especially is real progress in dietetics to be welcomed. *Qui bene nutruit, optime medebitur."* Address: Prof. of Physiological Chemistry, Sheffield Scientific School, Yale Univ., Connecticut.

277. Brunson, John A. 1904. A glimpse of Japanese life. *Good Health* (*Battle Creek, Michigan*) 39(5):237-42. May.
• ***Summary:*** A good photo (p. 239) shows a Japanese vegetable vendor carrying his goods in baskets on a shoulder pole. Page 240 notes: *"Tofu*, or 'bean curd,' as the foreigners call it, is a favorite dish. The beans are first ground fine in hand mills. These mills consist of two stone discs about eighteen inches in diameter, and perhaps six or eight in thickness, one being placed above the other. To the upper stone is attached a handle by which it is turned, and the motor power is supplied by two women. It is a familiar sight in Japan to see 'two women grinding at the mill.' The husks and coarser parts of the bean flour are then carefully removed, and the fine white residuum is mixed with water and pressed into squares which somewhat resemble cottage cheese in appearance. The *tofu* is then boiled, and is both palatable and nutritious, but rather concentrated."

In Japan, fish are served raw, while yet fresh, "with *shoyu*, a kind of Japanese Worcester sauce."

Note 1. This is the earliest article seen (Aug. 1996) with detailed information on soyfoods in Dr. John Harvey Kellogg's periodical *Good Health.*

Note 2. This is also the earliest document seen (Aug. 1996) that compares tofu with cottage cheese.

278. Broadbent, Albert. 1904. A short history of the English vegetarian movement. *Good Health* (*Battle Creek, Michigan*) 39(6):301-03. June.
• ***Summary:*** The city of Manchester, England, gave birth to the vegetarian movement. "In 1809 the Bible Christian Church, Salford, adopted a rule of abstinence from intoxicants and flesh foods for its members." In 1847, some 38 years later, a number of the members decided to form a vegetarian society, to do work of a secular nature. A meeting was accordingly held at Ramsgate in 1847, at which Brotherton, M.P. [Member of Parliament] was chairman. "The Vegetarian Society" was formed; during the first year 331 people joined it. "The Vegetarian Society has never been a local society, but was and is national and international in its character and claims... Fifty years ago there was no vegetarian periodical; to-day in Great Britain there are four monthly papers. Thirty years ago there was not one restaurant; to-day they are to be found in Ireland and in Scotland and in many large towns in England, and nowhere are they so successful as in Manchester, which is supplied with eight.

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"In 1847 the Vegetarian Society was the only one of its kind in the world; now there are independent societies in the United States, Australia, India, France, Germany, Russia, Finland, etc., etc. It is significant that the work in America was inaugurated by a band of emigrants from the Bible Christian Church, who established a church at Philadelphia [Pennsylvania]. The pastor of this church, the Rev. H.S. Clubb, is the president of the American Vegetarian Society [sic, Vegetarian Society of America], and one of the oldest members of the Vegetarian Society."

Photos show the following leading figures in the vegetarian movement in England: J.E.B. Mayor, Albert Broadbent, Rev. James Clark, William E.A. Axon, and Alfred Tongue. Address: F.S.S.

279. Kellogg, John Harvey. 1904. Vegetarianism and endurance. *Good Health* (*Battle Creek, Michigan*) 39(6):285-86. June.

• ***Summary:*** Begins by discussing Karl Mann, a German vegetarian, and eight other vegetarians, who competed two years ago in a walking match from Dresden to Berlin. Karl Mann won the match and "five of the eight other vegetarians reached the goal before a single one of the meat eaters had arrived."

Then talks about Mr. John Allen of England, a vegetarian who, at the age of 13 was a "poor, spindling, feeble, epileptic." He started to exercise systematically and became a vegetarian. Two years ago, he won the great walking match in England. Last year "he beat the world's record in long-distance walking, even coming out ahead of Karl Mann by a very little. This was the greatest walking feat ever performed. When Mr. Allen reached London after his hundred-mile walk, he walked twelve miles to see his mother. He then slept for a few hours, and awoke ready to walk another hundred miles. This marvelous endurance has been acquired by training and by living on pure food."

This and several other similar stories are from a symposium on "Natural Food." Address: M.D.

280. *Los Angeles Times.* 1904. Tented town of a church: Seventh Day Adventists in camp meeting. Thousand looked for under spreading canvas. Old Fernando College bell calls breakfast. Sept. 2. p. A1.

• ***Summary:*** It was probably the largest tent city of any church denomination ever assembled in Southern California, if not in the entire State. The annual conference at Vernon took place under the gnarled limbs of old pepper trees, which remain a relic of the old county park just of Central avenue and adjoining East 49th street. Some 1,000 Adventists are expected to attend for 10 days.

"On the grounds there is an Adventist restaurant and store, where the various food products extolled by this denomination are served or sold. The Adventists are vegetarians. Their church rules do not definitely prescribe this; but the teachings of the denomination inevitably lead to this conclusion, and it is adopted by the members. They use no liquors, tobacco, tea, coffee nor meats." Includes a history of the rapidly expanding denomination in Southern California.

281. Carqué, Otto. 1904. The foundation of all reform: A guide to health, wealth and freedom. A popular treatise on the diet question. Chicago, Illinois: Kosmos Publishing Co.; London: L.N. Fowler & Co. 66 + vi p. 20 cm.

• ***Summary:*** About vegetarianism. Contents: 1. Man's position in nature. 2. Chemistry and physiology of nutrition. 3. The raw food question. 4. The superiority of the fruitarian diet. 5. Diet-reform, the ultimate solution to the economical and social problems (the problem of increasing consumption of intoxicating liquors is one of the principal causes of the mental and physical degeneration of man). 6. The ethics of diet-reform.

The author (lived 1867-1935) argues for the superiority of the fruitarian diet. "Man's strong resemblance to the anthropoid apes which subsist almost exclusively on fruits and nuts places him in the frugivorous class. In fact, all the great anatomists, Sir Charles Bell, Dr. Richard Owen, Dr. William P. Carpenter, Baron Cuvier, have shown that not only is man adapted by anatomical structure to a diet of fruits and nuts, but that the meat-eaters' violation of this law has been the undoubted source of endless suffering and disease. This fact, which had already been recognized by the ancient sages, as Plato, Socrates, Pythagoras, Plutarch, and others, has also been fully confirmed by the great universal law of evolution which Lamarck, Darwin and Haeckel have scientifically established and which has thrown much light on the origin of life and its development on our planet" (p. 8).

Why did humans start to eat meat? At a comparatively recent date in man's existence, there was apparently a scarcity of proper plant food and very adverse conditions. So "man was forced by fierce hunger to subsist on flesh-food. But the fact remains that in the process of evolution so great a change in man's diet had not the slightest bearing on his anatomical structure... Man's normal type dates from the period when the digestive organs of our frugivorous ancestors adapted themselves to such food;... not evolution but cataclysm caused his change of food from fruit to flesh with 'made dishes' to hide the taint of death.

"It is very probable that the so-called glacial period or age of ice, which according to geologists occurred some twenty or thirty thousand years ago and subjected organic life to altogether new conditions, had also caused man's deviation from his original and natural diet, after he had subsisted on the products of fruit trees during many thousands of generations" (p. 10-11). "In reviewing the long march of evolution of the human race... we come to the conclusion that for a vast period of time man subsisted

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on fruits and nuts, his natural diet, which was abundantly furnished by a virgin soil and a congenial climate" (p. 15).

The chapter titled "The raw food question" states: "Raw food must therefore be declared as the ideal diet of man, and the unperverted appetite demands nothing else." "But here the question arises, is the milk of even perfectly healthy cows a desirable article of food for man in general and for infants in particular? The answer must be an emphatic 'no.' Nature has destined the milk of the cow, like that of other mammals, for the nourishment of their respective young" (p. 34). The milk of all mammals, "the first nourishment of the new-born is relished in its natural and raw state." Mr. Horace Fletcher has shown that raw foods require thorough mastication, and with thorough mastication a smaller quantity of food is required (p. 36).

"An argument of the greatest importance in favor of the fruitarian diet–at least from the economical and social point of view–is, that it means the emancipation of woman. She will then no longer be a slave to the kitchen, for it will hardly be needed. The time which she formerly devoted to so much cooking and toiling, she will then be able to devote to a proper education of her children and her own culture" (p. 37).

The last sentence in this chapter reads: The "ideal food for man should consist of fruits, nuts, and grains properly masticated" (p. 38). Note 1. Such a diet (including seeds) is widely referred to as a fruitarian diet.

The next chapter, titled "The superiority of the fruitarian diet" develops this idea in more detail "The athletes of ancient Greece were trained entirely on a fruitarian diet... The Mystic Adepts who are strong physically, mentally, and who are never sick and live to great ages, all the time doing a tremendous amount of work, never eat flesh-food. They live on plant-foods exclusively" (p. 41).

A table titled "A few daily dietaries for fruitarians" (p. 67) gives 7 meal plans and the cost of each. A typical meal consists of one serving each of fruit, nuts, and unfermented whole wheat bread. Two meals a day are recommended. The total cost of the diet for 1 week is $1.60.

At the back of the book are 27 unnumbered pages of ads, including the following: (1) "Become a vegetarian–and become stronger, healthier, happier, clearer-headed–and save money. Learn about Vegetarianism through *The Vegetarian Magazine,*" published by The Vegetarian Co., 712, 167 Dearborn St., Chicago, Illinois. (2) Pacific Health Journal, published in Oakland, California. "A magazine for the home intended to give practical instruction on health and hygiene." Note 2. This was a Seventh-day Adventist publication that advocated a vegetarian diet. (3) The Sanitarium Pure Food Store and bakery of Benold's unfermented whole wheat bread, 413 E. North Ave., Near Wells St., Chicago, Illinois. "Full line of reform foods: Entire wheat,... whole wheat flour freshly ground every day on our own mill,... almond, filbert, and peanut butter." (4) Strength and beauty: Benedict Lust, naturopathic physician, 122-124 East 59th St., New York City. Another Lust ad several pages later is titled "Return to Nature." (5) *The Humanitarian Review.* Singleton W. Davis, 852 E. Lee St., Los Angeles, California. "A monthly 40 page Magazine, published in the interest of Liberal Freethought, Ethical Culture, Study of Comparative Religion, Psychology, Human Treatment of all Sentient Creatures, Human and Animal." (6) *The Animals' Defender,* organ of the New-England Anti-Vivisection Society, 1 Beacon St., Boston, Massachusetts. Established 1896. (7) Mazdaznan Health University, 3016-3018 Lake Park Ave., Chicago, Illinois. (8) *The Health Messenger,* published by the Health Messenger Co., Lamotte, Iowa. (9) Physical Culture Restaurant Co., Inc., Bernarr Macfadden, Gen'l. Manager, Main office: Suite 1119, 1123 Broadway, New York City. Has 12 restaurants in New York City, Brooklyn, Boston, and Philadelphia [Pennsylvania].

Note 3. This is the earliest document seen (May 2004) by or about Otto Carque (one of two documents). This book is advertised in *Naturopath and Herald of Health* (New York City) (June 1905, unnumbered page).

282. Fulton, Edwin Giles. 1904. Vegetarian cook book: Substitutes for flesh foods. Oakland, California: Pacific Press Publishing Company. 266 p. Index. 19 cm.

• ***Summary:*** The introduction, titled "Why I was impressed to write a cook book," states: "The number of physicians and dentists increases each year at an alarming rate, but the aches and ills of the suffering people do not lessen. Thousands of people find themselves in a deplorable condition, with stomachs almost worn out, having depended largely upon predigested foods and a long list of so-called 'dyspepsia cures.'

"The amount of patent medicines, 'sure cures,' consumed by the people in the United States is enormous, and is increasing every year...

"Disease among cattle, poultry, and fish has increased so alarmingly in the last few years that we should no longer depend on the animal kingdom for food." "In our efforts to teach how to live without the use of flesh foods, we find we have only begun to discover the inexhaustible resources of the great vegetable kingdom in the boundless wealth of varied hygienic foods."

The chapter on "Entrees" (p. 67-114) contains only vegetarian recipes with names like Mock white fish, Fillets of vegetarian salmon, Mock turkey with dressing, Roast duck (vegetarian style), Vegetarian roast, Vegetarian hamburger steak (p. 113-14), or vegetarian sausage. Several commercial products are called for in many recipes: Protose, Nuttolene, and Nut Food–all made by the Sanitas Nut Food Co. of Battle Creek, Michigan.

The chapter on "Cereals" contains a recipe for Gluten-Granola mush (p. 184). The chapter titled "Toasts" states (p. 187): "Zwieback should be used as the foundation of all

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toasts, although ordinary toasted bread can be used." Adjust the fire so as not to burn or singe the bread.

The chapter titled "Nut butter" (p. 239-45) states that "Nut butter can be easily made in the home... Peanuts and almonds are the nuts most suitable for making nut butter... The best variety peanuts for making nut butter is the Spanish shelled." Three home-scale processes are given. The first is:

"Process no. 1: Put a layer of peanuts about one-half inch deep in a dripping-pan and place on perforated shelf in a moderate oven. Allow them to bake slowly for about one hour. Cook them until they are a light brown or straw color. Shake the pan or stir the peanuts every few minutes. When the kernels begin to crack and pop they brown very quickly, and should be watched closely.

"A splendid way to cook them is to fill a tight-covered dish about two-thirds full, place in the oven, and shake occasionally. When cooked this way, they are not liable to burn, and they retain their flavor better. When they have cooked sufficiently, spread out at once. When they have become quite cool, blanch as follows: This can be done by rubbing them in the hands, or what is better, a coarse bag, or take a piece of cloth and fold the ends together, forming a bag. Another good device is a screen made of coarse wire. Rub them until the skins are loose. The chaff can be removed by using a fan or by pouring them from one dish to another where the wind is blowing. Look them over carefully, removing defective nuts and foreign substances.

"The next step is to grind them. The most practical family mill we know of for grinding nuts, etc., is the Quaker City Mill (see cut [illustration] and description of same in this book).

"Always grind freshly cooked nuts, as they do not make good butter when left a day or two after being cooked." Note: No salt is used in this recipe. And, it is clearly based on the recipe in Lambert (1899, p. 70-71, which see). Moreover, the term "peanut butter" does not appear in this book.

These recipes are followed by recipes for: Salted nut butter ("Prepare nuts as described in process No. 1. Sprinkle salt on the kernels when grinding. It is much more preferable to grind the salt in with the nuts than to mix it in the butter"). Almond butter ("more difficult to make than peanut butter, on account of the difficulty in removing the skins"). Brazil nut butter. Peanut meal. Nut butter for the table. Peanut cream ("Emulsify with water until it is the consistency of milk").

Concerning "Nut butter for the table" (p. 245): "Put one-half the amount of butter required for the meal [p. 244] into a bowl and dilute with an equal quantity of water, adding a little of the water at a time, beating it thoroughly with a fork until it [sic, the mixture] is smooth and light. Enough water should be used to make it the proper consistency to spread nicely. An egg beater or a wire potato masher is an excellent utensil for mixing. A little salt can be added if desired. Nut butter when mixed with water does not keep but a few hours."

Page 249 lists 25 U.S. and 2 overseas "Vegetarian Restaurants and Cafes" worldwide, each with a street address. USA: Vegetarian Restaurant, Los Angeles, California. Vegetarian Restaurant, Oakland, California. Vegetarian Cafe, San Francisco, California. Vegetarian Cafe, Colorado Springs, Colorado. Vegetarian Cafe, Denver, Colorado. Hygienic Dining Rooms, Washington, DC. Hygeia Dining Rooms, Chicago, Illinois. Vegetarian Restaurant, Des Moines, Iowa. The Hygeia, Battle Creek, Michigan. Vegetarian Restaurant, Detroit, Michigan. North Michigan Tract Society, Petoskey, Michigan. Pure Food Cafe, Kansas City, Missouri. Vegetarian Restaurant, Lincoln, Nebraska. Vegetarian Restaurant, Jamestown, New York. Health Restaurant, New York City, New York. The Laurel, New York City, New York. Hygienic Cafe, Philadelphia, Pennsylvania. Vegetarian Restaurant (Corner Church & Vine St.), Nashville, Tennessee. The Pure Food Cafe, Salt Lake City, Utah. Good Health Restaurant, Seattle, Washington. Vegetarian Restaurant, Spokane, Washington. Restaurant, Fairmont, West Virginia. Hygienic Cafe, Madison, Wisconsin. Hygienic Cafe, Milwaukee, Wisconsin. Hygienic Restaurant, Sheridan, Wyoming.

Foreign: Vegetarian Restaurant, Sydney, NSW, Australia. Vegetarian Restaurant, Copenhagen, Denmark.

Pages 250-52 contain a "Directory of Sanitariums," 56 in all, worldwide. They are located in the USA (35), Australia (2; Wahroonga and Cooranbong, NSW), Canada (4; Vancouver and Victoria, British Columbia; Knowlton, Quebec; and St. Johns, Newfoundland), Denmark (2; Skodsborg and Frederikshavn), England (2; Caterham, Surrey, and Leicester), Germany (Friedensau, Bez. Magdeburg), India (Calcutta), Ireland (Belfast), Japan (Kobe), Mexico (Guadalajara), New Zealand (Christchurch), Norway (Christiania), Samoa (Apia, [Western Samoa]), South Africa (Cape Colony), Sweden (Orebro), and Switzerland (Basle).

Page 252 gives a "Directory of Sanitarium Food factories: Battle Creek Sanitarium Food Company, Battle Creek, Michigan Sanitarium Food Company, Sanitarium, California. Portland Sanitarium Food Company, West Ave., Mt. Tabor, Oregon. Colorado Sanitarium Food Company, Boulder, Colorado. Union College Bakery, College View, Nebraska. Sanitarium Food Company, 228 Clarence St., Sydney, NSW, Australia.

Commercial food products made by these food companies and used in the recipes include: Gluten, Granose Flakes, Nuttolene, and Protose.

In the back are ads (on unnumbered pages) for: (1) Quaker City Peanut Butter Mill, made by A.W. Straub Co. at 3 locations: 3737-41 Filbert St., Philadelphia, Pennsylvania; Canal and Randolph Streets, Chicago, Illinois; Vegetarian Cafe, 775 Market St., San Francisco, California. (2) Sanitarium Food Company, Sanitarium [St. Helena?],

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California. Branch stores: San Francisco, Oakland, San Jose, and Fresno, California; and Salt Lake City, and Provo, Utah. They make bottled grape juice and apple cider. (3) Sanitas Nut Food Co., Ltd., Battle Creek, Michigan (makers of Protose and Nuttolene. "Nut foods were developed by the Sanitas Nut Food Co., Ltd., Battle Creek, Mich. Their manufacture is protected by patents... Sanitas Protose and Nuttolene are the only successful and scientific meat substitutes on the market. Sanitas Foods are sold by reliable dealers in all parts of the country... The Sanitarium Food Co., St. Helena and San Francisco, Cal., carry a full line of our products.")

Note: This is the earliest English-language document seen (Nov. 2003) that contains the term "meat substitutes" (or "meat substitute").

A slightly revised edition was published later in 1904, containing 268 pages. A second edition was published in 1910.

283. Kellogg, Ella Ervilla Eaton. comp. 1904. Healthful cookery: A collection of choice recipes for preparing foods, with special reference to health. Battle Creek, Michigan: Modern Medicine Publishing Co. 299 p. Index. 19 cm.
• ***Summary:*** Contents: Methods in hygienic cookery: Healthful cookery. Measuring and combining ingredients. Breads. Unfermented, or aerated bread. Sandwiches. Toasts. Vegetable substitutes for flesh foods. Eggs. Porridges and breakfast dishes. Vegetables. Gravies and relishes. Salads. Soup. Soups with nut soup stock. Gruels and liquid foods. Desserts. The invalid's meals. Seasonable bills of fare. Note 1. Soy is not mentioned.

"Peanut butter" is called for in various recipes: Nut cheese (p. 163), Nut cream (p. 164), Nut salad dressing (p. 171), and Vegetable soup (p. 181-82).

"Almond butter" is called for in: Fruit pin wheels (p. 49), Almond cream (p. 164), Nut cream (p. 164), Peach salad (p. 169), Sweet salad dressing (p. 172), Sour salad dressing (p. 172-73), Cream of almond soup (p. 179), Almond puree (p. 197), Hot nut milk (p. 197), Granola pie crust (p. 210), Almond pound cake (p. 231, incl. almond butter in the icing), Almond filling (for desserts, p. 233), Chocolate mold no. 1 (p. 239), Cocoanut almond cream sauce (p. 245), Almond whipped cream ([non-dairy], p. 246. "Reduce Almond Butter to the consistency of cream, and pour slowly over the well-beaten white of an egg. Sweeten and flavor to suit the taste. For persons who can not use cow's cream, this makes an excellent substitute for whipped cream").

Note 1. This is the earliest document seen (Oct. 2013) that discusses a non-soy, non-dairy whipped cream.

"Nut butter" is called for in: Granuto cakes (p. 44), Nut butter puffs (p. 45), Nut gluten rolls (p. 47), and other recipes on pages 55, 57, 58, 71, 78, 82, 86, 87, 88, 104-06, 126, 136, 157, 159-62, 169, 173, 177-79, 233, 245, 301. For "Nut butters" see Sandwiches (p. 53; "The butter, whether dairy or some one of the various nut butters, should be creamed and spread smoothly on the bread...").

"Nut cream is called for in: Granuto cakes (p. 44; "Serve at once with dairy or Nut Cream, dairy or Nut Butter,..."), Nut gluten rolls (p. 47), Pease gravy toast (p. 65), Nut Lisbon steak, no. 2 (p. 75), and other recipes on pages 86, 99, 104-05, 121-23, 129, 132, 136-37, 141, 146, 151, 153, 155, 159-60, 164, 176, 192, 205, 217, 245, 253, and 283.

Gluten is mentioned throughout the book, as are gluten bread, gluten flour, 40% gluten flour, ½ cup gluten (p. 84), 20% gluten (p. 99, in Protose and gluten patties), gluten meal, and gluten gruel.

This is a vegetarian cookbook. In the chapter on flesh-food substitutes (p. 67+), "vegetarian" is mentioned in several recipe names: Vegetarian roast (p. 106). Vegetarian roast No. 2 (p. 107). Also: Vegetarian boiled dinner (p. 134). Major branded ingredients in this chapter are: Protose ("vegetable meat"), Nuttolene, Granola, and Nut Butter. On page 84 is a recipe for "Vegetable turkey."

On the last 2 pages of the book is an ad: "This volume contains some six hundred recipes." "For the preparation of Sanitarium foods. These foods are manufactured by the Battle Creek Sanitarium Co., Ltd., and the Sanitas Nut Food Co., Ltd., the two original health food manufacturers of Battle Creek. Our products are of world-wide reputation, some of them having been in use more than a quarter of a century [i.e., since about 1879]. The company makes more than 49 food products. "Many good grocers carry only a few of them; some, a large line; more, none at all... Thousands upon thousands of grocers have never heard of our products."

"To all express offices in the following States we prepay the express on orders of $5.00 or more." On orders of $15.00 or more they also offer a 10% discount. The names of 23 states near Michigan are listed. Then the name, weight, packaging type, and price of every product is given.

The author is the wife of the famous Dr. John Harvey Kellogg. She lived 1852-1920. A slightly enlarged edition (313 p.) was published in 1908. Address: A.M., Battle Creek, Michigan.

284. Kellogg, Ella Ervilla Eaton. 1904. Science in the kitchen: A scientific treatise on food substances and their dietetic properties, together with a practical explanation of the principles of healthful cookery; a thousand choice, palatable, and wholesome recipes. Revised and enlarged edition. Battle Creek, Michigan: Modern Medicine Publishing Co. 508 p. [39] leaves of plates. Illust. Index. 24 cm.
• ***Summary:*** In this new edition, the wife of the famous Dr. John Harvey Kellogg discusses the principles and methods of the dietary system employed at the Battle Creek Sanitarium. Although this is a vegetarian cookbook (which includes the use of eggs and milk), that fact is not discussed anywhere in

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the book.

The "Preface to the fourth edition" (p. 4) begins "Cookery is a progressive science. Within the past few years several new and very valuable food products have been developed in the food laboratories of the Battle Creek Sanitarium and put upon the market, making necessary the evolution of many new recipes for their preparation for the table."

The long chapter on "Meats" (p. 389-417) in the 1892 ed. has been replaced by an even longer chapter on "Nuts and nut foods" (p. 389-425). After that we find all new chapters: "Food for the sick" (p. 426-52), "The daily menu (p. 453-63), and "Appendix" (p. 464+) with many pages of nutritional analyses, copied from the "Battle Creek Sanitarium Diet List," showing the "Food value of the large variety of foodstuffs when prepared for the table."

In the new "Introduction," the section on dairy products has been rewritten to deemphasize their use.

The long chapter on "Legumes" again notes that the Chinese "manufacture cheese [clearly tofu] from peas and beans" (p. 217-18).

The chapter on "Milk, cream, and butter" states (p. 369): "Various nuts, as almonds, filberts, and cocoanuts furnish products which make excellent substitutes for milk, and which can be utilized in cooking in early all recipes where milk is needed. These milk substitutes approach very closely the same composition as cow's milk, thus affording equal nourishment, while they have the advantage of being perfectly clean and free from germs. Recipes for their preparation are given elsewhere."

The chapter on "Nuts and nut foods" begins with a description of the major nuts. The long section on "The peanut or groundnut" notes: "In this country they are more commonly roasted, but in this form are almost indigestible, for the peanut is really not a nut at all, but a legume, and requires thorough cooking... to render it digestible. Peanuts are, however, a very wholesome and nutritious food when properly cooked" (p. 393). Recipes include: To blanch almonds. To blanch peanuts. Cocoanut cream. Nut pulp (from well blanched and baked peanuts). Peanut butter (Blanch, then cook in a double boiler for 8-10 hours before grinding). The section titled "Nut preparations" states: "Within the last few years, various processes have been discovered whereby nuts of different kinds are converted into most valuable and palatable foods. Chief among these nut products may be named protose, or vegetable meat, almond and peanut butters, nuttolene, nuttose, nut meals, and nut soup stock" (p. 398). Then come subsections on: "Protose and nuttolene recipes" (p. 399-411, incl. 2 recipes for Vegetarian roast, Vegetarian chili sauce, Protose steak, Nut steak in gravy, Mock hamburger steak, Nuttolene cutlets, Nut fillets, Protose patties, and Rice and lentil croquettes). "Nut products with vegetables" (p. 411-16). Nut cream and butter (p. 416+, incl. Nut butter, Nut milk). Sandwiches (p. 214+, incl. with almond nutter or nut butter).

The Appendix showing nutritional value of foods (p. 464-84) includes all the new nut products. At the very end is a half-page table titled: "The following table shows clearly the inferior value of flesh foods." The nutritional composition of 23 such foods (red meat, poultry, fish, and shellfish) is given. The book contains 31 excellent illustrations and 39 unnumbered pages of glossy black and white photos, each page printed on only one side.

Note 1. This is the earliest document seen (Jan. 2007) that mentions a kind of meatless burger or patty, which it calls "Mock hamburger steak" and "Protose patties."

Also discusses: "The superiority of bread made from the entire wheat or unbolted meal" also called "whole-wheat bread" (p. 112, 143). Many gluten recipes throughout. Diabetic biscuit (p. 452, made of Graham or entire-wheat flour). The following words do *not* appear in the Index: Animal, beef, bulk, fiber, fish, flesh, roughage.

Note 2. The 1904 date appears only on page 4 in the section titled "Preface to the fourth edition." No mention of a 4th ed. appears on the title page. The copyright page gives only the 1892 date. Address: Battle Creek, Michigan.

285. Kellogg, John Harvey. 1904. The miracle of life. Battle Creek, Michigan: Good Health Publishing Co. 574 p. 19 cm. Plates (partly colored). *

• ***Summary:*** Includes a chapter on vegetarianism titled "Shall we slay to eat?" (p. 161-96). Address: M.D., Battle Creek, Michigan.

286. *Good Health* (*Battle Creek, Michigan*). 1905. Sanitariums. Health food restaurants. 40(1):ix (Advertisements section). Jan.

• ***Summary:*** Gives the name and address of 39 Sanitariums, including 26 in the United States, and 13 overseas (new ones since 1904 at Leicester, England. Cape Town, South Africa. Kimberly, South Africa). These "institutions are conducted in harmony with the same methods and principles as the Battle Creek Sanitarium.

Also gives the name and address of 27 health food restaurants in the United States (note that the term "vegetarian restaurants" is no longer used) including the following new ones: Vegetarian Restaurant, 555 Boylston St., Boston, Massachusetts. Vegetarian Cafe, 214 Union St., Seattle, Washington. Vegetarian Cafe, S. 170 Howard St., Spokane, Washington.

Note: This is the earliest English-language document seen (March 2007) that contains the term "Health food restaurants" (or "Health food restaurant" or "Health-food restaurant").

287. *New York Times.* 1905. An imitation dinner. May 22. p. 6, col. 4.

• ***Summary:*** Discusses (with lame humor and much

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sarcasm) the meatless dinner given by a social leader to some distinguished delegates to the National Tuberculosis Convention held in Washington. The menu (whose nomenclature was "stimulating to the imagination if not to the palate") included Broiled Slices of Pinenut Protose, Nut Sauce, C.C. Protose Timbale, Kellogg Gelatina, and Imitation Coffee.

288. *Life and Health* (*Washington, DC; Seventh-day Adventist*). 1905. Fresh pure peanut butter. 20(6):180. June.
• ***Summary:*** "Appetizing, nourishing, strengthening. Made from No. 1 Spanish peanuts in an absolutely sanitary factory. Our improved machinery enables us to furnish the highest grade peanut butter at the exceptionally low price of 14¢ a lb. in 5 and 10 lb. pails; 12¢ lb. in 20, 25, 50 lb cans. Add 1¢ a lb. extra on 50 lbs. or over and we prepay the freight east of the Mississippi and north of Tennessee.

"Order to-day, if only 5 lbs. to try. You'll use it always once you start. Send for trial can, post-paid for 10¢.

"St. Laurent Bros., 1220-22 Saginaw St., Bay City, Michigan."

289. International Health Association, Ltd. (The). 1905. Granose: The pre-eminent whole wheat preparation is the ideal food for breakfast, dinner and supper (Ad). *Vegetarian Messenger and Health Review* (*Manchester, England*). Sept. p. 253.
• ***Summary:*** "No table is complete without it. Granose is crisp, delicious, not only easily digested but an aid to good digestion, and nourishing, alike for infants, invalids, the strong and robust, the mechanic and athlete, the brain worker, and the aged. The only food of which it can be truthfully said: 'Tis the best for all.

"Sample of Granose Flakes, Granose Biscuits, and Toasted Wheat Flakes, with complete price list of other Cereal and Nut Health Foods sent post free for 3*d.;* or package of assorted samples of Health Foods for 1/ [1 shilling]."

"Eat for health and strength." Address: Legge St., Birmingham [England].

290. Fauvel, Pierre. 1905. A vegetarian experiment. *Modern Medicine* (*Battle Creek, Michigan*) 14:99. *
Address: Professeur à l'Université Catholique d'Angers.

291. Kellogg, John Harvey. 1905. Shall we slay to eat? Battle Creek, Michigan. 180 p. *
Address: M.D., Battle Creek, Michigan.

292. Loughborough, John Norton. 1905. The great second advent movement, its rise and progress. Nashville, Tennessee, and Fort Worth, Texas: Southern Publishing Assoc. xvii + 21-480 p. Illust. 21 cm.
• ***Summary:*** A participant's view of the early history of the Seventh-day Adventist church. Chapter 23, titled "Health Institutions," discusses the Battle Creek Sanitarium (Battle Creek, Michigan), Ellen G. White, J.N. Andrews, the health journal *Health Reformer,* dress reform, Dr. Trall's endorsement (1868), Dr. J.H. Kellogg's testimony, the *Pacific Health Journal,* Mrs. Haskell's $30,000 gift, medical missionaries and missionary work, the sanitarium hospital, list of sanitariums (USA 35, Great Britain 3, Australia 2, and 1 each in Germany, Switzerland, Denmark, Norway, Sweden, South Africa, New Zealand, Island of Samoa [probably Western Samoa; see Fulton 1904], Mexico, India, Japan). A portrait photo (frontispiece) shows J.N. Loughborough.

Note: There is no "Island of Samoa." Samoa or the Samoa Islands are divided into American Samoa (on the east; Pago Pago is the capital), and Western Samoa (Apia is the capital. Formerly controlled by Germany, then New Zealand, it became an independent nation in 1962). Address: Mountain View, California.

293. Roper, William N. ed. 1905. The peanut and its culture. Petersburg, Virginia: American Nut Journal. 75 p. Illust. Index. 23 cm.
• ***Summary:*** The many chapters in this book are written by various authors who are experts on peanuts; those with no special author given are written by the editor. The Preface states that this is a book of practical information "for all persons engaged in the growing or the handling of this important crop, with special attention to the methods that have obtained the best results among the most successful growers of all varieties of peanuts."

Contents: Introduction. Magnitude of the peanut crop. Origin and botany of the peanut, by Prof. H. Harold Hume, Raleigh, North Carolina. Peculiarities of the peanut plant. The peanut a fruit, not a vegetable. Varieties of the peanut and their special uses. Domestic uses of the peanut. Breeding seed peanuts, by Prof. W.F. Massey, Raleigh, North Carolina. Dealers' comment on seed selection, by Holmes & Dawson, Norfolk, Virginia. The peanut, by Prof. Charles W. Burkett, Raleigh, North Carolina. Cultivation of the peanut, by B.W. Jones, Spottsville, Virginia. How peanuts are harvested, by B.W. Jones, Spottsville, Virginia. How to cultivate and harvest Spanish peanuts, by E.T. Shackleford, Petersburg, Virginia. The peanut "popper" (used for shelling seed peanuts). Peanut culture in Arkansas, extracts from Bulletin 84, Arkansas Experiment Station, by C.L. Newman. Adaptability of the peanut to the arid west. How peanuts are prepared by factories for the trade. Spanish peanut industry at Petersburg, Virginia. Virginia peanut industry at Norfolk, Virginia. Peanut industry at Suffolk, Virginia. Foreign peanuts, by Burton H. Allbee, New York, for five years Market Editor New York Commercial: Introduction, France, Spain, Africa, Malayan Archipelago, China, Japan. Arachides in Marseille, by Hon. Robert P. Skinner, U.S. Consul General, Marseille, France. How peanut oil is made,

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by Robert P. Skinner. The peanut as a food (incl. peanut butter). Comparative weights and prices (by month from Jan. 1900 to May 1905, for Virginia and Spanish peanuts).

At the back of this book (p. 63-75) are 13 pages of ads related to peanuts, including seeds, Lummis & Co. cleaners of peanuts, peanut machinery from the Cardwell Machine Co., Ellis champion peanut and pea thresher from the Ellis Keystone Agricultural Works (Pottstown, Pennsylvania), Royster's peanut fertilizer, Lion brand fertilizer, National Nitro-Culture Co. (West Chester, Pennsylvania).

Concerning the origin of the peanut, by Prof. H. Harold Hume, Raleigh, North Carolina (p. 11): "For many years the original home of the peanut (*Arachis hypogaæa*) was in dispute, but this dispute has been set at rest by the investigations of Alphonse De Candolle.

"It has been said that it had its origin in Africa, or in Asia; but the weight of evidence points to Brazil as the home of this unique plant, though its existence in a wild state is unknown.

"The evidence upon which this conclusion is based is sufficiently convincing to allow little reason to doubt the accuracy of De Candolle's conclusion. The genus *Arachis* contains a half dozen or more other species, all of which are known to be natives of Brazil. It would be an unusual exception to find one single isolated plant the native of one hemisphere, while all of its near relatives were found in another. Marcgraf and Piso described the peanut from Brazil as early as 1648. There were ancient American names–*mandubi, anchic and mani*–for the plant. On the other hand, the peanut was unknown to the early Greek, Latin and Arab writers. The agriculture of Egypt is very ancient; yet, according to the early botanists, it was not in cultivation in that country. In India it has no name in the ancient Sanskrit. In the older books on the plants of the Orient, the peanut is always referred to as a cultivated plant, and in the more ancient ones it is not mentioned.

"But, on the other hand, we know that it was cultivated extensively in Guinea and other parts of Africa at an early date. Sloane, in his work on Jamaica, says that it was used by slave-dealers to feed the negroes on the passage from Africa. This may be explained, however, by the supposition that the first slave-ships carried the peanut from Brazil to Africa, toward the close of the fifteenth century, where it soon became generally cultivated, and it was then used in the way stated by Sloane, and eventually was brought to the British Colonies in America by the slave-ships, and was subsequently planted and cultivated in the Southern Colonies of Virginia and Carolina, from which its culture has spread generally throughout all the Southern States. Its presence in the Orient may be explained on the basis of a Portuguese introduction toward the close of the sixteenth century."

Photos (black-and-white) show: (1) Black people working in a 300-acre Spanish peanut field near Petersburg, Virginia. (2) Flat or running Virginia peanuts in the shell (3 views, exact size). (3) Improved running jumbo peanuts in the shell (2 views, exact size). (4) Black people sitting on the ground, picking nuts from the vines (Courtesy Bain Peanut Co.). (5) Black people with one horse taking the vines and nuts from the ground (Courtesy Bain Peanut Co.). (6) Black people stacking the vines and nuts to dry (Courtesy Bain Peanut Co.). (7) Cluster for four Spanish peanut vines. (8) Improved Spanish peanuts in the shell (8 views, exact size). (9) Vines shocked in the field; a black girl is standing in front of one, smiling (Courtesy Suffolk Peanut Co.). (10) A peanut popper. (11) Black people sorting peanuts on tables in a factory with lights overhead. (12) Solid carload (a train with many cars) or peanuts leaving Suffolk, Virginia. (Courtesy Suffolk Peanut Co.).

The section titled "The peanut as food" (p. 58-59) states: "Professor Jaffa, of the University of California, reporting interesting experiments made upon men engaged in hard, manual work, states that nuts are the cheapest source of energy, peanuts ranging far ahead. A prominent southern physician says the peanut is the best food a man can eat. There are sanitariums and hospitals where the little peanut constitutes the chief article of diet. It is ground and added to bread, made into croquettes, meringue, salads, soups, jumbles, griddle cakes, muffins, pies, and utilized in numerous other ways.

"Peanut butter is rapidly becoming a staple article of commerce, and it is claimed for this butter that it has these marked advantages: it does not absorb offensive odors, will stand a high temperature without melting, and does not become rancid when made pure. For the manufacture of candies and confections, the peanut is becoming more popular than ever. From refreshments on special occasions it is rapidly becoming esteemed as a food.

"The peanut will doubtless become one of the great staples of commerce, to take rank with wheat and rice as one of the most important articles of food supply for the millions of consumers in all parts of the world." Address: Editor, American Nut Journal, Petersburg, Virginia.

294. Battle Creek Health Food Co., Limited. 1906. Life Chips for the workingman (Ad). *Toronto Daily Star* (*Canada*). April 21. p. 12.

• ***Summary:*** "Flesh food does not give the staying quality–the energy it produces is quickly expended.

"The workingman is much better fitted for his day's labor by a cereal and egg diet.

"His strength is more uniformly distributed, and he is never troubled with that heavy, fagged, tired-out feeling.

"His health is improved by leaving meat alone–more than half the disease of today is caused by eating flesh foods."

Life Chips are made from the whole wheat, scientifically mixed with the best quality of malt."

For breakfast Life Chips are delicious with hot or cold

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milk or cream. For dinner or supper, in combination with fruit, vegetables or eggs, Life Chips are nourishing and appetizing."

A large vertical illustration, in the middle of the ad running its full height, shows a man walking, smoking a pipe, wearing a hat, and carrying a cylindrical lunch bucket as he walks to work. Address: Canadian Factory, London, Ontario.

295. Battle Creek Health Food Co., Limited. 1906. Life Chips for the young child (Ad). *Toronto Daily Star* (*Canada*). May 19. p. 5.
• ***Summary:*** "The foundation for perfect health is laid in childhood.

"Much depends on the child's diet. It most be nourishing and satisfying, without clogging the system.

"Life Chips should be the basis of every child's meal.

"They will give the vigor of perfect manhood and beautiful womanhood."

A large vertical illustration, in the middle of the ad running its full height, shows a young child, seated in a high chair at a dining table, wearing a bib, and eating from a bowl of Life Flakes. Address: Canadian Factory, London, Ontario.

296. White, Ellen G. 1906. Notes of travel–No. 1: Journey to Southern California. *Advent Review and Sabbath Herald.* June 14. p. 7.
• ***Summary:*** On April 12 Mrs. White left her home near St. Helena for a short visit to southern California. "The Los Angeles vegetarian restaurant: Our train into Los Angeles was a few minutes late, and we could not make close connections with the train for Loma Linda, so we spent a pleasant hour at the vegetarian restaurant, on the corner of Third and Hill Streets. This restaurant is now conducted by the medical missionary department of the Southern California Conference, and is in charge of Brother and Sister Allen..."

"During the past few years, the Lord has given much instruction regarding the establishment of hygienic restaurants in large cities. Over and over again he has indicated that in many cities we should have small restaurants, as centers of influence, by which the attention of thinking men would be called to the principles that make us 'a peculiar people.'"

"In 1902 I wrote out many reasons why it will be best to establish several smaller restaurants in different parts of our large cities. Among these reasons were the following: The smaller restaurants will recommend the principles of health reform as well as the larger establishments, and will be much more easily managed."

297. Battle Creek Health Food Co., Limited. 1906. The public invited (Ad). *Toronto Daily Star* (*Canada*). June 19. p. 11.
• ***Summary:*** "The Battle Creek Health Food Company of London [Ontario] are having a special demonstration of Granose Biscuit, Granose Flakes, and Caramel Cereal [a coffee substitute] in the Grocery Department of the T. Eaton Co., and all visitors to the big store are invited to purchase sample packages of these most excellent foods.

"With these foods it is not a question of price, because the cost is no more, but it is a matter of quality, and to know that what you are eating is the best that time, money, and skill can produce." Address: London, Ontario.

298. Kellogg, John Harvey. 1906. Vegetarians of India (Editorial). *Good Health* (*Battle Creek, Michigan*) 41(11):664-65. Nov.
• ***Summary:*** "The eminent Prof. C.B. Ramarao, M.D., delegate to the British Medical Association which recently held its meeting at Toronto [Ontario, Canada], stated in a lecture recently delivered before the physicians and guests of the Battle Creek Sanitarium upon the habits and customs of the people of India, that the Brahmans of southern India, who are known to be the most intellectual and highly cultivated people of that country, absolutely eschew all animal food of every description with the exception of milk. Even eggs are excluded from their dietary. The Brahmans of northern India make use of eggs, and sometimes of fish, but never eat the flesh of animals.

"Dr. Ramarao is himself a fine specimen of physical development and manly vigor, a man of great intellect and professional attainments."

"If foodstuffs rich in proteids are at any time needful as an addition to the dietary, they may be readily found in peas, beans, lentils, milk, and eggs..." Address: M.D.

299. Beard, Sidney Hartnoll. 1906. A comprehensive guide-book to natural, hygienic and humane diet. 5th ed. Paignton, England: The Order of the Golden Age. 138 p. Undated. Index. 16º. Preface dated 1906. 1st ed. 1902. 7th ed. 1913.
• ***Summary:*** "Preface to the fifth edition: The important subject of dietetic reform is now being seriously considered by thoughtful and enlightened persons in all parts of the world, and the extent of this interest in a matter which has been too long neglected is increasing every day." After the last numbered page of the Index (p. 138) are 21 unnumbered pages of ads, lists, etc.

Page [1]. Food-reform [vegetarian] restaurants: 13 in London, 1 in Birmingham (The Pitman Hotel and Restaurant, Corporation Street), 4 in Manchester, 1 in Glasgow, Scotland. 1 in Belfast and 1 in Dublin, Ireland. 1 each in Newcastle, Sheffield, Nottingham, Halifax, Bradford, Liverpool. 2 in Bolton (northwest of Manchester). 2 in Leeds.

Page [2] Food-reform institutions & establishments: 1 each in Worcester (college), Bristol (college), Bromley, Kent (fruitarian hospital and nursing home), Bournemoth

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(private hotel for fruitarians), Broadstairs (nursing home), Felixstowe (hygienic hotel), Bishopsteighton, Teignmouth (baths), Torquay (massage, dietetic treatment), Gloucester (sanatorium, spa hydropathic, dietetic), Hydro, London (Hygeia House). [5-7]. Booklets and pamphlets published by the Order of the Golden Age. The Order of the Golden Age (basic information). Herald of the Golden Age.

Page [8]. "Twentieth-century health foods." Protose, Nuttose, Bromose, Nut butter, and Granose. "Send for our illustrated price list of health foods." The International Health Association, Ltd., 70-74, Legge St., Birmingham.

Page [9]. "Pitman stores. Hygienic food. Health food specialists, Birmingham. The largest health food dealers in the world. Will send their New Illustrated Catalogue (just issued) of 88 pages, with 'Helps to a Simple Diet,' post free for two stamps, containing endless varieties of Health foods, nut butters, and other nut preparations, uncooked ready-to-eat foods, delicious gravies made from legumes, meats, butters, lard, and suet made from nuts, oils from nuts and olives in place of cod's liver, nourishing and non-stimulating coffees (uric acid free) made from cereals, pure vegetable soups, brawn, paste, and non-alcoholic grape juices. Improved nut mills with patent regulating attachments, and nut butter mills. 'Pitman' steamerettes for cooking all kinds of food with dry steam. Labour saving cooking appliances in large variety. Cereals & legumes. Vegetarian literature, &c. All free from fish, flesh, fowl, alcohol and drugs; to take the place of every variety of food in general use, obtained from the animal kingdom. Superior and far cheaper."

Page [10]. "Mapleton's. New nut cakes. Walnut cream butter. Nutter for cooking (Manufactured entirely from nuts). Fruitarian cakes. Table nutter. Send for full price list of Nut Foods to the Manufacturer–Hugh Mapleton, 2 & 3, Dolphin St., Ardwick, Manchester. Also in Bristol and Hamburg."

The author was born in 1862. Address: Paignton, England.

300. Winton, A.L. 1906. Diabetic foods. *Connecticut Agricultural Experiment Station, Annual Report* 30:153-65. For the year 1906.

• ***Summary:*** This article begins: The necessity of excluding so far as possible from the diet of diabetic patients sugars and substances, such as starch and dextrin, yielding sugar with the digestive juices, had led to the introduction of saccharine and other coal-tar derivatives and preparations containing, or purporting to contain, no starch or starch derivatives,..."

"Not only all of the cereal grains but also most of the seeds of the legumes... contain large amounts of starch and must be avoided by diabetics; the soja or soy bean, however, is a striking exception as it contains, when ripe, no true starch, or only traces. This leguminous seed is an important food in Japan and is being used in this country for the manufacture of meal for the use of diabetics. Two analyses of soja bean meal [whole soy flour] are given in Table XVI, pp. 156-157."

This table lists and analyzes about 45 diabetic foods made by about 12 companies. Only three products clearly contain soy; the first two (p. 156-57) are both named Soja Bean Meal made by the Theo. Metcalf Co. in Boston, Massachusetts; one contains 5.5% starch and the other 7.63% starch. The first product contains 19.06% fat and is thus a whole (full-fat) soy flour; this table contains the earliest analysis seen of whole soy flour. The third product (p. 164) is a homemade "Soja Bean Meal Biscuit (Muffins or Popovers)" made from Metcalf's Soja Bean Meal. Made with 1 cup cream, 2 eggs, baking powder, and salt, plus Soja Bean Meal, it contains (on an as-is basis) 27.6% water, 5.33% ash, 16.71% protein, 1.55% fiber, 12.84% nitrogen-free extract [non-fiber carbohydrates], and 35.91% fat. Note: This is the earliest English-language document seen (Nov. 2013) that uses the term "soja bean meal" to refer to whole soy flour.

"The peanut, another leguminous seed, although very rich in oil, contains about 11 per cent. of starch, sugar, and dextrin, of which about half is starch." Most of the nuts, including almonds, "since they contain no starch and only small amounts of sugar and dextrin but are rich in protein and oil, are valuable additions to the diet of diabetics. Almond meal is used in the preparation of various biscuits and bread substitutes."

The table (p. 156-59) also contains many gluten products, together with their manufacturers and nutritional composition. Diabetic products made by Battle Creek Sanitarium Food Co. (Battle Creek, Michigan) are: 40% Gluten Flour, 40% Gluten, 40% Gluten Biscuit, Potato Gluten Biscuit, and Pure Gluten Biscuit. Diabetic products made by the Sanitas Nut Food Co., Ltd. (New York) are: Sanitas Nut Butter, Nuttolene, Almond Butter, and Protose. Nutritional analyses of each of these products are given.

This table shows that The Health Food Co., New York, makes (p. 156): Flour and meal–Glutosac Flour, 35% proteids. Protosac Flour, 40% proteids. Pure Washed Gluten Flour, 85% proteids, 6% carbohydrates, 9% water. Almond meal. Bread, biscuit, rusk, etc.–No. 1 Proto Puffs, 78.86% protein, 6.71% starch. Salvia Sticks. Protosac Bread, 40% protein, Glutosac Bread, 35% proteids. Plain Glutosac Wafers, 33% proteids. Glutona, 35% proteids. Glutosac Zweiback, 35% proteids. Glutosac Butter Wafers, 35% proteids. Protosac Rusks, 40% proteids, Glutosac Rusk, 35% proteids. Diabetic Biscuit, 40% proteids.

Note: Kate G. Barber, PhD, is also a chemist in the station's Analytical Laboratory. She and Andrew Winton were later married. Address: PhD, Chemist in charge, Analytical Lab., New Haven, Connecticut.

301. Year book (1905) of the Seventh-day Adventist Denomination. 1906. Washington, DC: Review and Herald Publishing Co.

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• ***Summary:*** Under Pacific Union Conference is Southern California Conference (p. 59-60). Organized 1901. Under "Vegetarian Cafe" (no address is given) are the names of the "Board of Management: J.A. Burden, S.S. Merrill, O.F. Conway, W.M. Healey, E.S. Ballenger."

Note: The address was probably 257 South Hill St., Los Angeles. J.A. Burden, and two other ministers who lived in Los Angeles, lived at 317 West Third St.

302. *Good Health* (*Battle Creek, Michigan*). 1907. Directory of Sanitariums. Health food restaurants. Health food stores. 42(2): Feb. Near front (unpaginated).
• ***Summary:*** Gives the name and address of 37 Sanitariums and treatment rooms, including 25 in the United States, and 12 overseas (including Chaterham, Surrey, England; Leicester, England; Calcutta, India; Cape Town, South Africa; Christchurch, New Zealand; Kobe, Japan; Guadalajara, Jalisco, Mexico; Gland, Vaud, Switzerland; Skodsborg, Denmark; Wahroonga, NSW, Australia; Bez. Magdeburg, Germany; Kimberley, South Africa).

Also the names and addresses of 16 "Health food restaurants" in the United States (with names like Hygienic Cafe, Pure Food Cafe, Sanitarium Rooms, etc.) including: Vegetarian Cafe, 259 South Hill St., Los Angeles, California.

And the names and addresses of 8 "Health food stores" in the United States (in Omaha, Nebraska; Springfield, Massachusetts; Detroit, Michigan; Boston, Massachusetts; Melrose, Massachusetts; Rochester, New York; College View, Nebraska; Chicago, Illinois).

303. International Health Association, Limited (The). 1907. Do you want to be rich? The [key] to the secret (Ad). *Good Health* (*London*) 5(16):507. Sept.
• ***Summary:*** "Health is wealth! How many people unconsciously exchange health for money. How many violate the laws of nature in their efforts to gain a position in the world!

"Are you healthy? If so, allow us to offer you a few suggestions on the maintenance of strength and vigour. Are you sick? We believe we can help you get well."

Perhaps "you are anxious to discard the use of flesh meats, but are at a loss to find a suitable substitute. We can remove this difficulty by offering you a Perfect Meat made from choice Wheat and Nuts, being therefore absolutely pure and wholesome. Our Protose is the best substitute for flesh meats ever produced... Protose is beneficial to the brain-worker, and will also impart strength and vigour to those engaged in manual labour.

"Supplied in three varieties: No. 1. The Original Protose. No. 2. Pine-Nut Protose. No. 3. Hazel-Nut Protose." Price: 1½ lb., 1 shilling 4 pence. 1 lb., 1 shilling. ½ lb., 8 pence.

"Send six stamps for a sample tin. Health Food Booklet sent free on application." Address: Legge Street, Birmingham [England].

304. Yogurt Company (The). 1907. Yogurt: An invaluable remedy (Ad). *Good Health* (*Battle Creek, Michigan*) 42(9):Unnumbered page in ads at end of issue. Sept.
• ***Summary:*** "Masson, of Geneva, discovered in certain Oriental milk preparations a new lactic acid-forming ferment. Metchnikoff investigated this new bacillus and found it to possess extraordinary powers and great resistance, far superior to the ferments of kumyss [koumiss, kumis, kumiss], kefir, and other ferments previously known. The ferment is commonly used with milk in a form resembling kumyss or sour milk.

"The milk preparation containing this ferment has been used in Egypt under the name of Leben; in Bulgaria it is known as yoghourt or yaghourt. It is also used in Turkey and other Oriental countries. Metchnikoff, of the Pasteur Institute, Combe, Bourget, and many other European authorities make large use of this ferment in the treatment of intestinal autointoxication which investigation by these and other authorities has shown to be responsible for a large number of chronic diseases, particularly many cases of arteriosclerosis, Bright's disease, skin maladies, chronic rheumatism. rheumatoid arthritis and chronic biliousness..."

"Yogurt cures by driving out the disease-producing germs in the intestinal tract and substituting a harmless species instead. It is easily the most valuable remedy ever discovered for Intestinal Autointoxication.

"Hitherto this remedy has not been available in this country. It may now be secured, freshly prepared and of superior quality.

"We have succeeded in preparing this ferment in concentrated form so that it may be administered in capsules.

"Packages containing four dozen capsules, each post-paid, $1.00.

"Manufactured and sold by The Yogurt Company,..."

Note: This is the earliest English-language document seen (Sept. 2012) with the word "Yogurt" (regardless of spelling) in the title. This yogurt is made from dairy / animal milk. Address: Battle Creek, Michigan.

305. Kellogg, John H. 1907. Food product. *U.S. Patent* 0,869,371. Oct. 29. 1 p. Application filed 24 Feb. 1906.
• ***Summary:*** This is patent for a meat substitute product, and process of making it. The ingredients and their proportions by weight are gluten (wet, 37%, made from wheat flour), casein (wet, 37%, precipitated from cow's milk with an acid), and vegetable oil (25%). The ingredients are shredded, mixed, put into cans, and cooked. The product may also be dried. Soy is not mentioned. Note: This patent was later widely cited by Anson and Pader in their meat analog patents of the 1950s. Address: M.D., Battle Creek, Calhoun Co., Michigan.

306. International Health Association, Limited (The).

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1907. A move into the country. The International Health Association's new headquarters (Ad). *Good Health* (*London*) 5(17):533. Oct.

• ***Summary:*** "It is with pleasure that we announce our removal from Birmingham, where we have for some time been working under the disadvantages of limited facilities, a smoke-laden atmosphere, and the general unhealthful conditions which appertain to large cities, into a beautiful country location, where we shall be able to manufacture Health Foods under genuinely healthful conditions.

"The property consists of 55 acres of well-timbered park-land, situated one mile beyond the limits of the town, at an elevation of 300 feet above sea level.

"We have built the factory to suit all our requirements, and have fitted it throughout with electricity for power and lighting purposes.

"Our increased facilities and improved conditions warrant us to invite your continued and increased patronage, and make us feel confident of giving entire satisfaction to all. Price list free on application." Address: Stanborough Park, Watford, Herts. [Hertfordshire, England].

307. Andross, E.E. 1907. Dedication at Stanborough Park [of IHA food factory at Watford, Hertfordshire, England]. *Missionary Worker* (*London*) 11(21-22):177-78. Nov. 20.

• ***Summary:*** "Monday, Oct. 28th, at 2:30 p.m., in the packing room of the Food Factory (the largest room available for such a gathering) at Stanborough Park, about two hundred people assembled for the purpose of formally dedicating the estate, with all its buildings, to the service of God. While we could but say with David; 'All things come of Thee, and of Thine own have we given Thee,'..."

"The packing room was crowded to its utmost capacity, and the doors into the shipping room were thrown open, and all its available space was occupied, besides the standing room near the main entrance and on the landing being filled with attentive listeners.

"Statement of the business manager: Brother Sisley gave a brief history of our experiences in searching for a location for the headquarters of our work, and of the Lord's leading in securing this estate. He also gave a financial statement of the 'Seventh-Day Adventist Union, Limited' (the organization owning the property),..."

"Health work: Brother Barnard related some of the experiences in the development of the health food work in this field. And in behalf of its staff of workers expressed the high appreciation of, and deep gratitude to God for, the present beautiful situation and splendid facilities for the prosecution of their work."

A photo shows five, huge two-story buildings, including the food factory and printing office.

Note: This is the earliest document seen (Dec. 2013) concerning Seventh-day Adventist food manufacturing activities outside the United States.

308. Barnard, S.S. 1907. The health food work. *Missionary Worker* (*London*) 11(21-22):177-78. Nov. 20.

• ***Summary:*** "The manufacture of health foods occupies an important place in the health reform work;..."

"Many of the foods offered to the public to-day are unsafe to eat, owing to the harmful ingredients contained in them; various kinds of chemicals, adulterants, and other questionable elements being unscrupulously used by the majority of worldly firms engaged in the manufacture of foods, of whatever kind, whose chief object for being in business is to make money... With regard to flesh meat, it is an acknowledged scientific fact that its use is contrary to the best development of the physical, mental, and moral powers. The best meat naturally contains many impurities, besides which, animals are becoming more and more diseased, so that it is positively unsafe to eat their flesh.

"The health foods work began about twenty-five years ago [i.e., in about 1882] in America, when the Lord gave skill and understanding to His people to prepare [meatless] foods that are healthful and life-sustaining. These foods were adopted for regular use in our sanitariums, and proved so highly beneficial to the patients that many of them continued to use them after returning to their homes; consequently, in a little while the health food factory was sending out its products to all parts of the United States. In course of time inquiries for the foods were received from England, and in 1897 an agency for their sale was started at our Tract Society Office, 451 Holloway Road, the foods being imported from America. A year or two later the brethren in England decided to manufacture the foods in this country, and purchased a mill for the purpose at Horley, a village in Surrey. The enterprise was getting fairly well established when a fire burnt the mill to the ground. In September, 1900, a factory was rented in Birmingham, and for the last seven years the work has been carried on there. Unfortunately, the building and its location were unsuitable for our work, and we have long been looking for a more favourable place. The Lord has now provided us with an ideal place in the midst of the scenes of nature, for which we are truly thankful. The building that has been erected is light, airy, and hygienic in every way, and is eminently suited for the manufacture of health foods. It was publicly dedicated to the Lord's work on October 28th, at the time of the dedication of the other enterprises centered at Stanborough Park, Watford. Not only has the building been dedicated, but all the brethren engaged in the work of making the foods have dedicated themselves to the Lord, their chief motive being to work unselfishly for the benefit of their fellow men; and all will strive to reach the very highest standard of excellence."

"A few statistics bearing upon the progress of the work may be of interest. The first year at Birmingham showed a loss of £1,500, and the business would have had to be abandoned had not some of the brethren kindly assisted us

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with temporary loans; but since that time God's blessing has rested on the efforts put forth, each year showing a margin of profit, until on the 31st of December last, there was a balance of £400 on the right side. Our sales this year have kept ahead of last year's notwithstanding the increased competition, so that we anticipate a fair showing at the end of the present year, after deducting the heavy expenses that have been incurred in removing from Birmingham. We have sold over 100,000 packets of granose flakes and granose biscuits (our leading lines) during the last twelve months, and now we are aiming for the 200,000 mark."

"But a word now with reference to the profits that may accrue. These are to be wholly devoted to the extension of the work to which we, as a people, are committed."

"On our part we will do our utmost to merit support by supplying foods of the very best quality, carefully prepared on scientific lines, that will be health foods, not only in name, but in fact.

"Some firms are now manufacturing and selling goods that profess to be health foods, but that contain unwholesome ingredients. Again, the foods are often of so inferior a quality that much harm is done to the cause by their sale, those who buy them supposing that all health foods are similar. Foods are also being manufactured by a firm which obtained most of its recipes from one who went out from us, while many are imitating our foods and advertisements."

Photos show: (1) A corner of the bakery. (2) The room where Granose is made. Four workers are shown in each photo. Address: Manager, The International Health Ass'n, Ltd. [Stanborough Park, Watford, Hertfordshire, England].

309. International Health Association, Ltd. (The). 1907. Monotony in diet tends to mal-nutrition (Ad). *Good Health* (*London*) 5(19):607. Dec.

• ***Summary:*** "A variety of sustaining breakfast foods eaten on alternate mornings is, for most people, better than the same kind morning after morning." Each of IHA's breakfast foods is perfectly cooked and ready to serve in two minutes.

They are: Granose Flakes and Granose Biscuits. Toasted Wheat Flakes. Avenola. Gluten Meal (I.H.A. brand).

"Can be obtained from all Health Food Stores, or direct from the makers. In districts throughout the United Kingdom where we have no agents we will send, carriage paid, a packet of each of the above five foods, also a tin of our delicious Malted Nuts, and a ½ lb. tin of Protose (Nut Meat), together with "One Hundred Hygienic Recipes," for 5/-.

Note: The first page of the December issue states: "Our seventh Christmas... Our edition this month is 80,000 copies. Six years ago it was 15,000." Address: Stanborough Park, Watford, Herts. [Hertfordshire, England].

310. Fauvel, Pierre. 1907. A contribution to the study of vegetarianism. *Modern Medicine* (*Battle Creek, Michigan*) 16:8-12. *

Address: Professeur à l'Université Catholique d'Angers.

311. Williams, Howard. 1907. The ethics of diet: A biographical history of the literature of humane dietetics, from the earliest period to the present day. Abridged edition. Manchester, England: Albert Broadbent; London: Richard J. James. viii + 242 + [6] p. 19 cm.

• ***Summary:*** This abridged classic of vegetarian literature traces writings in support of vegetarianism from ancient Greece to the 19th century. Contents: Part I: Earlier ethical dietetics. Ad on unnumbered page: Brown & Polsons patent corn flour, and "Paisley flour" raising powder. 1. Hesoid and the Orphic Poems. 2. Pythagoras: The western founder of humaner living. 3. Sakya Muni [Shakyamuni] and Buddhism. 4. Empedokles: The prophet-poet of the humaner life. 5. Plato and the transcendental philosophy. 6. Asoka [Ashoka] and the Buddhist propagandism. 7. Publius Ovidus Naso and Italian ethics. 8. Lucius Annæus Seneca and humanitarianism. 9. C. Musonius Rufus; a distinguished eclectic. 10. Plutarch and extra-human rights. 11. Florus Tertullian and his protest against the materialistic diet. 12. Flavius Clemens and early Christian dietetics. 13. Porphyrius [Porphyry of Tyre] and Neo-Pythagoreanism. 14. Ioannes [John] Chrysostom and Christian dietetics.

Part II: Modern ethical dietetics. 15. Luigi Cornaro and the dietetic Renaissance. 16. Thomas More and his ideal community. 17. Michel de Montaigne and the humanitarian philosophy. 18. Pierre Gassendi and the scientific basis of the humane diet. 19. John Evelyn, with Milton and Ray, eloquent eulogist of the fruit-diet.20. Philippe Hecquet and medical barbarism. 21. Bernard De Mandeville and the 'Fable of the Bees.' 22. George Cheyne and right methods of medicine. 23. Alexander Pope and his satire on anthropocentricism. 24. Antonio Cocchi and the diet reformation in Italy. 25. David Hartley on the callousness of carnivorism. 26. Jean-Jaques Rousseau and the natural life. 27. Francois Marie Arouet de Voltaire and the humanitarian philosophy. 28. George Louis Leclerc de Buffon and his 'L'Historie Naturelle'. 29. Oliver Goldsmith and his humanitarian essays. 30. William Paley and the utilitarian critic of pastoralism. 31. Bernardin St. Pierre and the first of idyllic romances. 32. Jean Baptiste Pressavin and the art of prolonging life. 33. Joseph Ritson and his reasons for 'Abstinence'. 34. William Lambe and hygienic dietetics. 35. John Abernethy and the dietetic treatment of cancer. 36. John Frank Newton and the return to nature. 37. Percy Bysshe Shelley the prophet-poet of humanitarianism. 38. Richard Phillips and his humanitarian labours. 39. William Cowherd, William Metcalfe, and the religious-dietetic reformation. 40. Jean Antoine Gleïzès and the new existence. 41. Alphonse De Lemartine as poet of the humaner life. 42. Jules Michelet and the historian's view of kreophagy. 43. Gustav von Struve and the first humane propaganda in Germany. 44. Edward Baltzer and the natural way of living. 45. Arthur Schopenhauer and the foundation

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of morality. 46. Henry David Thoreau and the simple life. 47. Richard Wagner and the aesthetic dietetics. 48. Anna Kingsford and the first prophetess of the humane life.

Ads on six unnumbered pages in the rear: [1] scientific food: Grape-Nuts. Selected "parts of wheat and barley are so treated by moisture, heat and time as to change the starch into grape sugar. This form of pre-digested starch is quickly taken up by the blood and deposited in the muscles and tissues." [2] Dr. Nichols' Food of Health. Brill's Sea Salt. Dr. Nichols' Soap. The Nichols' Brill Co., May Roberts & Co., wholesale agents, 9-11, Clerkenwell Road, London, E.C. [3] Germ-free & water-free milk. [4] Mapleton's Nut Foods. Send for complete price list to Hugh Mapleton, Nut Food Manufacturer, 2&3, Dolphin St., Ardwick, Manchester.

[5] Two good things–in three varieties. Granose: The ideal "Staff of Life." Granose flakes, Granose biscuits, Toasted wheat flakes (sweetened). Protose: The standard nut meat. The original Protose, Pine-nut Protose, Hazel-Nut Protose. "Protose is a wholesome meat, prepared from choice nuts and wheat. It resembles flesh-meat in appearance, taste, and chemical composition, and is superior to it in point of purity, digestibility and wholesomeness. Protose, being the best, is the standard nut meat, and is used by food reformers the world over." From: The International Health Association Limited, Legge St., Birmingham.

[6] The universal digestive tea. Sold by the Vegetarian Society, 257, Deansgate, M/r. "The Health Food Stores, 257, Deansgate, Manchester. Depôt for all vegetarian specialties. Pure wholemeal ground fresh daily, pure olive oil, pure dandelion coffee, shelled nuts, nut mills, wholemeal biscuits, etc."

The author lived 1837-1931. Address: M.A., Late scholar of St. John's College, Cambridge.

312. Year book (1906) of the Seventh-day Adventist Denomination. 1907. Washington, DC: Review and Herald Publishing Co.

• ***Summary:*** The section titled "Health food restaurants and stores" contains the name and address of 21 restaurants, including: Los Angeles, California. 257 South Hill St. O.F. Conway, manager. San Francisco, California. 755 Market St.

Also the address of 14 such stores (in Boston, Massachusetts; College View, Nebraska; Des Moines, Iowa; Detroit, Michigan; Fresno, California; Melrose, Massachusetts; Oakland, California; Omaha, Nebraska; Rochester, New York; Sacramento, California; San Francisco, California; San Jose, California; Santa Cruz, California; Springfield, Massachusetts).

313. *Wanganui Herald* (*Manawatu-Wanganui, New Zealand*). 1908. Seventh Day Adventist Conference. Jan. 9. p. 5.

• ***Summary:*** "Cambridge, January 9. The Australian Conference of the Seventh Day Adventists has opened here and will be continued for a week. A large number of delegates are present. The Adventists recently purchased large farms and property near Cambridge and have erected a training school and health food factory."

Note: Cambridge is a town in the Waikato region of the North Island of New Zealand.

314. *Advertiser* (*The*) (*Adelaide, South Australia*). 1908. Sanitarium Health Food. Feb. 27. p. 6.

• ***Summary:*** "A 'Sanitarium Health Food Cafe' was opened on Monday in cool, airy, and convenient premises at 28, Waymouth-street under the management of Mr. J. G. Fisher. Great success has attended the hygienic cafes established by the same institution in Melbourne, Sydney, Hobart, and Wellington [New Zealand], where the viands purveyed have grown in public estimation every day. It is claimed that sanitarium health foods are pre-eminently calculated to supply all that is required for the development of the human body. They are prepared from the choicest grains, nuts, and fruits, and so can be eaten without fear of contracting diseases sometimes conveyed by flesh meats. Everything about the cafe is attractive, and the food is served in the most appetising way. The menu includes Macaroni cutlets, mock chicken soup, nut meat and tomato stew, and other vegetarian delicacies while the waitresses are expert and attentive. The cooking is, of course, in the hands of specialists. Meals are served at the ordinary hours, and it is asserted that in the food there are no free fats, coloring matter, or other injurious decoctions. If so desired palatable unfermented wine, the pure juice of the grape, can be taken with the meals."

315. White, Ellen G. 1908. An appeal for the Madison School. n.p. 4 p. May 25.

• ***Summary:*** "I am acquainted with the necessities of the work being done by Brethren Magan and Sutherland and their co-laborers at Madison, Tennessee, for the Lord has presented this matter clearly before me.

"Light had been given that a great work was to be done in and around Nashville. When these brethren were looking for a location for their school, they found the farm where the school is now established; The price was moderate, and the advantages were many. I was shown that the property should be secured for the school, and advised them to look no farther.

"The character of the work: The school at Madison not only educates in a knowledge of the Scriptures, but it gives a practical training that fits the student to go forth as a self-supporting missionary to the field to which he is called. In their work at Madison, Brethren Sutherland and Magan and their associates have borne trial nobly. The students have been taught to raise their own crops, to build their own houses, and to care wisely for cattle and poultry. They have been learning to become self-supporting, and a training more important than this they could not receive. Thus they have

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obtained a valuable education for usefulness in missionary fields.

"To this is added the knowledge of how to treat the sick and to care for the injured. This training for medical missionary work is one of the grandest objects for which any school can be established.

"The need for a sanitarium: There are many suffering from disease and injury, who, when relieved of pain, will be prepared to listen to the truth. Our Saviour was a mighty Healer. In His name there may be many miracles wrought in the South and in other fields, through the instrumentality of the trained medical missionary. It is essential that there shall be a sanitarium connected with the Madison school. The educational work at the school and the sanitarium can go forward hand in hand. The instruction given at the school will benefit the patients, and the instruction given to the sanitarium patients will be a blessing to the school.

"The value of an all-round education: The class of education given at the Madison school is such as will be accounted a treasure of great value by those who take up missionary work in foreign fields. If many more in other schools were receiving a similar training, we as a people would be a spectacle to the world, to angels, and to men. The message would be quickly carried to every country, and souls now in darkness would be brought to the light.

"It would have been pleasing to God if, while the Madison school has been doing its work, other such schools had been established in different parts of the Southern field. There is plenty of land lying waste in the South that might have been improved as the land about the Madison school has been improved. The time is soon coming when God's people, because of persecution, will be scattered in many countries. Those who have received an all-round education will have a great advantage wherever they are. The Lord reveals divine wisdom in thus leading His people to train all their faculties and capabilities for the work of disseminating truth.

"A call to self-denial: Every possible means should be devised to establish schools of the Madison order in various parts of the South; and those who lend their means and their influence to help this work, are aiding the cause of God. I am instructed to say to those who have means to spare: Help the work at Madison. You have no time to lose. Satan will soon rise up to create hindrances; let the work go forward while it may.

"Let us strengthen this company of educators to continue the good work in which they are engaged, and labor to encourage others to do a similar work. Then the light of truth will be carried in a simple and effective way, and a great work will be accomplished for the Master in a short time. When the Lord favors any of His servants with worldly advantages, it is that they may use those advantages for the benefit of others. We are to learn to be content with simple food and clothing, that we may save much means to invest in the work of the gospel.

"Our lack of self-denial, our refusal to see the necessities of the cause for this time, and to respond to them, call for repentance and humiliation before God. It is a sin for one who knows the truth of God to fold his hands and leave his work for another to do. The gospel of Christ calls for entire consecration. Let our church-members now arise to their responsibilities and privileges. Let them spend less on self-indulgence and needless adorning. The money thus expended is the Lord's, and is needed to do a sacred work in His cause. Educate the children to do missionary work, and to bring their offerings to God. Let us awake to the spiritual character of the work in which we are engaged. This is no time for weakness to be woven into our experience.

"The work at Madison not to be hindered: The workers at Madison have devised and planned and sacrificed in order to carry the school there on right lines, but the work has been greatly delayed. The Lord guided in the selection of the farm at Madison, and He desires it to be managed on right lines, that others, learning from the workers there, may take up a similar work, and conduct it in a like manner.

"In the work being done at the training-school for home and foreign missionary teachers in Madison, Tennessee, and in the small schools established by the teachers who have gone forth from Madison, we have an illustration of one way in which the message should be carried in many, many places.

"Brethren Sutherland and Magan should be encouraged to solicit means for the support of their work. It is the privilege of these brethren to receive gifts from any of the people whom the Lord impresses to help. They should have means–God's means with which to work. The Madison enterprise has been crippled in the past, but now it must go forward. If this work had been regarded in the right light, and had been given the help it needed, we should long ere this have had a prosperous work at Madison. Our people are to be encouraged to give of their means to this work which is preparing students in a sensible and creditable way to go forth into neglected fields to proclaim the soon coming of Christ.

"Now a modest sanitarium is being erected, and a more commodious school-building. These are necessary to carry on aright the work of education. In the past, Brethren Sutherland and Magan have used their tact and ability in raising means for the good of the cause as a whole. Now the time has come when these faithful workers should receive from their brethren, the Lords' stewards, the means that they need to carry on successfully the work of the Madison school and the little Madison sanitarium.

"I appeal to our brethren to whom the Lord has entrusted the talent of means: Will you not help the workers at Madison, who have been instrumental in raising means for many enterprises? As the Lord's messenger, I ask you to help the Madison school now. This is its time of need. The money

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which you possess is the Lord's entrusted capital. It should be held in readiness to answer the calls in places where the Lord has need of it.

"The necessities of the Madison school call for immediate help. Brethren, work while the day lasts; for the night cometh, when no man can work.

"May 25, 1908."

Note 1. Reprinted in 1986 in the *Madison Survey.*

Note 2. Letter (e-mail) from Tim Poirier, Vice Director, Ellen G. White Estate, Inc. (Silver Spring, Maryland). 2013. Jan. 2. "Contrary to the note that appears at the top of the page [in the 1986 *Madison Survey*], this 4-page appeal was not a part of *Special Testimonies,* Series B, No. 11. At least all of our original copies end with page 32 and do not include this appeal. The note refers to a 38-page edition, but this was a later reprinting of the pamphlet (either 1946 or 1958), in which the appeal was added by the Madison printers as an Appendix." Tim then gives the correct citation. It can also be found in "Pamphlet no. 119 in the Ellen White Writings CD-ROM and our online electronic database."

Note 3. Under the title "An Appeal for the Madison School," parts of this appeal were published during 1909 in several SDA periodicals; see www.adventistarchives.org. At that time the school's official name was "Nashville Agricultural and Normal Institute."

Note 4. This is the earliest document seen (Dec. 2013) that mentions Madison College. Address: St. Helena, California.

316. *Medical Evangelist* (*Loma Linda, California*). 1908. Testimonies and experiences connected with the Loma Linda sanitarium. 1(2):1-27. July. See p. 2-5.
• ***Summary:*** A long letter by Ellen G. White (p. 2) begins: "St. Helena, Cal., October 13, 1902. During my stay in Southern California, I was enabled to visit places that in the past have been presented to me by the Lord as suitable for the establishment of sanitariums and schools." After the letter is a commentary (not in quotation marks) by the editor of this periodical. It notes that while a sanitarium was developing at Paradise Valley, near San Diego, "an effort was being made to place the Los Angeles Vegetarian Cafe and treatment rooms in improved quarters, also to establish a sanitarium near Los Angeles." In a "few months the Glendale Sanitarium, its branch treatment rooms, and the Vegetarian Cafe in Los Angeles were all in good running order, thus proving that when the Lord bids us move forward in any line, it is not impossible to do so."

Note: Talk with Janice Little of Del E. Webb Memorial Library, Loma Linda Univ., California. 2004. June 9. This commentary clearly refers to Ellen White's letter of Oct. 1902. Thus, in late 1902 the search was on for a better location for the Vegetarian Cafe in Los Angeles.

317. *Naturopath and Herald of Health* (*The*) (*New York City*). 1908. A remarkable discovery. 9(9):269-71. Sept.
• ***Summary:*** "J.H. Kellogg, M.D., writes in the last issue of "Good Health" about: Masson of Geneva who, "in studying certain Bulgarian fermented milk preparations, discovered a new lactic acid forming ferment with superior properties. Prof. Metchnikoff of the Pasteur Institute who recognized the importance of this discovery. "Chronic autointoxication is unquestionably a factor in nearly all chronic disorders,..." "This new ferment in concentrated form is furnished in this country under the name of 'Yogurt'"

318. *Vegetarian Messenger* (*Manchester, England*). 1908. Home news–"Pitman" stores annual outing: A new departure. Sept. p. 252.
• ***Summary:*** From *Smethwick Telephone:* "The annual outing of the go-ahead firm took place on August 8th, the whole of the establishment being closed for the day. Employees and friends to the number of about fifty, journeyed in brakes [horse-drawn carriages] and by cycles [bicycles] from the Stores at about nine o'clock in the morning, Dodderhill Common, with its beautiful surroundings, being reached about noon. A cold vegetarian luncheon was served shortly after arrival. Mr. Tom Banks (president of the Birmingham Vegetarian Society) in a moving vote of thanks to their host and hostess (Mr. and Mrs. James Henry Cook), remarked on the pleasure it gave him for the fourth time to be present at the annual outing of the 'Pitman' Co. He believed that the firm had done much towards forwarding the Food Reform Movement, and he believed further... that with the new departure about to be inaugurated, much greater things would be done and still greater success achieved in the future. Mr. Cook... looked upon that day as a red letter day in the history of the firm. That morning the first sod was turned for their new premises, which when completed would be by far the most compact and up-to-date [but not the largest] health food factory in the kingdom. The building throughout would be lit up with electric light, and the whole of the ground floor premises, about 160 feet in length, would be laid from end to end with tram lines. The premises would have about three times their present accommodation., and will be built so that extensions can be made from time to time on the freehold land already acquired. While outside the City [of Birmingham], the land [at Aston] was just within the borough boundary, and could be reached by tram from the centre in a very few minutes."

Note: The largest health food factory in the UK was almost certainly that of the International Health Association (IHA), a Seventh-day Adventist organization, located at Stanborough Park, Watford, Herts. The IHA moved its factory from Birmingham to Stanborough Park in 1907.

319. Brook, Harry Ellington. 1908. Care of the body–Suggestions for preserving health. *Los Angeles Times.* Oct. 18. p. IM508. Sunday magazine.

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• ***Summary:*** "Benedict Lust, who has a spacious tract of land at Butler, New Jersey, which he calls 'Jungborn,' where the air and light and sun cures are practiced, by patients who go nude during a part of the day, in inclosures set apart for the purpose, writes to the editor of the Care of the Body that Wu Ting Fang, the Chinese Minister, who takes much interest in hygienic questions, and is a confirmed vegetarian, spent several days at Jungborn, and has ordered a special cottage, with a private park, to be fitted up for the next season.

"Since then Mr. Wu has spent a week at the big Battle Creek sanatorium [sic, sanitarium], as a guest of Dr. J.H. Kellogg. It was said to be an interesting sight to see him in his rich oriental robes, going through the dumb-bell drill and march. One evening he gave an address to the guests in the main parlor. He told them he hopes to reach 200 years. He said of all the things he had given up–meats, rich foods, coffee, wine and tea–the last-named was the most difficult to renounce, as is natural in the case of a Chinaman." Address: Staff writer.

320. Kellogg, J.H. 1908. Constipation: A lecture at the Sanitarium parlor, Battle Creek, Michigan, Thursday, December 3, 1908. 8:00 p.m. Battle Creek, Michigan. 22 p. 28 cm.
• ***Summary:*** This is the transcript of a one-hour lecture presented by Dr. Kellogg. In addition to constipation, he discusses the alimentary canal, human anatomy (stomach, liver, kidneys, appendix, gall bladder, colon, pancreas, lymph glands, mucous membrane) physiology, harmful and beneficial germs in the intestinal tract, surgical operations on the colon.

This archival document is found in the Bentley Historical Library, Univ. of Michigan: John Harvey Kellogg box 5–papers Notes & Articles 1908–Oct., Nov., Dec. Address: M.D., Battle Creek, Michigan.

321. Battle Creek Food Co. 1908. Healthful living: Fundamental facts about food and feeding. Battle Creek, Michigan. 64 p. *
• ***Summary:*** On the cover of this booklet is an illustration of a mother serving her family of three (husband, son, and daughter) seated around a dining table.

Several other undated editions were also published. Address: Battle Creek, Michigan.

322. Colcord, Anna L. (Mrs.). 1908. A friend in the kitchen: or What to cook and how to cook it. Containing 400 choice recipes carefully tested. 16th ed. Takoma Park Station, Washington, DC: Review and Herald Publishing Association. 112 p. Illust. Portrait. 20 cm.
• ***Summary:*** One chapter in this vegetarian cookbook, titled "Substitutes for meats," contains many Biblical quotations opposing meat eating. The recipes are based mostly on nuts, lentils and peas.

Another chapter, titled "Specially prepared health foods: Nuts, oils, etc.," gives recipes including: Peanut butter. Peanut cream. Peanut milk. Almond butter. Almond milk and cream. Cocoanut milk and cream. Home-made granola. Nutmeat. Protose steak. Protose cutlets. Nut gravy. Other chapters (p. 98-110) include "Simple dishes for the sick" (with recipes for Gluten gruel, Graham gruel, and Rice gruel), "Food for infants," "Remember the Sabbath Day to keep it holy," "Food combinations," "Time required to digest various foods" (Rice, apples, and granola take the least time, 1 hour; Roasted pork takes the longest, 5 hours and 15 minutes; animal foods generally take longer than foods of plant origin), "How to become a vegetarian," and "Vegetarianism in London."

A photo of the author, a Seventh-day Adventist, and her signature faces, the title page. Note: This is the second earliest U.S. document seen (March 1999) that mentions almond milk. Soy is not mentioned in this book. Address: USA.

323. Kellogg Food Co. 1908. Healthful living: An account of the Battle Creek Diet System. Battle Creek, Michigan. 72 p.
• ***Summary:*** The inside front cover, titled "A bit of history about the health food business in Battle Creek," states: "Thirty-five years ago Dr. J.H. Kellogg, the Superintendent of the Battle Creek Sanitarium, began the preparation of special food products, intended at that time for the use of the patients of the Sanitarium.

"The knowledge of their value grew. New foods were added from time to time as the idea developed. One of the first was a cereal coffee (1876). Later came the invention of Toasted Wheat Flakes (1895), and Toasted Corn Flakes (1901), then Toasted Rice Flakes and a long list of nut foods and other products.

"Dozens of food companies were organized in Battle Creek to manufacture toasted flakes, cereal coffees, and other foods. Millions were made and lost in exploiting the food ideas developed by Dr. Kellogg and the reputation acquired by Battle Creek as a headquarters for health foods and ideas.

"In order to protect the public against further imposition, a company has been organized and incorporated to manufacture and sell Dr. Kellogg's food products made after original and perfected formulæ, which will be known as The Kellogg Food Company, Battle Creek, Michigan."

The price list, near the back of this booklet, gives the prices for 126 foods–including various sizes. Among these are: Almond butter (1 lb can, $1.00), almond meal, Bran biscuit, Bromose, Diabetic gluten biscuits, Diabetic gluten meal, 40% gluten flour, Gluten meal, Granola, Meltose, Nut butter (1 lb can, $0.30), Nuttolene, Nuttose, olive oil, Peanut butter (large jar, $0.25; small jar, $0.10), Protose vegetable meat, Salted peanut butter (1 lb can, $0.25), Savora nut butter, Sterilized wheat bran, Taro gluten biscuit, Toasted corn flakes, Toasted rice flakes, Toasted rye flakes, Toasted

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wheat flakes, Vegetable gelatin, Wafer–whole wheat, Yogurt cheese, Zwieback.

On page 72 is a description of the company's "Peanut butter.–We were the originators of peanut butter, the use of which has become so widespread, and which is now manufactured by many concerns in different parts of the country. But we long ago abandoned the process of roasting the nuts, as we found this to produce harmful effects by setting free the oil and producing certain chemical changes in it. For years our peanut butter has been prepared by a wholly different process, by which the injurious effects referred to may be avoided. In this respect our Peanut Butter differs from all similar products. Prepared from choicest nuts. Put up in pound tins. Most excellent fat producer. Capital for use in sandwiches, for the preparation of salads and desserts. An excellent substitute for butter. Large glass jars, 25 cents; small glass jars, 10 cents.

"Salted Peanut Butter–Same as the preceding, but containing a certain proportion of salt. Pound tins, 25 cents.

"Nut butter–A combination of various nuts. An exceedingly palatable, toothsome vegetable fat which is readily accepted as a substitute for animal fats of all sorts. Pound, 30 cents."

Note 1. This is the earliest English-language document seen (Nov. 2003) that contains the term "vegetable meat" (or "vegetable meats"–with any combination of quotation marks).

Note 2. This is the earliest document seen (June 2002) showing interest by Seventh-day Adventists or Dr. John Harvey Kellogg in dietary fiber, or a high-fiber food product (Bran Biscuit, Sterilized Wheat Bran) sold by an Adventist food company. Dr. Kellogg was the founder and director of Battle Creek Foods. This is the earliest document seen (June 2002) that mentions bran in connection with Dr. John Harvey Kellogg. It is also the first commercial product seen with "Bran" in the product name. Address: Battle Creek, Michigan.

324. Kellogg, John Harvey. 1908. The Battle Creek Sanitarium system: History, organization, methods. Battle Creek, Michigan. 215 p. Illust. See p. 137, 207.

• ***Summary:*** Note: This book was written after the U.S. Circuit Court of Appeals ruled in July 1900 that Dr. Kellogg's company must stop using the words "Health Food Company" in its company name, since that term had been used continuously since 1875 by Frank Fuller of New Jersey. A careful reading of these text reveals a great deal.

The section titled "The original Sanitarium health foods" begins (p. 137): "All the so-called Sanitarium health foods are regularly found on the Sanitarium bill of fare, having been originally devised solely for this use. The character of these foods cannot be judged by the numerous imitations and piracies which are lauded by newspapers and signboard advertisements in terms not unlike those employed by the patent medicine vendor. The Battle Creek Sanitarium has no connection whatever with these questionable exploitations."

The section on "Sanitarium health foods" states (p. 207): "Various special foods were for some time manufactured and sold by a department organized for the purpose, but after the fire of 1902 the management disposed of all its interest in the manufacture and sale of foods to friendly parties, who it was believed would conduct the business in an honorable and ethical manner, precautions being taken to secure this. Through clerical oversights and trusting too much to advertising agents, some mistakes were made, the correction of which involved large losses and reorganization. At the present time all the foods which have originated in connection with the Battle Creek Sanitarium, and some of which have at various times been sold by the Battle Creek Sanitarium Food Department, the Battle Creek Sanitarium Health Food Company, the Battle Creek Sanitarium Food Company, the Battle Creek Sanitarium Company, Limited, and the Sanitas Nut Food Company, Limited, are now manufactured and sold exclusively by the Sanitas Food Company, who announce their products under the name of the 'Battle Creek Diet System,' the only food company doing business in Battle Creek whose products are used or recommended by the Sanitarium management.

"The Battle Creek Sanitarium has never at any time had any connection whatever with the manufacture of 'Postum,' 'Grape-Nuts,' 'Obesity Pills,' or any other of the numerous nostrums made or sold by parties advertising from Battle Creek."

The section titled "A public charity–No private interest–No sectarian affiliation" begins (p. 203): "The Battle Creek Sanitarium corporation is a private enterprise conceived and conducted solely for the public welfare. It has never been owned by any church or sect. For many years the institution was closely affiliated with the Seventh-day Adventist denomination because of the fact that the original founders and the contributing members were chiefly members of the denomination named; but the nonsectarian and undenominational character of the work was always fully acknowledged, and was clearly indicated by its charter. An attempt made in recent years by the central committee of the denomination named to bring the institution under denominational control resulted in so marked a failure that at the present time the institution is absolutely free from sectarian affiliation as well as control. The personnel is made up of Christian men and women of various denominations, but there is no church or sectarian control or affiliation."

At the front of this book, on the verso of the title page, are two quotations: (1) "Nature alone can cure; this is the highest law of practical medicine, and the one to which we must adhere... Nature creates and maintains; she must therefore be able to cure.–Dietl (1845)." Note: Joseph Dietl (1804-1878) was a medical reformer who belonged to the so-called New Vienna School of Medicine.

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(2) "Diseases are not entities that have entered into the body; they are not parasites that take root in the body; they merely show us the course of the vital processes under altered conditions.–Virchow (1847)." Note 2. Rudolf Ludwig K. Virchow (1821-1902) was a German doctor, who is referred to as the "Father of Pathology." He is perhaps best know for his saying that "every cell originates from another existing cell like it" which he published in 1858. It is a rejection of the concept of spontaneous generation, which held that organisms could arise from non-living matter. Address: M.D., Superintendent.

325. Battle Creek Foods. 1909. The only original health foods: A complete list of our products (Ad). *Good Health* (*Battle Creek, Michigan*) 44(3):Unpaginated. March.
• ***Summary:*** The company sells seven categories of products: 1. Cereals (15 products), incl. Toasted rice flakes, Granose flakes, Granola, Granuto, and Gluten meal (20 per cent, for gruels, mushes, and purees), Sterilized bran (a gentle laxative). 2. Bakery products (12 products), incl. Graham crackers (plain or sweetened), Sanitas wafers, Zwieback, Sanitas cookies. 3. Meat substitutes (10 products), incl. Protose (made of nuts and grains, ½- or 1-lb can), Savory Protose, Potted Protose, Protose roast, L-Protose (no nuts), K-Protose (resembles veal, no nuts), X-Protose (resembles chicken), Nuttose (made from nuts, 1 lb can), Nuttolene ("Made exclusively of choice edible nuts. A vegetable butter for table use").

4. Other nut products (5 products), incl. Peanut butter (1 lb can, unroasted), Salted peanut butter, Almond butter, Almond meal. 5. Condensed soups (4 products). 6. Savory sauces (3 products). 7. Beverages (3 products), incl. Malted nuts (large bottle), Noko (cereal coffee), Caramel cereal ("The original coffee substitute, containing no burnt molasses or artificial flavoring").

Note: This is the earliest English-language document seen (March 2005) that uses the term "vegetable butter" but not to refer to margarine. Address: Battle Creek, Michigan.

326. Howland, John A. 1909. The week's progress: New argument for vegetarians. *Chicago Daily Tribune*. Sept. 5. p. E4.
• ***Summary:*** "Dr. J.H. Kellogg of Battle Creek, Michigan, declares that the researches of Metchnikoff, Tissier, and others have shown that most chronic diseases may be directly traced to putrefaction processes in the intestines and the absorption into the blood of poisons thus formed, or intestinal autointoxication. He argues that vegetable proteins or tissue building foods less readily undergo putrefactive changes in the intestine, hence are less likely to become a source of poisoning to the body.

"Vegetable protein foods are free from toxins with which flesh foods abound..."

"Vegetable proteins are found in natural foodstuffs, are presented in a properly arranged bill of fare in the right proportions to supply the body needs, whereas proteins in the form of meats are in a highly concentrated form, and hence likely to be taken in great excess, giving rise to the enormous mischief which follows high protein foods as pointed out by Chittenden and Mendel of Yale [New Haven, Connecticut], and others, in recent years." Address: New York.

327. Kellogg, John Harvey. 1909. The Battle Creek Sanitarium diet list. Battle Creek, Michigan: Modern Medicine Publishing Co. Ltd. 71 p. 16 cm.
• ***Summary:*** A table on page 53 shows the "Number of food units or calories per ounce of various uncooked foodstuffs." Soja beans are said to contain the following: 38.4, fats 48.3, carbohydrates 33.5, total 120.2. Note: The units are not clear. The food with the highest total is almond meal (200.2). There are two types of Sanitas self-rising gluten flour. One with protein 20.0 and total 107.4, and another with protein 46.4, total 100.3.

One section titled "Disease-producing foods" (p. 58-59) discusses cane-sugar, fats (in excess), flesh foods, oysters and other shellfish, eggs, milk, condiments, tea, coffee, chocolate, cocoa, wine, beer, and all alcoholics [i.e. alcoholic beverages].

Note: This is the second earliest document seen (Nov. 2002) connected with Dr. John Harvey Kellogg that mentions soy beans [actually "Beans, Soja"]. Dr. Kellogg was born in 1852. Address: M.D., Superintendent, Battle Creek Sanitarium, Battle Creek, Michigan.

328. Loughborough, John Norton. 1909. The great second advent movement: Its rise and progress. Washington, DC: Review and Herald Publishing Assoc. xvii + 21-480 p. Illust. *
• ***Summary:*** A participant's view of the early history of the Seventh-day Adventist church.

329. Mill, Jean Oliver (Mrs. Mill). 1909. Reform cookery book: Up-to-date health cookery for the twentieth century. New and enlarged, 4th ed. Dundee, Scotland: J. Leng. 128 + [28] p. 19 cm. 1st ed. 1904 (Edinburgh, Menzies; 112 p.). 2nd ed. 1905. *
• ***Summary:*** Pages 44-46: "A few of 'Pitman' 1001 delicious health foods. In place of meat and free from its dangers. Brazose Meat–Made from Brazils. Quite different from all other nut meats... Per ½-lb tins, 10*d.* Vigar Brawn–The superb cold dish. Tokio Baked Beans, with tomato and nut sauce. Baked Beans, with tomato sauce. Curried beans, with savoury sauce. Vegetable soups–in 12 varieties. Nutmarto Potted Paste–Far superior to meat and fish pastes. Vigar Gravy Essence–Delicious flavour. Add but a few drops to water. One Penny Packet Health Wafers with two ripe bananas insure a perfect meal.

"All those interested in Health Foods and Perfect Health

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should read 'Pitman' Health, from Food Library, No. 1 to 8. One penny each, post free... Full catalogue of health foods, with 'Diet Guide,' post free one stamp. A wise selection of health foods will give you Perfect Health and Digestion, and so enable you to perform the maximum amount of work–both mental and physical–with the minimum amount of fatigue."

"'Pitman' Health Food Stores, 155 Aston Brook St., Birmingham [England]. (The largest health food dealers in the world)."

Page 66: "In addition to above, there are the products of the International Health Association [1899–Founded under the name The International Health Association Limited. 1926–Name changed to Granose Foods Limited], 'the pioneer manufacturers of health foods,' who have within the past year removed their works into the country (Stanborough Park, Watford, Herts). Then Messrs Winter, Birmingham, 'Pitman,' Birmingham, and Messrs Chapman, Liverpool, have a number of excellent nut meats, fuller reference and recipes for which will be found in the chapter on 'Health Food Specialties' at end of book."

Pages 215-16. "Nut meat preparations, whereby one can with very little contrive Nut meats for one's self. There are four different kinds–walnut, white, and brown almond (free from pea nuts), and another containing pea nuts... 'Pitman' Savoury Nut Meat bears a name which guarantees its excellence. It is free from pea nuts, and is put up in ½-lb., 1-lb., and 1½-lb. tins.

"Quite the biggest development of the last year or two are the nut meats manufactured by R. Winter, Birmingham, of 'Pure Fruit Fame.'" The products include: Nutton, and Legumon.

330. Sinclair, Upton; Williams, Michael. 1909. Good health and how we won it: With an account of the new hygiene. New York, NY: Frederick A. Stokes Co. [5] + 302 p. Illust. (with 16 full-page illustrations from photographs). Index. 20 cm.

• ***Summary:*** Contents: Introduction. 1. The battle of the blood. 2. How to eat: The gospel of dietetics according to Horace Fletcher. 3. The Yale experiments [New Haven, Connecticut]. 4. How digestion is accomplished. 5. How foods poison the body (advocates a vegetarian diet). 6. Some important food facts. 7. How often should we eat. 8. Health and the mind. 9. The case as to meat. 10. The case against stimulants. 11. Diet reform in the family. 12. Breathing and exercise. 13. Bathing and cleanliness. 14. A university of health. 15. Health reform and the Committee of One Hundred. Appendix.

Photos show: (1) The battle of the blood (White blood cells attacking two types of germs; Frontispiece). (2) Mr. Upton Sinclair and Mr. Michael Williams, resting from their favorite exercise, tennis. (3) "Mr. Horace Fletcher, whose books on dietetics and good health were the forerunners of the present movement." (4) Horace Fletcher making a world's record of weight lifting endurance in the Yale gym; he doubled the previous best record. (5) Prof. Russell H. Chittenden, Ph.D., LL.D., Sc.D., Director Sheffield Scientific School, Yale University. "He has conducted many dietary experiments from the physiologist's point of view." (6) Prof. Irving Fischer, Ph.D. Prof. of Economics at Yale Univ. "His investigations have had to do largely with the cost of necessary food." (7) Mr. John E. Granger breaking the world's record for deep knee bending. Observing are Mr. Alonzo A. Stagg (coach of the Chicago University football team) and Mr. Michael Williams.

(8) M. Elie Metchnikoff of the Pasteur Institute, Paris. He has studied auto-intoxication and "believes the normal life should be over 125 years long."

(9) Prof. Lafayette B. Mendel, Ph.D., Yale University. He has carried on researches with Prof. Chittenden. (10) Mr. Upton Sinclair's three children at the beach. "Well nourished on two meals a day." (11) Mr. Sinclair's children (2 more photos). (12) The daily swim. (13) Fresh air in Bermuda. (14) Outdoor exercise.

(15) Dr. J.H. Kellogg of the Battle Creek Sanitarium. (16) A group by the fireside at the Battle Creek Sanitarium with Dr. Kellogg.

The Introduction, by Sinclair, begins with this story: About 10 years ago, when he was a college student, he became sick for the first time in 14 years. He visited a doctor and said: "'Doctor, it has occurred to me that I would like to have someone who knows about the body examine me thoroughly and tell me how to live.'

"I can recall his look of perplexity. 'Was there anything the matter with you before this attack?' he asked. 'Nothing that I know if,' I answered; 'but I have often reflected that the way I am living cannot be perfect; and I want to get as much out of my body and mind as I can. I should like to know, for instance, just what are the proper things for me to eat -"

"'Nonsense,' he interrupted. 'You go right on and live as you have been living, and don't get to thinking about your health.'

"And so I went away and dismissed the idea... All doctors that I had ever heard of were people who cured you when you were sick; to ask one to take you when you were well and to help you to stay well, was to take an unfair advantage of the profession.'" Over the years he visited the doctor several times, and each time the doctor gave him a another kind of medicine to cover up his symptoms. It was first in Battle Creek, Michigan, that he found a large, modern and entirely new type of hospital with "more than a thousand nurses, physicians, and helpers, all devoting their time to the teaching of the new art of keeping well." Slowly but surely he "found the road to permanent health."

A review in Nature: "A new sort of health book, giving in condensed form the theories of Fletcher, Metchnikoff, Kellogg and others. 16 full page illustrations. Price, $1.35."

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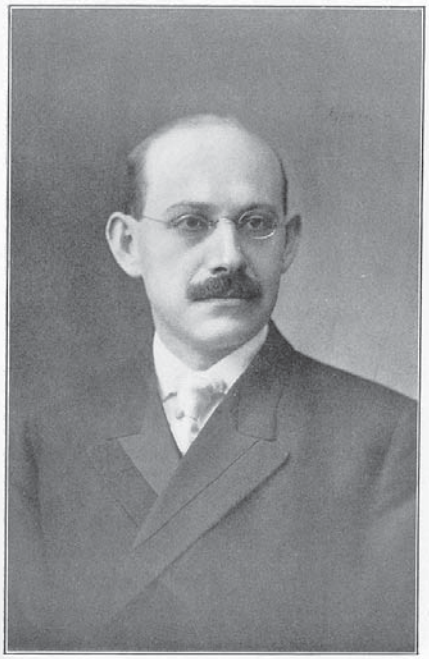
M. Elie Metchnikoff, of the Pasteur Institute of Paris.
His researches have thrown great light on auto-intoxication. He believes that the normal life should be over 125 years long.



Prof. Lafayette B. Mendel, Ph.D., Yale University,
Who has carried on researches in conjunction with Prof. Chittenden.

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M. Elie Metchnikoff, of the Pasteur Institute of Paris.
His researches have thrown great light on auto-intoxication. He believes that the normal life should be over 125 years long.

It might be introduced into Tasmania with advantage, and in a calcareous soil would prove a source of great profit to the grower. The Wahroonga variety of Soy bean takes less time to cook and is also more tender when cooked than that imported direct from Japan. It is far more digestible than any other kind of bean."

Note 1. In 1910 Wahroonga was a suburb of Sydney; it would have included some small, semi-rural market-gardening areas that provided vegetables for the city dwellers. The word "extensively" above probably means that small plots of soybeans were being grown in market gardens around towns and settlements in NSW. As of 2005 Sanitarium Food Reform Co. has been renamed Sanitarium Health Food Co. and is a thriving maker of health foods, breakfast cereals, meat alternatives, soymilk, etc.

"While the writer feels some satisfaction in the thought that more than 20 years ago [i.e., before April 1890], in the columns of a Melbourne journal, he was the first to call attention to the great merits of this most remarkable bean, and to advocate its introduction into Australia, he feels somewhat depressed at the fact that it has taken so many years to (?) its cultivation on and its adoption and recognition as an article of food. As a rule it may be assumed that it will take a generation to effect any great (?) reform. But we shall meat, together with an intense craving for stimulants [e.g., alcohol], is wholly unknown to vegetarians, and this is why, in London, the numerous vegetarian restaurants are thronged by bankers and brainy business men at the time of the midday meal.

"It is worthy of notice that the ox gives back in his meat only some of the food derived by him from the grass, retaining the balance to form his teeth, horns, hoofs and hide. So that, at best, man loses some of the best nutriment when he uses meat as food. In addition to this, in the venous blood of the animal are to be found poisonous and effete material, waste tissue, cadaveric alkaloids, and even parasites and disease-germs, wholly absent from vegetables and fruit. It is a rare thing for vegetarians to suffer from anaemia, though it must be supposed that even a diet so rich in all the elements the blood requires will of itself secure immunity from this and other diseases if other hygienic conditions are absent. A vegetarian diet is not a panacea, although those who adopt it suffer far less from all complaints than their meat-eating brothers and sisters. If a vegetarian lady, 'cumbered with much serving,' and beset with a multitude of household duties, keeps all day indoors and does not go out enough to exercise in direct sunlight and fresh air–and most women have too little of these–she will very likely become anaemic,

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like her meat-eating sister, but this is not because of her vegetarian diet, but in spite of it. Still, she will not suffer so badly, or become so 'run down,' as that meat-eating sister, and she will, moreover, make a much more rapid recovery from all her ailments.

"It is also quite possible for a vegetarian to eat too much nitrogenous food, and to suffer from consequent indigestion. Still, the diet is not responsible for a man's gluttony if he will eat to much, and will live to eat rather than live to eat. Temperance in eating is almost as essential as temperance in drinking. Here it may be added that a moderate and well-chose vegetarian diet is a certain cure for drunkenness, since the craving for intoxicants is mainly induced by the inflammatory state of the stomach caused by flesh-eating. Vegetable food is so nourishing and sustaining that a vegetarian can better afford to go without a meal than can a meat-eater. Indeed, the experience of the writer has been that for prolonged muscular and mental work there is nothing to compare with a judiciously-selected fruit and vegetable diet. The ancient Spartan and Roman athletes disdained meat. They lived on barley-cakes, olive oil, and black lentil soup. The canny and energetic Scotchman is virtually a vegetarian. The miners of Chili [Chile] are wont to ascend a perpendicular ladder with 2 cwt [1 cwt = hundredweight = 112 pounds] on their backs, and they do this all day long on a meal of beans and vegetables and fruit.

"The writer is of [the] opinion that after the age of three years milk should not be taken by human beings. It clogs his stomach, makes his brain sluggish and stupid, and in the stomach gives rise to lactic acid complications. Hence it should never be forced upon children over three years of age who have come of gouty or rheumatic parents. As a rule, such children have a natural detestation of it and a great aversion to it. Cow's milk is an abomination that ought never to be taken. It is an unnatural thing for a human being that has cut its teeth, and ought to eat solid food, to drink the milk of a brute! The human stomach resents it!"

The writer then discusses: Suitable foods for vegetarians. The benefits of eating two meals a day. The importance of understanding the "elements of nutrition" contained in each food to maintain one's proper weight and good health, the ability of a given area of land to support 6 times as many vegetarians as meat-eaters, the need to divide large Tasmanian land holdings into small plots of orchards and kitchen gardens, the sustaining and invigorating power of a non-flesh diet, the overall physical, mental, and moral effects of a vegetarian diet, and the need to abolish abattoirs or slaughter houses.

"It is not sufficiently understood that a vegetarian has far higher motives that the gratification of his palate and the satisfaction of his appetite. He regards all life as sacred, and the taking of innocent animal life as a monstrous crime, both against the animal and its right to live, and against the moral development of society at large. He regards his Creator as the Creator and Father of every living thing. When his last hour comes the vegetarian will be able calmly to meet his Heavenly Father–the Father also of every poor dumb animal–with the happy though humble consciousness that he has neither knowingly caused the infliction of pain or death, nor connived in their infliction by others upon an innocent animal. There is sound sense in the lines: -

"'He prayeth best who loveth best
All things both great and small;
For the dear God who loveth us,
He made and loveth all.'"

Source of poem: "Rime of the Ancient Mariner," by Samuel Taylor Coleridge (1798; Part VII, stanza 23). Coleridge lived 1772-1834

Note 2. This is the earliest document seen (May 2005) concerning soy beans in connection with (but not yet in) Tasmania.

Note 3. The author may have been a Seventh-day Adventist, since he states that soybeans have been grown in the Sanitarium gardens at Wahroonga, New South Wales. If he was an Adventist, this would be the earliest article seen on soybeans written by a Seventh-day Adventist. Address: Tasmania.

335. Fulton, Edwin Giles. 1910. Vegetarian cook-book: Substitutes for flesh foods. Mountain View, California, Kansas City, Missouri, and Portland, Oregon: Pacific Press Publishing Association. 419 p. Illust. Semi-index. 20 cm.
• ***Summary:*** This Seventh-day Adventist cookbook was first published in 1904 under the title *Substitutes for Flesh Foods.* In the long chapter on "Entrees" (p. 35-94), many recipes call for meat alternatives, such as Nuttolene, Protose, and "nut cero"–but with no recipe given for making the latter.

In the chapter on "Sandwiches," are two recipes (p. 301-02) which could be considered precursors of the veggie burger. The first, "Nut cero sandwiches," is a lettuce and sliced tomato sandwich, with nut cero serving in place of the burger.

On p. 260 are two recipes with "Granola" in the title. In Granola Porridge, the first ingredient is "Granola or fruit nuts, 1 cup." The meaning of "fruit nuts" is unclear. The second is Gluten-Granola Mush.

The sub-chapter titled "Nut butter" (p. 309-13) states: "Nut butter is easily made in the home... Peanuts and almonds are the nuts most suitable for making nut butter. The other varieties are difficult to blanch... The best variety of peanuts for making nut butter is the Spanish shelled... There are three ways of cooking them; namely baking or roasting, boiling, and steaming. The baking process is the easiest way, but care should be used not to scorch them..." Two processes / recipes for homemade peanut butter are given, followed by Almond butter, Peanut meal, Nut cream (alternative to dairy cream made by mixing 2 tablespoons peanut butter with 1 pint hot water and 1 teaspoon salt), Crystallized peanuts,

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Salted peanuts, and Blanched almonds.

The author was born in 1867; his portrait photo faces the title page, with the inscription "Yours for health," and his signature, A slightly revised edition with the same number of pages was published later in 1910.

336. Kellogg, Ella Ervilla Eaton. 1910. Science in the kitchen: A scientific treatise on food substances and their dietetic properties, together with a practical explanation of the principles of healthful cookery; a thousand choice, palatable, and wholesome recipes. Revised and enlarged edition. Battle Creek, Michigan: The Good Health Publishing Co. 508 p. Illust. 23 cm. *

• ***Summary:*** In the last edition of this book, the wife of the famous Dr. John Harvey Kellogg discusses the principles and methods of the vegetarian system employed at the Battle Creek Sanitarium. Address: Battle Creek, Michigan.

337. *Los Angeles Times.* 1911. Reaper takes noted elder: Miles Grant, Adventist, answers summons. Veteran preacher had passed his ninety first year–For a half century he never tasted meat and never ate a meal prepared by any hands but his own. March 25. p. II7.

• ***Summary:*** "A swing of the reaper's scythe yesterday gathered in Elder Miles Grant, veteran Adventist clergyman and many years a vegetarian, formerly of Boston" [Massachusetts]. He was born on 13 Dec. 1819 in Farrington, Connecticut. "For the last fifty years he had never tasted meat in any form..." He did use raw eggs and milk, plus "grain foods, cheese, raisins, nuts and fresh fruit. These he ate but twice a day and after adopting this diet he became possessed of almost perfect health, and almost to the last retained his mental and physical vigor." He died of uremic poisoning.

"The funeral will be held in the Advent Christian Church on North Avenue Twenty-two."

338. Bugby, William. 1911. Soy beans as human food. *Vegetarian Messenger and Health Review* (*Manchester, England*). March. p. 83-84 (Series 8, 63d year). Reprinted from the Daily Post (Australia). [2 ref]

• ***Summary:*** "For some time past there has been a growing demand for a substitute for animal food that should be at once palatable, nutritious, and digestible, as well as easily cooked and moderate in price. Such an article of diet is furnished in the Soya, Soja, or Soy bean of China and Japan...

"In an article on 'A Vegetarian's Experiences,' in this paper, some months ago, by the present writer, a very brief account of this remarkable bean was given" accompanied by a table showing the nutritional composition of two soy bean samples compared with peas, lean beef, and fat mutton. The soy beans are much higher in protein, containing 34.0 to 38.8%.

The soy bean "has greatly improved in quality and flavor since its introduction to Australia; the beans produced at the [Seventh-day Adventist] Sanitarium gardens at Wahroonga, New South Wales, have also thinner skins, and are consequently much more easily cooked.

"The present writer does not pretend to be a gardener, but since his former article appeared, he himself has succeeded in growing the Soy bean in Tasmania. Although sown as late as October 24th, the beans survived a very sudden and severe frost, just after they had appeared above the ground. The plants are doing remarkably well, and are now developing rapidly. They evidently find the Tasmanian climate highly favorable to them. The beans thus sown came originally from the Wahroonga Sanitarium in New South Wales.

"The true economy, therefore–quite apart from the moral advantage of a non-flesh diet–is to use the Soy bean itself direct, as a perfect and superior substitute for flesh meat.

"As the writer is frequently asked how the Soy bean should be cooked, the recipe is here given:–Take a large breakfast cupful of Soy beans, place them in a basin, over them pour enough boiling water to cover them, and leave them to soak for one hour. Then boil gently for 2 hours. Like other beans they require flavouring with salt, mint, celery seed, mushroom ketchup, tomato sauce, or a slice of onion."

Note 1. This is the earliest document seen (May 2005) concerning soybeans in Tasmania or the cultivation of soybeans in Tasmania.

Note 2. This is the earliest English-language document seen (April 2008) with the term "human food" in the title, referring to soy beans. Address: Tasmania.

339. Kellogg, John Harvey. 1911. Food product. *U.S. Patent* 1,001,150. Aug. 22. 2 p. Application filed 19 Oct. 1908.

• ***Summary:*** This meat substitute is made from 3 parts each wet casein and wet wheat gluten, 3 parts vegetable oil (such as corn or nut oil, optional), plus yeast products from waste brewery yeast (either concentrated yeast extract or crude yeast product). After the ingredients are mixed and cooked in cans, the product has a meaty consistency and flavor, making it a "very satisfactory substitute for flesh foods. It is very nourishing and may be used in a great variety of ways." Address: M.D., Battle Creek, Calhoun County, Michigan.

340. Kellogg, John Harvey. 1911. Vegetable vs. animal protein. *Good Health* (*Battle Creek, Michigan*) 46(8):680. Aug. [1 ref]

• ***Summary:*** The editor of *Scientific American*, in an article about producing wheat that contains a larger proportion of protein, notes that vegetable gluten costs less than one-twelfth as much as animal "gluten" (i.e., beef protein). Address: M.D.

341. Kellogg, John Harvey. 1911. Vegetarian societies in

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China. *Good Health* (*Battle Creek, Michigan*) 46(8):679. Aug.
• ***Summary:*** "Dr. Tucker, of North China, states that there are in existence all through China vegetarian societies known as *tsiali*. These people eat no meat on any occasion. They are quite numerous, perhaps five per cent of the entire population... The people of North China eat very little meat. As a rule, meat is eaten only on three occasions: weddings, funerals, and Chinese New Year, which occurs in January or February. A pound of meat costs in China as much as a day's wage. The average wage is five cents a day."

"The above statements are true with reference to nine-tenths of the entire population. The other one-tenth, the official class, eat more meat. The principal food of the Chinaman is millet with a little salt, turnip or cabbage. They put no salt in their food but eat the salt in the form of dried salt vegetable. The wealthy class eat peanuts as a relish." Address: M.D.

342. Nashville Sanitarium–Food Factory. 1911. High grade health foods (Ad). *Naturopath and Herald of Health* (*The*) (*New York City*) 16(12):Unnumbered page. Dec.
• ***Summary:*** "Made by expert bakers, from best selected materials, in a well-ventilated hygienic factory away out in the country, surrounded by farms and pure fresh air. Made by men who do things from principle.

"Contain no animal fat. Full line of nut foods, cereal foods... More than twenty-five kinds. Nutfoda is the great vegetable meat, pure, wholesome, delicious, a perfect meat substitute at 10, 15 and 25¢. for ½ lb., 1 lb and 2¼ lb. cans.

"Nutkysa–similar to cheese, 1 lb. can–$0.15.

"Nashville Malted Nuts, 1 lb. jar–$0.35...

"Baked Beans, Tomato or Plain, 1½ lb. can–$0.10. Note: It is possible, but unlikely, that these baked beans are soybeans.

"Cereal Coffee, Superb, 1 lb. pkg.–$0.10...

"Dixie Kernel (a Malted Breakfast Food) 1¼ lb. pkg.–$0.15.

"20 per cent Gluten Meal, Well Cooked, 1 lb. pkg.–$0.12."

"On sale at Naturopathic Supplies Store, 465 Lexington Ave., New York, N.Y." Address: Nashville, Tennessee.

343. Anderson, Hans Steele. 1911. Food and cookery, their relation to health. Revised ed. Loma Linda, California: The College Press. 82 p. Illust. 18 cm. *
• ***Summary:*** The author was born in 1877.

344. Encyclopaedia Britannica (11th ed): Vegetarianism. 1911. Cambridge, England, and New York: Encyclopaedia Britannica. See vol. 27, p. 967-68. [7 ref]
• ***Summary:*** The word "vegetarianism" came into use in about 1847, and refers to "the practice of living upon foods from which fish, flesh and fowl are excluded." "... while vegetarian societies claim as 'vegetarians' all who abstain from flesh foods, there is a large and growing number of people who repudiate the name of 'vegetarian' because of its associations, but who none the less... abstain from eating anything that has been killed. The order of the Golden Age, for example, with its headquarters at Barcombe Hall, Paignton, South Devon, adopted the words 'Fruitarian' and 'Fruitarianism' to denote the dietary of its members. The rule laid down by the Order is abstinence so far as possible from all foods which are obtained by the cruel infliction of pain, and the minimum that is set is complete 'abstinence from flesh and fowl,' while net-caught fish may be used by associate members."

Note: This is the earliest English-language document seen (April 2005) that contains the word "fruitarianism."

The reasons advanced for the practice of vegetarianism are: health, economy, racial improvement (more workers are required to grow crops than to feed animals), and character improvement (encourages gentle humaneness).

"Organizations have been established to advocate this method of living under the name of 'Vegetarian Societies' in many countries–chiefly the United Kingdom, America, Germany, France, Austria, Holland and Australia. Propagandism is carried on by lectures, literature, cookery demonstrations and restaurants. In England, the oldest and one of the most important societies is 'The Vegetarian Society,' of which the headquarters are at Oxford Street, Manchester. There are also several small London societies, and an active London Association. A few provincial towns, too, have small societies. An attempt has been made to organize the various vegetarian societies of the world under the title of 'The Vegetarian Federal Union.' The headquarters of the London societies and of the 'Union' are at Memorial Hall, Farringdon Street, E.C...

"The athletic side of the movement has been represented in national and international races by vegetarians winning the Berlin and Dresden walking match (125 m.), the Carwardine Cup (100 m.) and Dibble Shield (6 hours) cycling races (1901 and 1902), the amateur championship of England in racquets and in tennis (held by Mr Eustace Miles for a series of years), the cycling championship of India (3 years), half-mile running championship of Scotland (1896), world's amateur cycle records for all times from 4 hours to 13 hours (1902), 100 miles championship Yorkshire Road Club (1899, 1901).

"In the religious world the Seventh-Day Adventists (who are connected with many sanatoria and the manufacture of food specialties) and some Bible Christians, the worshippers of Vishnu and the Swami Narang and Vishnoi sects, amongst others, preach abstinence from flesh food. The Salvation Army, the Tolstoyans and the Doukhobors encourage it. A number of orders in the Roman Catholic church (e.g. the Trappists) and in the Hindu faith (e.g. the Dadupanthi Sadus) are pledged abstainers...

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"The literature on the subject is considerable, but the two classics are perhaps *The Ethics of Diet*, by Howard Williams, and *The Perfect Way in Diet*, by Dr. Anna Kingsford. In former years the 'Vegetarian Society' was the most active in producing literature, but since about 1901 the Order of the Golden Age has come to the front with new and up-to-date books, booklets and leaflets, and the Ideal Publishing Union has reprinted much of the earlier literature. The chief periodicals are the *Vegetarian* (weekly), the *Herald of the Golden Age* (monthly), the *Vegetarian Messenger* (monthly), the *Vegetarian* (American monthly), the *Children's Garden* (monthly)."

345. Marcuse, Julian; Woerner, Bernardine. 1911. Die fleischlose Kueche: Eine theoretische Einleitung und ein praktisches Kochbuch [Vegetarian cookery: A theoretical introduction and a practical cookbook]. Munich, Germany: Ernst Reinhardt. 2 + 552 p. Index. 21 cm. [Ger]
• ***Summary:*** Dr. Marcuse was born in 1862. The 3-part introduction by Dr. Marcuse discusses: The significance of a flesh-less [*fleischlosen*] diet for human nutrition. The practice of flesh-less cookery. Comparative summary of the main animal and vegetable food products. This is followed by recipes. In the back are some advertisements: (1) Nuxo foods made from nuts by Nuxo-Werke, Rothfritz & Co., Hamburg; (2) Protose, Vegetabilischer Aufschnitt (vegetable cutlet), Nuttolin, Granola, Granoseflocken and Bromose, from the Deutscher Verein für Gesundheitspflege, Friedensau Nr. 60 (Post Grabow, Bez. Magdeburg). This looks like a Seventh-day Adventist company with a health food factory in Germany.

There is a directory of Vegetarian eating houses, restaurants, and boarding houses (Pensionen) in Germany, and other nearby German-speaking countries (mostly Switzerland and Austria). Address: 1. Doctor of medicine.

346. *Evening Post* (*Wellington, New Zealand*). 1912. Sanitarium health food cafe. May 10. p. 8.
• ***Summary:*** "About six or seven years ago a cafe was opened in Willis-street by the Sanitarium Health Food Company. Later it was shifted to Manners-street, and owing to a fire the cafe is again located in Willis-street, in Shortt's Building. The change made is certainly a very advantageous one–a new building with a bright, cheery outlook, instead of one of the oldest places in Wellington. There are twelve tables in the room with ample seating accommodation for fifty people.

"The cafe is owned by the Sanitarium Health Food Company, whose headquarters are in Sydney [Australia], with a manufactory at Cooranbong, 80 miles from the city, and another manufactory in Christchurch [New Zealand]. The latter is likely to be shifted to Wellington, and placed under the manager of the cafe here. As considerable misunderstanding exists as to what constitutes a cereal-vegetable [vegetarian] diet, it may be stated that there are half-a-dozen classes of biscuits, a dozen kinds of green goods, six varieties of beans and two of lentils, and, generally, all vegetables and fruits in season.

"Olive-oil is imported from Italy, best selected raisins from California, unfermented wine from California and New South Wales, and clover honey is obtained from local apiaries. Amongst the many special foods for invalids are gluten flour and biscuits, and Soya beans for diabetic patients: it is stated that this bean is rich in gluten. Whilst the principal aim of the Sanitarium Health Food Cafe is to cater for those in health, it is claimed that indigestion and many forms of stomach trouble can be eradicated by the adoption of the food served up at the cafe, or by buying the ingredients and cooking them at home. The object is to endeavour to educate the public to live on what is regarded as a higher quality of food for mental or physical work."

347. *Good Health* (*Battle Creek, Michigan*). 1912. Vegetable protein not inferior to animal protein as a nutrient. 47(7):347-49. July.
Address: M.D.

348. *Good Health* (*Battle Creek, Michigan*). 1912. Rejuvenating effects of a vegetarian diet. 47(8):428-29. Aug.
• ***Summary:*** Contains six stories of such rejuvenating effects: The first: "Sir Walter Scott tells of a certain Doctor Ferguson, of Edinburgh [Scotland], who became a flesh abstainer at sixty, after he had suffered a number of strokes of paralysis. By abstemious living he recovered entirely from all paralytic symptoms, and after having attained his eightieth year still possessed a considerable degree of strength and vigor. He lived to the advanced age or 93."

Note 1. This is the earliest document seen (June 2002) concerning a vegetarian diet and relief from cardiovascular disease (stroke, in this case).

Note 2. This is the earliest English-language document seen (Jan. 2004) that uses the term "flesh abstainer" to refer to a vegetarian–one who eats no red meat, poultry, or fish.

349. *Good Health* (*Battle Creek, Michigan*). 1912. Constipation: Simple remedies for its removal. 47(12):609-29. Dec. [1 ref]
• ***Summary:*** This is the third in a series of three articles on the nature, causes, and treatment of constipation. The two previous articles showed that constipation is largely the result of wrong habits of living. The most frequent cause is a concentrated diet–that is, a diet lacking in bulk–together with food that readily decomposes, such as meat products.

Discusses: Regulation of diet, exercises to treat constipation, proper sleeping posture, simple water treatment and enemas, use of electricity, kneading the abdomen, conclusion.

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350. **Product Name:** 20% Gluten Meal, 40% Gluten, 80% Gluten, Avena-Gluten Biscuit Mixture (made from oatmeal and wheat gluten), 40% Gluten Biscuit, 80% Gluten Biscuit, Breakfast Toast.
Manufacturer's Name: Kellogg Food Co. (The).
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1912.
New Product–Documentation: J.P. Street. 1913. Connecticut Agric. Exp. Station, Annual Report 36:107-11. For the year 1912. "Gluten and Special Foods." The protein and starch content of these diabetic foods is as follows: (1) Gluten Meal (27.50% protein, 49.64% starch); (2) 40% Gluten (47.00% protein, 31.86% starch); (3) 80% Gluten (81.25% protein, 6.21% starch); (4) Avena-Gluten Biscuit Mixture (21.38% protein, 41.13% starch; made from oatmeal and wheat gluten); (5) 40% Gluten Biscuit (47.50% protein, 35.01% starch); (6) 80% Gluten Biscuit (82.38% protein, 4.68% starch); (7) Breakfast Toast (13.63% protein, 57.42% starch).

Note: These are the earliest products seen, made by a Seventh-day Adventist food company or by Dr. John Harvey Kellogg, that contain gluten.

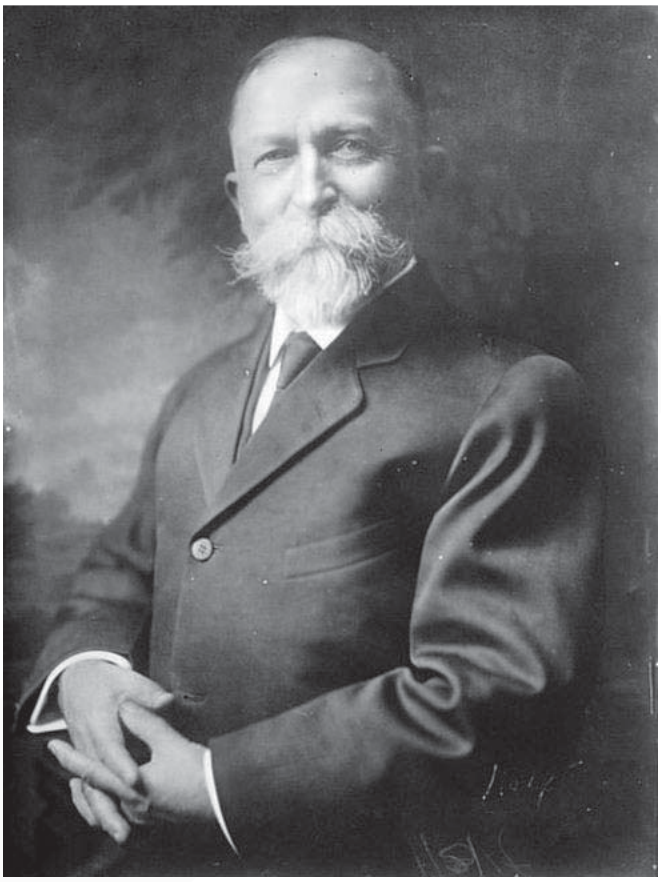
351. Portrait of Dr. John Harvey Kellogg (Photograph). 1912.
• ***Summary:*** This portrait photo from the Library of Congress is dated 1912-1915. He was born in 1852. We copied it from the Wikipedia page for John Harvey Kellogg.

352. Kellogg Food Co. 1913. Constipation: Fight it (Ad). *Good Health* (*Battle Creek, Michigan*) 48(6):8-9. June.
• ***Summary:*** Ninety percent of Americans are victims of constipation. "The use of salts, pills, cathartics and mineral waters is a constant menace to the health. Drugs do not cure: They afford only temporary relief and aggravate the trouble in the end. Medical laxatives of all sorts afford relief only by irritating the intestine and sooner or later produce disastrous results..."

"A new drugless remedy: The food experts of the Battle Creek Sanitarium have after years of research perfected a wonderful remedy for constipation known as Para-lax." A major ingredient is "a refined product of Russian mineral oil." Address: Battle Creek, Michigan.

353. Kellogg, J.H. 1913. Constipation–How to fight it. Battle Creek, Michigan: Good Health Publishing Co. 80 p. 16 cm.
• ***Summary:*** Dr. Kellogg discusses: Cellulose (p. 32), and bran (p. 61). Note: This fragile small book (perfect bound and stapled) is owned by the Bentley Historical Library, University of Michigan, Ann Arbor. Address: M.D., Battle Creek, Michigan.

354. Cooper, Lenna Frances. 1913. The new cookery: A book of recipes, most of which are in use at the Battle Creek



Sanitarium. Battle Creek, Michigan: The Good Health Publishing Co. [v] + 298 p. Illust. (10 photos). Index. 20 cm.
• ***Summary:*** This Seventh-day Adventist vegetarian cookbook, the first by Lenna F. Cooper, advocates a "low-protein" diet based on the research of Prof. R.H. Chittenden, dean of physiology, Yale University [New Haven, Connecticut]. It uses dairy products and eggs, but no meat, poultry, fish, shellfish or stimulants (such as coffee or tea).

The Foreword states: "Many 'food reformers' and faddists have attempted to prepare wholesome foods but have neglected the almost equally important requirement–palatability. This combination of wholesomely prepared and palatable foods constitutes in a sense a New Cookery... which has for its object, efficiency of body and mind." She thanks "Dr. and Mrs. J.H. Kellogg, who first inspired her with a love for the study of foods and their scientific preparation and who have since been constant sources of help and encouragement." She also thanks Miss Clara B. Lambert and Mrs. Estella F. Ritter.

Recipes call for the use of Minute Brew (p. 10), cereal coffee (p. 10), Kaffir tea (p. 11), Sanitas / Health Koko (p. 11), yogurt buttermilk (p. 11-13), bran (p. 18), Graham flour (p. 20), Good Health Breakfast Food (Brose, p. 20), gluten (p. 20), granola (p. 22), fermented breads (p. 23+), Graham bread (p. 26-28), unfermented breads (p. 33+), bran and Graham biscuit (p. 41), bran gems (p. 43-44), peanut butter

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sandwiches (p. 49), Protose (p. 49, 71, 77, 79), cream soups made with almonds, lentils, white beans, lima beans, or split peas (p. 63-66), Savora (p. 73-74, 78-79).

Chapter 10, titled "Meat substitutes and entrees," begins (p. 81): "In many homes, meat forms the chief part of the meals,..." but this book calls for a "meatless dietary," which requires a "knowledge of the chemistry of foods." Recipes (p. 81-103): Roast Protose [canned] with dressing. Boiled Protose. Protose fillet. Nut fillet (with Protose and Nuttolene). Fillet of nut meat. Panned Protose. Nut or Protose cutlets. Braised Protose. Nut and apple pie. Normandy or mock veal loaf. Chipped Protose in cream. Nut and rice croquettes. Protose hash with rice and peas. Nut sausage (p. 87; with ¼ lb Protose, seasoned with "2 tablespoons Japanese soy [sauce] or 4 teaspoons Savora"). Nut and vegetable stew (with Protose). Protose steak with onions. Broiled Nuttolene. Nuttolene with mint sauce. Nuttolene cutlets. Nuttolene a la cream. Baked Nuttolene. Nuttolene fricassee. Nuttolene croquettes. Nut meat pie (with Protose). Pressed vegetable meat (with Protose). Rice a la Carolina (with Protose). Nut meat loaf (with Protose and Nuttolene). Vegetarian ham (with Nuttolene and Savora). Nut patties. Nut chops (with peanut butter). Pine nut roast. Peanut roast (with peanut butter). Walnut roast. Cereal roast (with granola). Chestnut roast. Creamed chestnuts. Chestnuts with tomato sauce. Baked beans (with white beans). Baked lima beans. Lima bean loaf. Bean croquettes. Bean souffle. Savory roast or mock turkey (with lentils and granola). Peas patties. Baked lentils. Lentil and potato loaf. Hominy croquettes. Corn roast. Apple fritters. Prune fritters. Banana fritters. Rice patties.

Chapter titles: 12 Eggs. 15. Salads and relishes (incl. Neufchatel or yogurt cheese, p. 168, 176. Salad dressings, p. 172+). 17. Fruits and fruit desserts (incl. Baked apples with Meltose dressing, p. 186. Vegetable gelatine desserts, p. 195+). 19. Frozen desserts (incl. Yogurt buttermilk ice cream, p. 215). 20. Pastry and pies (most desserts call for lots of white or granulated sugar). 21. Cakes. 22. Cake fillings and icings [icing, frosting]. 23. Hot puddings. 24. Sauces for puddings. 25. Canning and preserving. 26. Invalid dishes. 27. Balanced menus (breakfast, dinner, supper). Lenna F. Cooper was born in 1875.

After the Index (p. 288-98) are advertisements: Perfection Biscuit Co. The Welch Grape Juice Co. Horlick's Malted Milk Co. Winorr Canning Co. (Winorr Kerneled Corn). Acme Preserve Co. (White A Condensed Tomatoes). Garis-Cochrane Household Dish-Washing Machine (motorized). Sprague, Warner & Co. (Richlieu Food Products). A.-B. Stove Co. (gas range). Wagner Manufacturing Co. (cast aluminum ware). The Kellogg Food Co. ("Protose: A vegetable meat." Minute Brew. Colax {relief from constipation}). McGraw Mfg. Co. (Servette [Lazy Susan]). Battle Creek Sanitarium School of Home Economics. National Onion Salt Co. American Thermos Bottle Co. Seely Fasco Fireless Cooker. Address: Director of the Battle Creek Sanitarium School of Home Economics, Head Dietitian of the Battle Creek Sanitarium.

355. Street, John Phillips. 1913. Gluten and special foods. *Connecticut Agricultural Experiment Station, Annual Report* 36:107-11. For the year ending Oct. 31, 1912.
• ***Summary:*** "Eleven samples of gluten foods and similar preparations were examined. While some of these were not specially recommended for use by diabetics, the chief use of a gluten preparation lies to provide a food rich in nitrogenous compounds and as poor as possible in starch. Some of these samples are excellent from this standpoint, while others contain so much starch that their claims to be diabetic foods are unfounded if not fraudulent, and their use by diabetic patients attended with considerable danger." The foods were: (1) Akoll Biscuit (53.2% protein, 1.53% starch); (2) Brusson Diabetic Bread (37.3% protein, 40.14% starch); (3) Barker's Gluten Food (Herman Barker, Somerville, Massachusetts; 86.88% protein, 0.00% starch); (4) Soy Bean Gruel Flour (Cereo Co., Tappan, New York; 45.69% protein, 0.63% starch); (5) 20% Gluten Meal (The Kellogg Food Co. [or Battle Creek Food Co.], Battle Creek, Michigan; 27.50% protein, 49.64% starch); (6) 40% Gluten (Kellogg; 47.00% protein, 31.86% starch); (7) 80% Gluten (Kellogg; 81.25% protein, 6.21% starch); (8) Avena-Gluten Biscuit Mixture (Kellogg; 21.38% protein, 41.13% starch; made from oatmeal and wheat gluten); (9) 40% Gluten Biscuit (Kellogg; 47.50% protein, 35.01% starch); (10) 80% Gluten Biscuit (Kellogg; 82.38% protein, 4.68% starch); (11) Breakfast Toast (Kellogg; 13.63% protein, 57.42% starch). Address: M.S., Chemist in charge, Analytical Lab., New Haven, Connecticut.

356. Ulrich, Laura L. 1913? Good food: How to prepare it. Warburton, Victoria, Australia: Signs Publishing Co. 128 p. Undated. *
Address: Australia.

357. Lienhard, William. 1914. Information and news department. *Naturopath and Herald of Health* (*The*) (*New York City*) 19(3):[205-07]. March.
• ***Summary:*** Appears to give strong support to the eugenics movement. Moses Harman (1830-1910) of West Virginia has been credited as one of the founders of what became the eugenics movement. "He gave the spur and start to this effort. Through his journals, Lucifer, the Light Bearer, later re-christened The Eugenic Magazine, encouraged by a small circle of earnest men and women, he dug down below the surface endeavoring to bring forth a stronger and better type of men." Note: Harman was also a school teacher and publisher, notable for his staunch support of women's rights. He was also an anarchist.

Dr. John Harvey Kellogg of Battle Creek, Michigan,

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recently hosted the successful "National Conference for Race Betterment, upon which the attention of the eugenic scientists of all the world was centered."

One section, titled "Health Foods," includes Berhalter's Health Foods, 308 North Ave., Chicago, Illinois.

358. Nashville Sanitarium Food Factory. 1914. Offers a full line of health foods... (Ad). *Naturopath and Herald of Health* (*The*) (*New York City*) 19(4):Unnumbered page. April.
• ***Summary:*** "... such as meat substitutes, whole wheat preparations, nut butters,... baked beans, wholesale or retail.

"Same are for sale also at the Pure Food Store, 112 East 41st St., New York City." Address: Nashville, Tennessee.

359. *Good Health* (*Battle Creek, Michigan*). 1914. Vegetable diet in colitis. 49(10):512-13. Oct.
• ***Summary:*** "A person suffering from colitis should use an anti-toxic diet. Let it consist largely of fruits and vegetables. Lettuce is especially good. Even bran and such coarse articles as turnips, cabbage and beets will act as a broom to sweep away the foul matter that is irritating the bowels. It is the rotting, putrefying fecal matter adhering to the wall of the intestine which occasions the irritation, and by means of a rather coarse vegetable diet, these materials may be scrapped off, swept on and carried away, and the habitual rhythm restored, and the intestines given a chance to heal. This is no new idea."

Prof. von Noorden of Vienna holds similar views on dietary treatment of colitis; they are described in detail.

360. *Los Angeles Times.* 1914. Seventh-day Adventists. Dec. 6. p. I-11.
• ***Summary:*** M. Meyers, head baker at the Loma Linda plant in Loma Linda, California, is suffering from a serious injury to his left hand, which was mashed when it was caught in a dough mixer brake.

Note: This is the earliest document seen (Dec. 2013) concerning Loma Linda Food Co.

361. Arnbrecht, Jacob. comp. 1914. Hygienic cook book: A collection of choice recipes carefully tested. College View, Nebraska: International Publishing Assoc. 318 p. 20 cm.
• ***Summary:*** The title page states that this vegetarian cookbook offers "Plain directions on healthful cookery; Nutritive value and digestibility of foods; Proper food combinations; Food for the sick; Weights and measures for the kitchen, etc."

In the section on Proteids, page 8 discusses gluten and how to make it at home. In the chapter on Entrees (p. 60-) is a long section titled "Substitutes for flesh meats." Many of these recipes are based on Protose or Nuttolene, with granola and nut butter also used, indicating that Mr. Arnbrecht may well have been a Seventh-day Adventist.

362. Cooper, Lenna Frances. 1914. The new cookery: A book of recipes, most of which are in use at the Battle Creek Sanitarium. 2nd ed., revised. Battle Creek, Michigan: The Good Health Publishing Co. [10] + 301 p. Illust. (10 photos). 20 cm.
• ***Summary:*** Soy is mentioned only once in this book, in the recipe titled "Nut sausage" (p. 89); this exact same recipe was on page 87 of the 1913 1st ed.

Note: This book contains a few more pages than the 1913 edition; 5 more pages of unnumbered front matter and 3 more pages of text. The title page is identical except that the words "Second edition–Revised" have been added. The index starts on p. 291, is more than 1 page longer, and ends near the bottom of p. 301. The ads at the rear are generally on different pages; some have been added and others deleted. Lenna F. Cooper was born in 1875. Address: Director of the Battle Creek Sanitarium School of Home Economics, Head Dietitian of the Battle Creek Sanitarium.

363. Fischer, A. 1914. Kuhmilch und vegetabile Milch und ihre Unterschiede in der Magenverdauung besonders mit Ruecksicht auf das Problem der Kuhmilch-Intoleranz: Eine vergleichend-experimentell-diaetetisch Studie [Cow's milk and vegetable milk and the different ways they are digested in the human stomach, especially with regard to the problem of cow's milk intolerance: A comparative experimental dietetic study]. *Archiv fuer Verdauungs-Krankheiten* 20(1):13-48. [Ger]
• ***Summary:*** Page 18 gives the compositions of a number of nuts and seeds from which plant/vegetable milks can be made–including peanuts, coconuts, hazelnuts, walnuts, sweet almonds (*Amygdalus communis*), Brazil nuts (*Paranuss; Bertholletia excelsa*), cashews or cashew nuts (*Indische Mandel, Accajouness; Anacardium occidentale*), and soybeans. Of these, the soybean contains the highest percentage of protein and the lowest percentage of fat. In this long article, the soybean is mentioned only on page 18. Fischer focused his attention on almond milk and Brazil-nut milk, showing that they were more easily digested than cow's milk. He found that vegetable milks formed smaller, finer, more flocculant, and more easily digestible curds in the stomach, that these stayed in the stomach for less time, and that the peristaltic motion of the stomach was less after their consumption.

Note: On the basis of Fischer's observations, subsequent writers (such as von Nordon and Salomon in 1920 in Germany, and Dr. John Harvey Kellogg and Frances Dittes in the 1920s and 1930s in America), recommended the therapeutic use of soymilk for many digestive problems, including gastric and duodenal ulcer, peritoneal irritation, and disturbances of the motility of the stomach. Address: Dirig. Arzt des Sanatoriums Untere Waid-St. Gallen, Schweiz, Germany.

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364. Fulton, Edwin Giles. 1914. Vegetarian cook-book: Substitutes for flesh foods. Revised ed. Mountain View, California, Kansas City, Missouri, etc.: Pacific Press Publishing Assoc. 271 p. Illust. 20 cm. *
• ***Summary:*** This book was first published in 1904 under the title *Vegetarian cook book: Substitutes for Flesh Foods*. The author was born in 1867.

365. Gillmore, Maria McIlvaine. comp. 1914. Meatless cookery: With special reference to diet for heart disease, blood pressure and autointoxication. New York, NY: E.P. Dutton & Company. viii + 352 p. Introduction by Louis Faugeres Bishop. Illust. Index. 21 cm.
• ***Summary:*** The author's Preface begins: "Since auto-intoxication is now held to be the cause of many of the most serious diseases of humanity, too much stress cannot be laid upon the immediate necessity of looking into the question of diet and removing those foods which are responsible for the cause of ill health.

"In the case of heart trouble and high blood pressure, with the accompanying deterioration of other organs, Dr. Bishop has found from prolonged observation that the offending substance most often appears in meat, eggs, fish and meat stock soups, but is not the same in all cases."

"In a double sense, the way to a man's heart is by the food he is given, and the more elaborate the food, the more quickly does his heart succumb to the strain put upon it. So it falls upon the women to meet this condition, and without delay."

The author thanks: (1) The patients of Dr. Bishop (see below), who have been kind enough to share the result of their successful experience. (2) Dr. C.W. Langworthy, expert in charge of Nutrition Investigation at the United States Department of Agriculture. (3) Miss Lenna Frances Cooper, Head Dietitian of the Battle Creek Sanitarium [Michigan], for recipes published in *The New Cookery.*

In the Introduction, Dr. Louis F. Bishop, M.D. (Prof. of Heart and Circulatory Diseases, Fordham Univ. School of Medicine, New York) begins by describing how difficult it is to bridge the gap between those of technical education and those who have not been so trained. After years of research he has found that, "under certain circumstances, the cells of the body become sensitive to the protein element of certain kinds of foods, and from that time on, as long as this sensitiveness lasts, that kind of food acts as a poison to the cells of the body. The only way to limit the damage is to exclude the offending article of food from the diet." Even small amounts of this kind of food can be as harmful as large amounts. Moreover, food damage can be entirely independent of any discomfort. "Food poisoning has generally existed for five or ten years before the heart is sufficiently damaged to cause distress on exertion... My own experience is that heart disease and hardening of the arteries have usually existed about five years at the time the sufferer comes under observation."

"The things that do damage are usually found in the group including eggs, fish, meat and stock soups, but there is no definite way of determining which of these things is at fault. This has to be accomplished by the study of each individual person, by means of the absolute withdrawal of all those things until there is an improvement in the action of the heart and blood vessels. Now one article of food, and then another is added to the diet, and it is discovered by experiment which one the person can use without a return of the disorder.

"In the beginning, it may be only eggs, or fish, or meat, that is a source of irritation to the cells of the body. In persons very seriously ill with hardening of the arteries, all of these things are a source of irritation."

There is a long chapter titled "Meat substitutes" (p. 81-127). The following recipes are of interest: Cereal coffee (p. 1). Almond milk (p. 2). Rice milk (p. 3). Peanut butter sandwiches (p. 209). Two charts near the back of the book give the nutritional composition of peanut butter, and peanuts.

Note 1. is the earliest document seen (June 2002) which states that diet (and specifically a meatless or vegetarian diet) can reduce the risk of coronary heart disease in humans.

Note 2. This is the earliest English-language document seen (Aug. 2013) that contains the term "rice milk," which it uses to refer to a recipe.

Note 2. This is the earliest English-language document seen (June 2003) that contains the word "autointoxication" (or "auto-intoxication").

Note 3. This is not a Seventh-day Adventist cookbook and no commercial products made by SDA companies are called for in the recipes. Soy is not mentioned. Maria Gillmore was born in 1871. Address: Clinical Prof. of Heart and Circulatory Diseases, Fordham Univ., Bronx, New York.

366. Street, John Phillips. 1914. Diabetic foods. *Connecticut Agricultural Experiment Station, Annual Report* 37:1-95. For the year ending Oct. 31, 1913. See p. 20-21, 30-33, 38, 45, 47-48, 56, 75-77. Part I. Eighteenth Report on Food Products and Sixth Report on Drug Products, 1913.
• ***Summary:*** Page 11: "What is a 'diabetic' food? Formerly an almost complete absence, or at least a very marked reduction, of carbohydrates was considered an essential characteristic of a true 'diabetic' food. A table of 12 different classes of diabetic foods shows that, of the 542 commercial products, "Beads, biscuits, cakes, etc." 150, and "Flours and meals" 109 were the top two classes.

In Table I, titled "Analyses of diabetic foods" (p. 18-39), the many commercial products are grouped into classes, starting with "Flours and meals." For each product is given: Year of analysis, name of manufacturer and brand, no. of pieces, net weight of package, cost per package, cost per pound, nutritional composition (water, ash, protein

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{Nx6.25}, fiber, nitrogen-free extract, fat {ether extract}, starch, weight supplying same amount of carbohydrates as 10 gms. of wheat bread, calculated calories per 100 gms.).

The summary (p. 75-77) groups the main commercial products into six groups based on their carbohydrate content. The first group contains less than 5% carbohydrates and the 6th group contains 25 to 35% carbohydrates. "The soy bean flours contained from 23 to 26 per cent. carbohydrates" and "cost from 30 to 65 cents per pound." Brands include: "Health Food Co., New York, Protosoy Soy Flour, Jireh Diabetic Food Co. (NY), Soja Bean Flour, Health Food Protosoy Diabetic Wafers (21.2% carbohydrates) and Protosoy Soy Flour (24.5%), Cereo Soy Bean Gruel Flour (23.7%), Metcalf's Soja Bean Meal (25.0%), Jireh Soja Bean Meal (25.8%; sometimes also named Jireh Diatetic [sic, Dietetic] Soja Bean Flour). Platschek (Karlsbad) Sojabohnenmehl (49%)."

Note. This is the earliest English-language document seen (Nov. 2013) that contains the term Soja Bean Flour (regardless of capitalization).

The Health Food Co., New York, made the following products: Flours and meals: Almond meal (analyzed 1906, 1913), C B X Cold Blast Flour, 25% protein (1911), Glutosac Gluten Flour (1906, 1909, 1911, 1913), Pronireu (Gluten Griddle Cake Flour; 1913), Protosac Gluten Flour (1906, 1913), Protosoy Soy Flour (1913), Pure Washed Gluten Flour (1906, 1913). Soft breads–Protosac Bread (1906). Hard breads and bakery products: Alpha Best Diabetic Wafer (1913), Diabetic Biscuit (1906 & 1913), Gluten Nuggets (1913), Glutona (1906), Glutosac Butter Wafers (1906), Glutosac Rusks (1906), Glutosac Wafers, Plain (1906), Glutosac Zwieback (1906), No. 1 Proto Puffs (1906 & 1913), No. 2 Proto Puffs (1911 & 1913), Protosac Rusks (1906), Protosoy Diabetic Wafers (1913), Salvia Sticks (1906). Breakfast Foods–Manana (1913). Miscellaneous products–Kaffeebrod (1913).

Peanut butter was made or sold by the following (p. 36-37): Atlantic Peanut Refinery, Philadelphia (1899), J.W. Beardsley's Sons, New York, Acme Red Brand (1913), Beach Nut Packaging Co., Canajoharie, NY (1913), A.C. Blenner & Co. New Haven, Connecticut (Distributor; 1913), D.W. Brooke (Newark, NJ; 1913), Dillon & Douglass, New Haven, CT, Perfection (Distributor), H.J. Heinz Co., Pittsburgh, Pennsylvania (1913), The Kellogg Food Co., Battle Creek, Michigan (1913), Francis H. Leggett & Co., New York, Premier (1913), MacLaren Imperial Cheese Co., Detroit, Michigan, Eagle (1913), Nut Products Co., New Haven, CT, Penolia (1913), Penolia Food Co., New Haven, CT, Penolia (1899), S.S. Pierce Co., Boston, MA, Acharis Brand (1914).

Almond paste [Almond butter] was made by: Chapman, Chicago (1902-03), Henry Heide, New York (1902-03), Spencer, New York (1902-03).

Many gluten-based foods are also discussed and analyzed in a table including Kellogg's Protose (3.6% carbohydrates), Barker's Gluten Food "A" (4.1%), Kellogg's 80% Gluten Biscuits (4.4%), Bischof's Gluten Flour (5.0%), Barker's Gluten Food "B" (5.9%), Barker's Gluten Food "C" (7.7%), Kellogg's 80% Gluten (1912) (7.8%), Plasmon Cocoa 9.3% (Made by Plasmon Co., London, analyzed 1903), Metcalf's Vegetable Gluten (1913) (9.8%), Kellogg's Pure Gluten Biscuit (1906) (10.2%), Kellogg's Potato Gluten Biscuit (1906, 1909) (11.9%, including fiber), Ferguson Gluten Bread (33.6%), Gum Gluten Breakfast Food (34.2%).

Many peanut-based foods are also discussed and analyzed including Rademann's Erdnuss-Brot [Peanut Bread 19.7%, p. 26, 77]. Frank & Co. (Bockenheim) Erdnuss-Kakes [Peanut Cakes, p. 28, 56]. Rademann's Erdnuss-Biskuits [Peanut Biscuits, p. 34]. Peanut butter: Manufacturers (with date of analysis in parentheses) are: Atlantic Peanut Refinery, Philadelphia, Pennsylvania (1899). J.W. Beardsley's Sons, New York (Acme Red Brand, 1913). Beech-Nut Packing Co., Canajoharie, New York (1913). A.C. Blenner & Co., New Haven, [Connecticut] (Distributed by D.W. Brooke, Newark, New Jersey, 1913). Dillon & Douglass, New Haven (Perfection brand; Distributed by H.J. Heinz Co., Pittsburgh, Pennsylvania, 1913). The Kellogg Food Co., Battle Creek, Michigan (2 samples, 1913). Francis H. Leggett & Co., New York (Premier brand, 1913). MacLaren Imperial Cheese Co., Detroit, Michigan (Eagle brand, 1913). Nut Products Co., New Haven (Penolia, 1913). Penolia Food Co., New Haven (Penolia, 1899). S.S. Pierce Co., Boston, Massachusetts (Acharis brand, 1913). Note the two brands that were on the market by 1899.

A host of products contain "almond" in the name, including Kellogg's Almond Butter (8.2% carbohydrates), Callard's almond shortbreads (21%), and Fritz's Mandelbrot (23%), Almond-form wafers with chocolate (from Fromm & Co., Dresden), Charasse Gluten Exquis Biscuits aux Amandes.

Other nut preparations (p. 38): The Kellogg Food Co., Battle Creek–Nut Bromose (Meltose [a malt preparation] and nuts, 1913), Nut Butter (Sanitas, 1906), Nut Meal (1906), Nuttolene (6.3%, 1906). Nashville Sanitarium-Food Co., Nashville, Tennessee–Nut Butter, Nutcysa, and Nutfoda (13.0% 6.3%, and 6.8%; Analyzed in 1913).

A section titled "Nut, Nuts Pastes, etc." (p. 62-64) notes: "Samples of peanut butter showed considerable uniformity; the carbohydrates ranged from 12 to 20, with 3.2 to 6.5 per cent. starch. Most of the peanut butters we have examined would seem to be useful additions to the diabetic's diet." The manufacturer of Kellogg's Malted Nuts claims that it "supplies the place of cow's milk as a liquid food. Its composition is similar to that of milk." The author thinks this statement is misleading, but he notes that "Kellogg's Nut Butter closely resembles peanut butter in composition, and has its same advantages as a diabetic food... Kellogg's Nut Meal is a peanut meal containing only 12 per cent.

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carbohydrates. Kellogg's Nuttolene and Protose likewise contained only 6 and 4 per cent. carbohydrates, respectively."

Webster's Dictionary defines "aleurone" (a word first used in about 1869) as "protein matter in the form of minute granules or grains occurring in seeds in endosperm or in a special peripheral layer." Many German products have the same root: Gerike's Aleuronat (3.1% carbohydrates, p. 76). F. Guenther, from Frankfurt, makes Aleuronat-Kakes (p. 56). R. Hundhausen, from Hamm, makes Aleuronatzweiback (high or low gluten) and Aleuronat Biskuits and Kakes (biscuits and cakes, p. 57, 30), or pure (4.0% carbohydrates, p. 76). Kirche, from Duesseldorf, makes Aleuronat-Kakes (p. 32).

Other well-known products. Protein preparations: Plasmon Co., London, makes Plasmon. Troponwerke, Mülheim, makes Tropon (p. 24). Address: Chemist of the Station, New Haven, Connecticut.

367. *Good Health* (*Battle Creek, Michigan*). 1915. Vegetable protein not inferior to animal protein. 50(2):92, 93 + 10a. Feb.

• ***Summary:*** "For many years a stock argument against the non-flesh dietary has been the claim that animal protein is much more readily and completely assimilated than vegetable protein. At best this argument would be only a matter of economy and would amount to nothing, since the cost of vegetable protein is not more than one-fifth to one-tenth the cost of animal protein, so that one could easily afford to lose five to ten per cent of the raw material while making a saving of three hundred to four hundred per cent in cost.

"But a review of the supposed experiments of comparative indigestibility of protein has shown that there is no real foundation for the claim that vegetable proteins are less digestible than animal proteins. In the earlier experiments it was observed that when a large amount of protein of the diet was derived from peas or beans, only three-fourths to four-fifths of the protein was assimilated, whereas in the case of animal proteins in the form of eggs or meat eighty-eight to ninety per cent was assimilated.

"Experiments made by an eminent Japanese physiologist with the pure protein of the soy bean have shown it to be digestible to the extent of ninety-six per cent, a degree of digestibility fully equal to that of any animal protein. It appears that the only reason why animal proteins have seemed to be more digestible than vegetable protein has been the fact that vegetable proteins are combined with various substances, especially cellulose, which is indigestible, so that digestion is hindered.

"These experiments have been repeated in this country by Doctor Mendel of the Yale University laboratory [Connecticut] and with practically identical results. Doctor Mendel does not hesitate to state that vegetable proteins are equally as digestible as animal proteins."

368. Benedict, Francis G.; Roth, Paul. 1915. The metabolism of vegetarians as compared with the metabolism of non-vegetarians of like weight and height. *J. of Biological Chemistry* 20(3):231-41. March. [2 ref]

• ***Summary:*** "Perhaps no special dietetic regime is more successful in attracting adherents and holding them than is that of vegetarianism. While the modern conception of the word 'vegetarianism' is by no means as strictly applied to the exclusive use of vegetables as was formerly the case, and we have at the present time the lacto-vegetarians and the ovo-vegetarians, nevertheless there are a considerable number of individuals who regularly confine themselves to a strictly vegetarian diet."

"This adherence to a vegetarian diet may be due to any one of several causes. First, to environment, heredity, training, or the habit of the household and parents; second, to a religious belief, in which the use of flesh for food is proscribed; third, as the result of some dietetic alteration incidental to the treatment of disease and a subsequent adherence to the vegetarian diet; or finally, for physiologic or biologic reasons, in the belief that a non-flesh dietary is the natural or physiologic diet for human beings as well as other primates.

"In the discussion of the supposed benefits of vegetarianism, considerable stress has been laid upon the remarkable endurance (see Fisher 1907; Iotekyo and Kipiani 1906) apparently shown by vegetarians over flesh eaters, the statements being made that the vegetarians live upon a distinctly lower metabolic plane, are not so highly stimulated as the flesh eaters, have a lower blood pressure, and, in general, that the metabolic activities are on a lower level."

It is not difficult "to measure the metabolic plane by studying the respiratory exchange. Thanks to the kindness and interest of Dr. J.H. Kellogg of the Battle Creek Sanitarium, Michigan, we are enabled to make a series of observations on both men and women vegetarian subjects, all of whom may be definitely classified as normal individuals. The greater number of these subjects were members of the staff of the Sanitarium. These individuals [11 men and 11 women] had been meat abstainers for varying lengths of time, the periods stated in the list given below."

This experiment showed that there appears to be little, if any, difference between the basal-metabolic rates of vegetarians and non-vegetarians.

Note 1. This is the earliest English-language document seen (June 2005) that uses the term "lacto-vegetarians" (or "lacto-vegetarian") to refer to vegetarians whose diet includes milk and dairy products, but does not include eggs.

Note 2. This is the earliest English-language document seen (June 2005) that uses the term "ovo-vegetarians" (or "ovo-vegetarian") to refer to vegetarians whose diet includes eggs, but does not include milk or dairy products. Address: From the Nutrition Lab. of the Carnegie Institution of Washington [DC], Boston, and the Battle Creek Sanitarium,

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Battle Creek, Michigan.

369. Cooper, Lenna F. 1915. The cost of foods in non-meat dietaries. *J. of Home Economics* 7(3):137-41. March.
• ***Summary:*** "The fact that meat is one of the most expensive articles of diet is illustrated by a comparison of the costs of a mixed diet and of a non-meat diet. The cost of foods given here are from the non-meat dietary in use at the Battle Creek Sanitarium." The cost of foods in the guests' dining room for the year 1912 amounted to 67.8 cents per capita per day. A copy of one day's menu is shown in order to give an idea of the variety of food in the guests' dining hall. Breakfast foods include: Scotch bran borse. Gluten gruel. Boiled protose. Scrambled eggs. Whole wheat bread. Entire graham bread. Toasted rice biscuit. Toasted granose (wheat) biscuit. Bran biscuit. Nut butter. Palm butter. Malt honey. Malt sugar. Yogurt buttermilk. Sanitas cocoa. Hot malted nuts [peanut milk]. Minute brew [coffee substitute] with sugar and cream. Kaffir tea. Dinner (afternoon meal) entrées include: Nut fillets. Nuttolene with piquant sauce. Supper (evening meal) includes many of the same foods served for breakfast.

In 1914 the total number of guest days at the Sanitarium was 115,590. The cost of vegetarian food for this same period was $67,866. Address: Head Dietitian, Battle Creek Sanitarium, Michigan.

370. Morse, W.J. 1915. Re: Report on trip to Experiment Stations in Connecticut, Rhode Island, New Hampshire, Vermont, and Massachusetts. Letter to Prof. C.V. Piper, Washington, DC, Aug. 28. 3 p. Handwritten, with signature on USDA letterhead.
• ***Summary:*** Morse is writing from Lowville, New York, where he was born and raised. "Dear Prof. Piper: During the past week I have been at the Experiment Stations in Connecticut, Rhode Island, New Hampshire, Vermont, and Massachusetts. The Manchurian varieties, which were sent from the office this spring to these stations, in my opinion were doing very nicely. A number of them should mature at the stations and appear very promising as early grain strains. Others appear to be of promise as forage strains being finer and more suitable for hay. I found the men at the stations much interested in securing the early grain variety. The Manchu, Black Eyebrow, and 36653 appear to be the earliest and I think all three will mature with possibly a few other numbers. No other variety except the Ignotum (a variety from E.E. Evans, West Branch, Michigan) approached ours in earliness. The Guelph and Ito San are at least two weeks later. The station men appeared very much interested in the test.

As yet I have not looked into the soybean factory at Clayville, but after leaving here Monday expect to look into that matter. From Clayville, I expect to go to East Lansing, Michigan, and then to Battle Creek, Michigan. I do not think I shall stop at Elysia for I have given [Mr. E.E.] Evans our note books to take fall notes. I think I can put my time in better other places.

"I have been here since Thurs. and expect to leave here Mon.

"Have had a very pleasant time here the past few days. Had a rather heavy frost here last night. Very truly yours,..."

Note: This is the earliest document seen (March 2012) that mentions the soybean variety Ignotum–which was later thought to be the same as Ogemaw.

Location: National Archives, College Park, Maryland. Record group 54–Bureau of Plant Industry, Soils and Agricultural Engineering. Subgroup–Div. of Forage Crops and Diseases. Series–General Correspondence, 1905-29. Box 92–Morgan-Morse.

Sent to Soyinfo Center by Matthew Roth of Rutgers Univ., March 2012. Address: Forage-Crop Investigations, Bureau of Plant Industry, USDA, Washington, DC.

371. Morse, W.J. 1915. Re: Report on visits to makers of soy products. Letter to Prof. C.V. Piper, Forage Crop Investigations, Bureau of Plant Industry, Washington, DC, Sept. 5. 2 p. Handwritten, with signature.
• ***Summary:*** "Dear Professor Piper:... At Clayville, New York, I looked up the soy bean factory recently started for the manufacture of flour and milk. I had a visit with the man in charge, a Mr. Spring/Sjurning (?) of Cussville (?), New York. The establishment is under the name of Spring (?) Corporation Co. and in addition to the soy products are to put out different kinds of breakfast food. The soy beans were to be purchased from (?) and Indiana growers, but Mr. Spring is going to get in touch with growers in eastern North Carolina... They have a patent process for making the milk called an emulsifier. The beans are crushed, put in the emulsifier with water, the mass churned about and the liquid drawn up. The bean mass is then dried and ground into flour. The milk is all to be sold to chocolate manufacturers while some biscuit concerns agree to take a certain amount of the flour.

"At Battle Creek, Michigan, the Kellogg concern are interested in trying out the soy bean both as a flour and as a substitute for coffee. Mr. Kellogg would like to have us send him about a bushel of the Mammoth Yellow for experiments. He will give us the results and furnish us some of the products made from the beans." He is at the Toasted Corn Flake Co. in Battle Creek.

Note: This is the earliest document seen (Dec. 2013) that mentions Mr. [W.K.] Kellogg or his Toasted Corn Flake Co. in connection with soybeans.

Location: National Archives, College Park, Maryland. Record group 54–Bureau of Plant Industry, Soils and Agricultural Engineering. Subgroup–Div. of Forage Crops and Diseases. Series–General Correspondence, 1905-29. Box 92–Morgan-Morse. Folder–Morse, W.J.–#1 F.C.I.

Sent to Soyfoods Center by Jacob Jones of Purdue

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Univ., Aug. 1998. Address: St. Paul, Minnesota: Scientific Asst., Forage-Crop Investigations, Bureau of Plant Industry, USDA, Washington, DC.

372. *Advance* (*The*) (*Elizabeth City, North Carolina*). 1915. A better day for soy beans. Nov. 30. p. 2.
• ***Summary:*** "Farmers in this section will be glad to know that the Division of Agronomy at Raleigh, of which C.B. Williams is the head, is very much interested in the future of the soy bean crop, which is being more extensively grown now every year in this country.

"It is not strange that the State Department of Agriculture should be interested in soy beans, for the soy bean crop in North Carolina is larger than in any other state in the union. This year the soy bean acreage in nearly every county in this section was increased and it is said that Hyde County alone this year has harvested no less than 200,000 bushels.

"With a million bushels of soy beans now on their hands, Eastern Carolina farmers are wondering what they are going to do with them.

"In central New York, according to Mr. Williams, a factory has been established for the manufacture of soy bean milk and soy bean flour. The Kellogg Toasted Corn Flake Company of [Battle Creek] Michigan have conducted experiments with soy beans, and have expressed a desire to get in touch with growers of the product. Mr. Williams has recently visited this section and has obtained the promise of the Elizabeth City Oil and Fertilizer Company and of the Eastern Cotton Oil Company of Hertford [15 miles southwest of Elizabeth City] to conduct experiments with view to utilizing the soy bean to keep their mills running after the close of the cotton season. Also inquires have been received from the owners of factories which handle the soy bean and are able to use its by-products for information about factory sites in this section."

Note: This is the earliest document seen (June 2003) that mentions the Elizabeth City Oil and Fertilizer Company (or Elizabeth City, North Carolina) in connection with soybeans.

373. Anderson, Hans Steele. 1915. Food and cookery: Hand book for teachers and pupils for use in cooking classes and demonstrations. 3rd revised ed. Loma Linda, California: The College Press. 127 p. 18 cm. *
• ***Summary:*** The author was born in 1877.

374. Daniel, Florence. 1915. The healthy life cook book. 2nd ed. London: C.W. Daniel, Ltd. 114 p. Index. 17 cm. Series: Healthy Life Booklets, No. 4.
• ***Summary:*** Discusses vegetarianism and English cookery. Contains many ads, including Mapleton's Nut Foods (frontispiece, facing the title page), Eustace Miles Proteid Foods Ltd. (p. 118; 40-42 Chandos St., London, W.C.; Emprote and Popular Proteid), International Health Association, Ltd. (p. 122; Stanborough Park, Watford, Herts.; Granose [crisp, delicate flakes], Protose, Avenola, Health Coffee [made from cereals], I.H.A. Health Biscuits; "Manufactured in the interests of health and NOT merely for profit"), Manhu Food Co. Ltd. (p. 123; Manhu Flaked Wheat; Manhu Diabetic Foods). Address: England.

375. Kellogg, John Leonard. Assignor to Kellogg Toasted Corn Flake Company (Battle Creek, Michigan). 1916. Manufacture of a food product. *U.S. Patent* 1,189,128. June 27. 1 p. Application filed 19 Nov. 1915.
• ***Summary:*** "My invention relates to the manufacture of a new food product made from the soy or soja bean." It "is particularly adapted to be used as a diabetic food by mixing it with water or milk."

To make the powdered product, soybeans are soaked, dried, dehulled in an ordinary scouring device using the brush method, roasted in an ordinary roaster to a dark brown color, then ground to a fine powder, which "tastes and smells very much like peanut meal, but is quite dry.

"In making my improved butter for spreading over crackers, bread, etc., as peanut butter is used, I mix the finely powdered product of the above process by preference with a good grade and sufficient quantity of peanut oil... to give the product the texture and appearance of peanut butter.

"The final product is used as peanut butter is used, and may be mixed with peanut butter in any desired proportions, as the two blend admirably and improve the flavor each of the other. The soy beans contain much more protein than peanuts and my final product is, therefore, very desirably as a dietetic food.

"The powdered product, before mixing with the oil, can also be used as a diabetic food, by mixing it with water or milk, and on account of its high protein value and low starch composition, it makes an admirable food for persons suffering from diabetes or for babies who require an excessive amount of protein."

Note: This is the earliest document or patent seen (Dec. 2012) that mentions soynut butter (powdered or regular–although the word "soynut" is not used) and the earliest document seen that mentions work by a Seventh-day Adventist with soybeans or soyfoods.

Note 2. This is the earliest English-language document seen (Dec. 2012) that mentions soynut butter, which it calls "my improved butter for spreading over crackers, bread, etc., as peanut butter is used..."

Note 3. According to the book titled *The Kelloggs in the Old World and the New*, by Timothy Hopkins (1903, San Francisco), John Leonard Kellogg was the second child of Will Keith Kellogg (who was the brother of Dr. John Harvey Kellogg and who founded the Kellogg Toasted Corn Flake Co. in 1909; Will Keith made Corn Flakes into a famous product). John Leonard Kellogg was born on 23 Aug. 1883 in Battle Creek, Michigan. In 1903 Will Keith Kellogg had

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been vice-president and manager of the Modern Medicine Publishing Co. for ten years, and of the Sanitas Nut Food Co. for seven years. Address: Battle Creek, Calhoun County, Michigan.

376. Kellogg, John Harvey. 1916. Diet as a means of combating acidosis. *American Medicine* 22(6):457-61. June. (Vol. 11 in New Series).

• ***Summary:*** "The pathological condition known as acidosis has long been known and been the subject of exhaustive researches by physiologists and clinicians, but the great importance of this disorder of metabolism as a factor in a great variety of medical and surgical cases is only just beginning to receive recognition. Many laboratory and clinical studies have demonstrated that the normal functioning of the body cells requires the maintenance of the reaction balance. The arterial blood must be kept neutral or slightly alkaline."

"We now know that acidosis plays a dominant role in many conditions in which its presence was formerly not even suspected. The discovery of accurate tests for acidosis... has greatly contributed to the collections of clinical data and the extension of our knowledge."

Acidosis "results from perverted metabolism. The direct cause of acidosis is the abnormal production in the liver of diacetic and beta-oxybutyric acids as a result of imperfect metabolism of fats and protein." Discusses the findings of Zellner, M.H. Fischer, Palmer and Henderson, and Lewis and Barkman indicating the a high protein diet is a cause of acidosis. "It is evident, then, that in the treatment of these conditions the protein ration should be reduced to a minimum and carbohydrates provided in abundance. "Malt sugar" is better tolerated than cane sugar.

Concerning fasting: "When deprived of food, an obese person of course finds his chief source of energy in the oxidation of fat. In such a case the situation is practically the same as when a normal person is fed exclusively on fat. The few ounces of glycogen [carbohydrate] stored up in the liver and muscles is soon consumed, so after the first day or so of fasting the obese patient is living almost exclusively on fat and the natural result is a high degree of acidosis. The clinical evidence of acidosis is to be seen in the languor, weakness, lassitude, often headache and sometimes nausea of which these patients often complain when fasting." If a small amount of carbohydrate, about 50 grams/day, "is given to a patient who is taking a fasting cure for obesity acidosis will disappear." "The patient will loose flesh less rapidly but will avoid the disagreeable symptoms which tend to discourage him and lead him to abandon the effort. A still more satisfactory plan is to allow the obese patient to eat freely of" green vegetables "and of such fruits as apples, strawberries, oranges, cantaloupe, and watermelons. Such a diet will not only satisfy the craving for food but will also furnish a liberal supply of basic elements to neutralize the acids resulting from the oxidation of fats."

"In the practical management of the diet of several hundred cases of diabetes the writer and his colleagues have found great advantage in very largely replacing animal proteins by vegetable proteins. It is very surprising how quickly both acidosis and glycosuria disappear on a properly regulated diet in which the protein is reduced to a minimum and animal proteins mostly excluded."

"Bunge many years ago called attention to the fact that the ordinary diet among civilized nations tends to produce a preponderance of acids in the body. He especially called attention to the fact that flesh foods contain an excess of acids that are not oxidizable in the body... and that a considerable excess of these acids is also found in cereals.

"Sherman of Columbia University, who has made extended studies of this subject in recent years, has confirmed the observations of Bunge."

"The injury resulting from this excessive intake of protein is greatly increased by the sedentary habits of a large proportion of the population and especially from a diet deficient in bulk because of the use of fine flour bread and other concentrated foods from which cellulose, an essential intestinal stimulant, is almost wholly lacking.

"Humans are primates and as such are low protein feeders... The alimentary canal is long–ten times that of the length of the body, measuring from the end of the nose to the end of the backbone. The liver is small, one one-fourth as large in proportion to the body weight as in the dog and other carnivorous animals."

"Modern scientific research is showing more and more clearly that in these departures from primitive conditions of life is to be found the foundation of most of the chronic ills which afflict us."

Note: This is the earliest English-language document seen (July 2005) that contains the term "acidosis." Address: AM., M.D., Battle Creek, Michigan.

377. *Good Health* (*Battle Creek, Michigan*). 1916. Vegetarian restaurants in Russia. 51(12):670. Dec.

• ***Summary:*** According to a journal from Stockholm, Sweden, the rise in food prices in Petrograd, Russia [one year before the 1917 revolution] has given great encouragement to vegetarian restaurants. Hundreds of vegetable kitchens have been opened, supplying thousands of meals daily. "Although the prices of the dishes are not remarkably low, long lines of waiting guests throng the larger halls."

378. Colon hygiene: comprising new and important facts concerning the physiology of the colon and an account of practical and successful methods of combatting intestinal inactivity and toxaemia. 1916. Battle Creek, Michigan. 402 p. *

• ***Summary:*** This book is divided into three large chapters:

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1. The twelve gates. 2. The symptoms of constipation. 3. Simple measures for its relief. Dr. Kellogg discusses cellulose (p. 228-30) and bran (p. 237-40).

Note: This book is owned by the Bentley Historical Library, University of Michigan, Ann Arbor.

379. Cooper, Lenna Frances. 1916. The new cookery. 3rd ed. Revised and enlarged. Battle Creek, Michigan: The Good Health Publishing Co. 412 p. 22 cm.

• ***Summary:*** This is a Seventh-day Adventist vegetarian cookbook. Contents: 1. Food values. 2. The art of preparing foods. 3. Beverages. 4. Cereals. 5. Fermented breads. 6. Unfermented breads. 7. Sandwiches. 8. Dairy products. 9. Cream soups. 10. Plain soups. 11. Meat substitutes and entrees. 12. Macaroni and Italian pastes. 13. Eggs. 14. Gravies and sauces. 15. Vegetables. 16. Salads and relishes. 17. Toasts. 18. Fruit desserts. 19. Custards and cold desserts. 20. Frozen desserts. 21. Pastry and pies. 22. Cakes. 23. Cake fillings and frostings. 24. Hot puddings. 25. Sauces for puddings. 26. Canning and preserving. 27. Special dishes for invalids. 28. Balanced menus."

In the Foreword, the author states: "We are indebted to Professor Ivan Pawlow [Pavlov], of Russia, for demonstrating the relation between appetite and digestion." "Many food reformers and faddists have attempted to prepare wholesome foods but have neglected the almost equally important requirement–palatability." "The author wishes to express her indebtedness to Dr. and Mrs. John Harvey Kellogg, of the Battle Creek Sanitarium, who first inspired her with a love for the study of foods and their scientific preparation and who have since been constant sources of help and encouragement. She would also acknowledge her indebtedness to Miss Clara B. Lambert, who for several years was associated with the author and has contributed to this volume both by helpful suggestions and by numerous recipes."

Soy is not mentioned in this Seventh-day Adventist vegetarian cookbook. The following commercial products are mentioned: Minute Brew (cereal coffee [coffee substitute], p. 32). Cereal coffee (p. 33). Kaffir Tea (p. 33). Sanitas Health Koko (p. 33). Yogurt buttermilk (p. 33-34). Sterilized bran (p. 44). Gluten mush (p. 47). Graham bread (p. 54). Bran bread (p. 62). Bran gems (p. 76). Protose (p. 129-35). Gluten flour (p. 136). Nuttolene (p. 138-41). Peanut butter (p. 144-145). Nut chops (p. 144, with peanut butter). Savora (p. 145). Granola (p. 147). Mock turkey (p. 152). Salted almonds (p. 300). Strawberry gelee (p. 306, with Vegetable Gelatin and egg whites). Yogurt ice cream (p. 307). Meltose dressing (p. 361). Hot Malted Nuts (p. 386. Pour 3/4 cup boiling water into ¼ cup dry Malted Nuts, stirring while so doing. Add salt if desired. It is ready to serve at once. Calories in the recipe: 34 from protein, 88 from fat, 61 from carbohydrate. Total 183. Note: Malted Nuts was a dry powder or meal. The resulting beverage was almost certainly a mixture of peanut milk and almond milk). Almond ice (p. 389, with "almond butter"). Gluten bread (p. 390). Gluten puffs (p. 391).

Note: This cookbook calls for abundant use of dairy products (milk, cream, butter), eggs, and sugar (up to 2 cups in some recipes). Address: Director of the Battle Creek Sanitarium School of Home Economics, Head Dietitian of the Battle Creek Sanitarium [Battle Creek, Michigan].

380. Joslin, Elliott Proctor. 1916. Treatment of diabetes mellitus, with observations upon the disease based upon one thousand cases [5th ed.]. Philadelphia and New York: Lea & Febiger. xvi + 17-440 p. 25 cm.

• ***Summary:*** Joslin (lived 1869-1962) recommended the use of Hepco Flour, a soybean product, in his diabetic diets. Page 397 states: "Soya bean is also extensively used, and probably deserves a still wider introduction into the diabetic diet. It is used in the manufacture of Hepco Flour." Page 400 states that "soy bean meal" [probably soy bean flour] contains 34.0% carbohydrates. "Ralston Health Food" is a type of "Cereal breakfast food." Page 402 notes, under "fresh vegetables," that soy beans [i.e. green vegetable soybeans] contain on average 28.0% carbohydrates (range 19.3-39.0%).

In the section titled "Composition of so-called diabetic foods" (p. 406-17) the author notes that such foods have been more thoroughly studied at the Agricultural Experiment Station in New Haven, Connecticut, than elsewhere. The lengthy list that comprises most of this section is based on original analyses found in Connecticut Agricultural Experiment Station Reports, for 1913, Part 1; for 1914, Part 5, and for 1915, Part 5. The table contains the following columns: Date of analysis. Manufacturer and brand. Protein per cent. Carbohydrate per cent. Fat per cent. Starch per cent. and Calculated calories per 100 grams. The following contain soy: Cereo Co., Tappan, New York: Soy Bean Gruel Flour (1913 [date of analysis]). Health Food Co., New York: Protosoy Soy Flour (1913, 1914), Protosoy Diabetic Wafers (1913, 1914). Jireh Diabetic Food Co., New York: Soja Bean Flour (1913). Theo. Metcalf Co., Boston, Massachusetts: Soja Bean Meal, 18% starch (1913). Waukesha Hepco Flour (1913).

A large number of companies in the USA and Europe make products containing gluten; among these are The Kellogg Food Co. in Battle Creek, Michigan. The Nashville Sanitarium Food Co. in Nashville, Tennessee makes Malted Nut Food, Nut Butter, Nuteysa, and Nutfoda.

A list of 13 peanut butter manufacturers is given (p. 415), including The Kellogg Co. (Battle Creek, Michigan), Beech-Nut Packing Co. (Canajoharie, New York), and H.J. Heinz Co. (Pittsburgh, Pennsylvania). The fat content of the various brands ranges from 42.8% to 51.3%; Kellogg's is 49.7%. Two companies whose peanut butter was analyzed in 1899 were: Atlantic Peanut Refinery, Philadelphia, Pennsylvania, and Peanolia Food Co., New Haven,

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Connecticut.

Special protein preparations include Soson and Tropon (made in Germany), and Plasmon (made in London, England). Address: Asst. Prof. of Medicine, Harvard Medical School, Massachusetts.

381. Kellogg, John Harvey. 1916. Battle Creek Sanitarium diet list. Battle Creek, Michigan: Modern Medicine Publishing Co. Ltd. 71 p. *
• ***Summary:*** The author was born in 1852. Address: M.D., Battle Creek, Michigan.

382. Kellogg, John Harvey. 1916. Colon hygiene: Comprising new and important facts concerning the physiology of the colon and an account of practical and successful methods of combating intestinal inactivity and toxemia. Battle Creek, Michigan: Good Health Publishing Co. 370 p. 19 cm.
• ***Summary:*** Contents: The colon. The physiology of the colon. The ileocecal valve and its function. Normal bowel action. The feces. Influences which excite movements of the colon. Influences which lessen intestinal movements. The causes of constipation. Habits which give rise to constipation. Disorders of the digestive tube. Alimentary toxemia, or intestinal autointoxication. Important discussion of alimentary toxemia before the Royal Society. Forms of constipation. The treatment of constipation. Diet in constipation. Baths and other home treatments for constipation. Exercises which combat constipation. Efficient electrical methods. Special treatment of different types of constipation. Treatment of disorders which result from constipation. Bowel habits of uncivilized man.

The section titled "Cellulose-containing foods" (p. 228) states: "All vegetable foods contain more or less cellulose, but the amount differs very greatly. This element, as has already been mentioned, is highly necessary as a means of securing normal bowel action. Indeed, bulk, not simply in the food itself, but in the residues left behind after the absorption of the nutritive portions of the food, is of first importance."

In the chapter titled "Diet in constipation" (p. 218-40): A bar chart (facing p. 229) shows the number of grams per ounce of cellulose in some common cereal foods. The leaders: Bran 200, oatmeal 44, barley 20, rye 15, wheat 10, Graham flour granola 10, Graham bread 6. A table (p. 229-30) gives similar information. A section on "Recipes for the use of bran" (p. 237-40) contains 6 recipes: Bran brose (like mush), Sterilized bran, Bran and granola mush, Graham bread (made with "whole wheat flour"), Bran Graham biscuit, Bran gems (like muffins). Address: M.D., LL.D., Superintendent of the Battle Creek Sanitarium.

383. Kellogg, J.H. 1917. Should the colon be sacrificed or may it be reformed? *J. of the American Medical Association* 68(26):1957-59. June 30.
• ***Summary:*** Metchnikoff of the Pasteur Institute believes that the colon is a useless appendage and the source of many health problems. Sir William Arbuthnot Lane advocates surgical removal of the colon, or colectomy as a way of restoring health. But Dr. Kellogg sees the question as this: Is the design of the colon at fault or are we misusing it through improper diet. Dr. Kellogg has treated more than 40,000 patients with colon problems at the Battle Creek Sanitarium during the last 10 years. He then lists 10 nonsurgical methods that he has found "most effective in relieving intestinal stasis." "1. A low protein, bulky diet consisting largely of fruits, fresh vegetables and whole grain preparations. 2. The free use of bran or agar-agar, or a combination of both at every meal. From one half ounce to an ounce of cellulose daily seems to be necessary to stimulate the bowels to normal activity... 5. In very obstinate cases the patient takes, three or four times a day, a couple of tablespoonfuls of bran and as much fruit as he can eat."

"7. In cases of colitis with a spastic condition of the descending and pelvic colon, the colon is treated by means of hot saline enemas, and afterward there is introduced into the colon, with the patient in the knee-chest position, several ounces of a liquid culture of *Bacillus bulgaricus* and *Bacillus bifidus,* to which is added a small amount of malt sugar and boiled starch, the purpose being to change the character of the bacteria growing in the colon and thus encourage the healing of the infected mucous membrane."

"Too much cannot be said in favor of bran and liquid petrolatum [½ to 1½ ounces at every meal] used in combination." Address: M.D., Battle Creek, Michigan.

384. Kellogg, John Harvey. 1917. Bran the best laxative. *Good Health* (*Battle Creek, Michigan*) 52(10):471-73. Oct.
• ***Summary:*** Bran is a laxative because it "contains a suitable proportion of cellulose, a substance that the human stomach and intestines cannot digest." The "bowel requires a considerable amount of residue to stimulate it to activity. There must be sufficient bulk to stretch the intestine." The idea that bran irritates was started by millers and manufacturers of fine bolted flour.

On the title page of this issue, just below the title, is written: "A Journal Devoted to Race Betterment. Official Organ of the Eugenics Registry. The oldest health magazine in the world–Established 1866." Address: M.D.

385. Anderson, Hans Steele. 1917. Food and cookery. Revised fourth ed. Mountain View, California, and Kansas City, Missouri: Pacific Press Publishing Assoc. 163 p. Index. 18 cm.
• ***Summary:*** This is a book about vegetarianism. Soy is mentioned on pages 45 (see Lesson 11, Soy bean-rice loaf; Soy bean-rice patties), 84, 85.

Soy-related recipes: Stewed soy beans (with whole soybeans, p. 84). Rice and soy bean loaf (with "1½ cups

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soy bean purée" and "3 tablespoons soy bean broth" plus "1 cup steamed natural rice," p. 85). Rice and soy bean patties (using the "soy-bean-rice mixture described in the preceding recipe," p. 85).

The author was born in 1877. Address: Food expert, Loma Linda Sanitarium, California.

386. Joslin, Elliott Proctor. 1917. Treatment of diabetes mellitus, with observations upon the disease based upon thirteen hundred cases. 2nd ed. enlarged and thoroughly revised. Philadelphia and New York: Lea & Febiger. xvi + 17-559 p. See p. 506-07, 512, 531. Index. 25 cm. [50* footnotes]

• ***Summary:*** For details, see the 1916 edition. Joslin recommended the use of Hepco Flour, a soybean product, in his diabetic diets. "Diabetes is a disease in which the normal utilization of carbohydrate is impaired, in consequence of which glucose is excreted in the urine." Glycosuria is a related but different condition (p. 17). "If diabetes should continue to increase in the next 30 years at the same rate statistics show it has increased in the last thirty years it would rival tuberculosis as a cause of death" (p. 19).

Section VII, titled "Foods and their composition," begins with a subsection on "Diabetic foods" which states: "The improvement in the treatment of diabetes owes much to the recent dissemination of knowledge regarding the composition of foods. To the United States Government we are indebted for an excellent monograph by Atwater and Bryant entitled 'The Chemical Composition of American Food Materials, Bulletin No. 28, Revised Edition,' which was first issued in 1906." "The State of Connecticut, from its Agricultural Experiment Station in New Haven, has also published excellent special reports on diabetic foods, and from year to year adds analyses of new preparations" (p. 503). The subsection titled "What is a diabetic food?" (p. 504-05) gives a long definition. Such foods should contain much less carbohydrate than ordinary foods of the same class, the "label should bear a correct statement of the percentages of protein, fat, and carbohydrate present," and "The amounts of the different carbohydrates present should be declared on the label, *i.e.*, starch, sucrose, levulose, lactose, etc." The diabetic patients under Joslin's care "who have done best either never use special diabetic foods or only a few varieties, such as Akoll Biscuits, Barker's Gluten Flour, Casoid Flour, Hepco Flour..."

In the subsection titled "Substitutes for bread" are discussions of bran bread, gluten bread, and "various other substances." The latter states (p. 506-07): "Soya bean is also extensively used, and probably deserves a still wider introduction into the diabetic diet. The carbohydrate in it is unassimilable. It is used in the manufacture of Hepco Flour."

A table titled "Foods and their carbohydrate content" shows: Soy-bean meal [flour] contains 42.5% protein, 19.9% fat, and 34.0% carbohydrates (p. 512). Soy beans, when used as a fresh vegetable, contain 28.0% carbohydrates (range 19.3 to 39.0%) (p. 514). A long table titled "Table of so-called diabetic foods" (p. 519-30) is similar to that in the 1916 edition. Seven daily menus for a severe diabetic appear on p. 536-37. Address: M.D., Asst. Prof. of Medicine, Harvard Medical School.

387. Kellogg, John Harvey. 1917. The new method in diabetes: The practical treatment of diabetes as conducted at the Battle Creek Sanitarium, adapted to home use, based upon the treatment of more than eleven hundred cases. Battle Creek, Michigan: Good Health Publishing Co. 177 p. See p. 64-65.

• ***Summary:*** In the chapter titled "The feeding of diabetics," the section on "Legumes" (p. 64-65) states: "The soy bean is a remarkable legume which is two-fifths fat and one-third protein, giving a food content closely resembling fat meat with the addition of a small amount of carbohydrate–about one-fourth the total food value. The soy bean is a highly valuable food for diabetics."

A table titled the "Food value of legumes" compares the nutritional composition of "peas, beans, lentils, and soy bean." The latter contains 38% "protein calories" (32% of total calories come from protein), 48.0 fats calories (40%), 34.0 carbohydrate calories (28%), and 120.0 calories per oz. A table titled "Foods containing a moderate amount of carbohydrates" (p. 81-82) includes soy bean, peanuts, nuts of all sorts, Protose, and Nuttolene. A table titled "Caloric value of diabetic foods" (p. 164) includes "Beans, Soja," and "Gluten mush."

Note: This is the earliest document seen connected in which Dr. John Harvey Kellogg writes in some detail about soybeans; he praises them. He also thanks Miss Lenna F. Cooper (Director of the Battle Creek Sanitarium School of Home Economics) and Miss Corinne King (Head Dietitian of the Sanitarium) for their excellent recipes and standard bills-of-faire. Under each recipe is given per-serving nutritional information: Weight of one serving, and calories from protein, fats, carbohydrate, and total.

The book contains many recipes which use wheat gluten: Gluten egg toast (p. 129-30), Gluten bran bread (p. 143), Gluten griddle cakes (p. 143-44), 40% gluten puffs, Gluten bread, 80% gluten puffs (p. 144-45), 40% gluten mush, Cream gluten mush (p. 158).

Also discusses: Agar-agar (p. 107), Cream of almond soup (with almond butter, p. 119), almonds (p. 63, 145), chronic intestinal toxemia as a cause of diabetes (p. 17, 27, 106-07), constipation (p. 106-07), essential features of the new method (p. 19-27, 165-67), peanuts (p. 63), bran (p. 56, 106-07, 144), fasting (p. 24-26), lentils (p. 65), nut butter (p. 121-22), vegetable proteins (p. 61-63), vegetarian diet (p. 61, 166). Address: M.D., LL.D., Chief Medical Director, Battle Creek Sanitarium, Battle Creek, Michigan.

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388. Kellogg, J.H. 1917. Colon hygiene: comprising new and important facts concerning the physiology of the colon and an account of practical and successful methods of combatting intestinal inactivity and toxaemia. Battle Creek, Michigan: Good Health Publishing Co. 417 p. Index. 19 cm. "28th thousand."

• ***Summary:*** The Preface begins: "That most despised and neglected portion of the body, the colon, has in recent years been made the subject of much scientific study and research, with the result that a lively controversy has been stirred up over the question as to whether this organ should be permitted to remain a part of the "human form divine," or whether it should be cast out as worse than useless and unworthy of a place in the anatomy of the modern *genus homo.*

The Preface continues (p. 11-12): "Forty years' experience and observation in dealing with chronic invalids, and careful study of the results of the modern X-ray investigations of the colon, together with observations made at the operating table in many hundreds of cases, has convinced the writer -

"(1) That constipation with its consequences is the result of the unnatural habits in relation to diet and colon hygiene which prevail among civilized people."

Note: Dr. Kellogg observed this clearly about 30-40 years before Dr. Denis Burkitt, founder of the "fiber hypothesis."

"(3) That practically every case of constipation is curable, and in all but exceptional cases without the aid of surgery. It must be added, however, that by cure is not meant the working of such a miracle that the colon will perform its function normally without attention to diet or other means which encourage colon activity, but rather that by observing certain rules and the faithful and continuous use of safe and simple means, the colon may be made to perform its functions in a regular and efficient manner, without the use of irritating laxative drugs."

One or two rounded tablespoonsuls of sterilized bran should be taken at each meal, the amount depending upon the character of other foods taken.

The section titled "Meat eating" (p. 91-92) states: "Carnivorous animals have a short alimentary canal and a smooth colon. The movement of food stuffs along this short, smooth passage is rapid. This is necessary for the preservation of the life of the animal, as undigested remnants of meat long retained in the body necessarily undergo putrefactive changes with the production of ptomaines and poisons of a dangerous character. The digestion of meat leaves little residue, hence an animal that lives chiefly on meat has but little bulk to stimulate the bowels to activity, a condition which favors the putrefaction of undigested remnants, and this by creating an alkaline condition of the intestines soon develops constipation.

"A diet of fine-flour [white] bread and meat, with the usual concomitants of the ordinary bill of fare, would be an excellent prescription for the production of constipation. Within the last century there has been an enormous increase in the use of flesh foods in all civilized countries; and the use of modern milling processes has become almost universal. Fine flour bread and meat form a combination that is productive of prodigious harm, not only in causing constipation, but also in depriving the bones of the lime salts [calcium] which are essential for their development and maintenance. From the lack of lime salts comes decay of the teeth, and loss of the teeth leads to imperfect mastication of food. The increased consumption of flesh, and the substitution of fine-flour bread for the wheatmeal of our ancestors, are two calamities, the evil results of which upon the health of the men and women of the present generation are incalculably great."

The chapter on the "Bowel habits of uncivilized man" states (p. 377):

"In this country the percentage of patients in whom constipation is present is just the reverse of that in Uganda. Whereas in Uganda there are less than two per cent who are constipated, in civilized countries among sick people there is scarcely one in a hundred who is not constipated.

"'The rather coarse diet, largely grains and vegetables, has a favorable influence on the bowel movements. The stools are usually very large and fairly soft.'–A.H. Norton, M.D., Haiju, Korea."

Note: The word "laxative" appears on 58 pages in this book (Dr. Kellogg strongly disapproves of the use of "laxative drugs"), the word "bran" on 35 pages, the word "bulk" on 33 pages, the word "cellulose" on 25 pages, the word "constipation" on 14 pages, the term "sterilized bran" on 10 pages, and the word "laxatives" on 10 pages.

The following words do not appear in this book: "fiber" or "roughage." Address: M.D., LL.D, Superintendent of the Battle Creek Sanitarium.

389. Hall, George W. 1917? Food in war time–Vegetarian recipes for 100 inexpensive dishes. London: G. Bell and Sons, Ltd. 48 p. Reprinted in 2006 by Read Books. *

• ***Summary:*** This book retails for only one penny. Page 41: Ad by the "The International Health Association, Ltd., Stanborough Park, Watford, Herts." They make Granose, Protose, Avenola, Nuttolene, Health Coffee (made entirely from cereals), I.H.A. Biscuits. "Everybody who studies his health should become acquainted with our Health Foods, for they are manufactured in the interests of health and not merely for profit. For sale at all Health Food Stores and leading Grocers."

"I.H.A. foods are the very basis of food reform. They were the pioneers of the movement in this country and still stand unrivalled."

390. *Good Health* (*Battle Creek, Michigan*). 1918. The

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peanut crop. 53(2):75-76. Feb.
• ***Summary:*** "The peanut crop of the United States in 1908 was worth $12,000,000.00. In 1916, it was worth $40,000,000.00 and its value is growing every minute.

"Peanut butter first made at the Battle Creek Sanitarium and first introduced to the public in the pages of this journal, has become a household staple, and has helped to raise the peanut to the dignity of a food staple."

391. Kellogg, John Harvey. 1918. The soy bean. *Good Health* (*Battle Creek, Michigan*) 53(2):111. Feb.
• ***Summary:*** "A new food product has made its appearance in the United States, although up to the present time it has been little appreciated. This new food is a legume, the famous Japanese soy bean, which has for unknown centuries been a staple food in Japan and China."

"Another point in favor of the soy bean is the fact that the protein which it contains is a complete protein. That is, it is capable of fully supplying the place of lean meat, milk or eggs. It is for this reason that the Chinese and Japanese are able to prepare from the soy a very good substitute for milk. A very fine cheese is also made from the soy which is in many respects superior to ordinary cheese.

"The fat or oil of the soy is of excellent flavor and is more easily digestible than animal fats."

"The soy bean has been grown quite freely of late years in the South as a forage plant and for feeding cattle, but has been little used for human food. The chief obstacle in the way of its introduction as a food product has been the difficulty of preparing palatable dishes from it. Ordinary cooking even when prolonged left the beans so tough as to be hard to chew and unpalatable. A few months ago the interesting discovery was made that by cooking the bean under pressure it became remarkably tender and toothsome. A temperature of about 225 degrees F. is required and the cooking must be continued for four to six hours."

A recipe is then given for "pressure cooking" whole dry soybeans without a pressure cooker. "Soak the beans over night in sufficient water to cover them. Provide an empty stone jar with a tight fitting top, also prepare a strong brine by adding to a gallon of water five pounds of common salt. Put the soaked beans in the stone jar with a little salt, adding tomato sauce if desired. Screw in the top, taking care to make it tight. Immerse the jar in the brine and boil for five or six hours. The brine has a boiling temperature of about 225 degrees F. Higher temperatures may be obtained by adding chloride of calcium to the brine.

"Prepared in this way, the soy bean makes an exceedingly rich and savory dish with a meaty taste and very great staying and satisfying qualities."

Note 1. The USA entered World War I in April 1917. Starting in about 1916 there was great interest in finding alternatives to meat and dairy products, so that the latter foods could be shipped to American and allied soldiers.

Note 2. This is the earliest document seen (Oct. 2006) that uses the term "complete protein" (or "complete proteins") and also the earliest that uses this term in connection with soy.

Note 3. This is the earliest document seen (June 2013) that mentions the cooking of soybeans under pressure or in a pressure cooker. Note that the soybeans are apparently in a separate container inside the pressure cooker so that their skins do not clog the pressure-release valve. Address: M.D.

392. *Good Health* (*Battle Creek, Michigan*). 1918. The peanut. 53(5):284-85. May.
• ***Summary:*** "Although, since the writer–some twenty-five years ago [i.e., about 1893]–introduced the crushed nuts, or peanut butter, into the bill of fare of the Battle Creek Sanitarium, the use of the peanut in this form has rapidly extended and it has found its way to many thousands of tables.

"But the discovery, which has really placed the peanut upon a high pedestal among food stuffs of the finest quality, has yet to be mentioned. It is the fact that the protein of the peanut belongs to a special class very rare among the products of the vegetable kingdom, known to the chemist as 'complete protein.'"

"It has been known for some time that complete proteins were found in the almond and a few other choice nuts, but it is now known that the peanut, together with its cousin the soy bean, contains proteins of the very finest quality."

"It is certainly most comforting and reassuring to know that in the peanut, and we may add the soy bean, we have crop foods by means of which in a single season, through an organized effort in the farming communities of the southern and southwestern states, a sufficient amount of fat and protein could be produced to more than equal our annual production of meat and animal fats."

393. *Good Health* (*Battle Creek, Michigan*). 1918. Milk from beans. 53(5):285. May.
• ***Summary:*** "A recent patent application in England is based upon a process for the manufacture of artificial milk for human consumption It is claimed that a wholesome and inexpensive substitute can be made from peanuts, soy beans, sugar, water, and the mineral salts found in milk." Contains a summary of the process.

394. Kellogg, John Harvey. 1918. Method for changing and reforming the intestinal flora. *American Medicine* 24(6):432-40. June. (Vol. 13 in New Series). [2 ref]
• ***Summary:*** Contents: Introduction (buttermilk, Metchnikoff). 1. The low-protein diet. Results of recent experiments. 2. Increased intestinal activity (intestinal stasis vs. frequent bowel movements; need to supply the proper amount of bulk and lubrication). Lubrication necessary. 3. The displacement of harmful, putrefactive bacteria by

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harmless acid-forming bacteria (*B. bifidus* discovered by Tissier). Other anti-toxic ferments.

Dr. Kellogg advocates consumption of a meatless diet that is low in protein, high in carbohydrates, and high in bulk (cellulose, later called "fiber"), supplemented with *Bacillus bulgaricus* (found in buttermilk).

The article begins: "When Poehl, of St. Petersburg [Russia], more than thirty years ago, announced that the putrid stools of infants suffering form diarrhea could be made quickly to disappear by a buttermilk diet, the profession was incredulous; but within a few years the feeding of buttermilk to sick babies became almost a fad in Paris [France]. This led to a bacteriologic study of buttermilk." Grigoroff in Geneva [Switzerland] "discovered a vigorous growing acid-forming bacillus to which was later given the name *B. bulgaricus.* Tissier, then first assistant to Metchnikoff, in studying this new organism found that it possessed to a remarkable degree the property of suppressing the growth of putrefactive organisms, a property which he showed to be common to all acid-forming organisms.

"Metchnikoff soon announced this important discovery to the world, and the new bacillus was hailed as a panacea for nearly all human ills. Buttermilk germs in tablets or vials were soon being dispensed by druggists and later by milk venders [vendors] thruout the civilized world, but the results were disappointing... To change the intestinal flora is not an easy matter."

Several measures must be employed in conjunction successfully to change the intestinal flora. These are: 1. A diet that will produce in the intestine a media unfavorable for the growth of putrefactive and pathogenic organisms. 2. Increased activity of the colon. 3. The introduction into the intestine and especially the colon of large quantities of acid-forming or protective bacteria."

1. The low protein diet.–It is a matter of common observation that carbohydrates (starches and sugars) ferment, while proteins putrefy." In this respect there is a marked difference in the character of the stools of a vegetable-eating animal, like the sheep, and a carnivorous animal, like the dog. "How to get the required amount of carbohydrates into the colon is the problem." "Since the epoch-making experiments of Chittenden [at Yale in Connecticut], supplemented by those of Folin at Harvard [in Massachusetts], Hindhede of Copenhagen [Denmark] and other investigators, the sufficiency of a low-protein diet to support life and health can no longer be questioned." Folin shows that fruits, grains, and vegetables contain enough protein; flesh foods and even eggs may be excluded. At the Battle Creek Sanitarium, "for more than forty years, a low protein dietary has been employed as a prominent feature in the general therapeutic program employed in the treatment of more than one hundred thousand patients..."

2. Increased intestinal activity. To prevent the development of putrefactive bacteria, "acceleration of the food materials along the intestinal tract" is important. There is a clear relationship between intestinal stasis and resulting toxemia. Increased frequency of bowel movements is desirable, and a sign of good health and vitality. Primitive people typically have three bowel movements a day, one after every meal. "The chimpanzees and other big apes in zoological gardens move their bowels four to six times a day."

"It is usually quite easy by the methodical use of simple means to acquire the habit of three bowel movements daily and the results of this practice have always been found to be beneficial and in no way harmful. The method is quite simple. It is only necessary to supply the proper amount of bulk and lubrication required in each individual case. For giving the diet a proper amount of bulk, Nature has provided only a single food substance. This is cellulose... Cellulose is found in larger or smaller quantities in practically all vegetable foods... In fruits and fresh vegetables cellulose is found in a newly formed state in which it is very easily broken up, and it is on this account less valuable as bulk-producing material. It is easily acted upon by bacteria and broken up into gases resembling illuminating gas. The bran of cereals represents an older form of cellulose in which it has been transformed into wood and which is resistant to bacteria. Agar-agar represents a peculiar form of cellulose known as 'hemi-cellulose,' which is soluble in boiling water. This is also indigestible. All forms of cellulose are useful in giving bulk to the intestinal contents; but bran and agar-agar, known also as 'Japanese isinglass,' are most valuable.

"For efficient stimulation of the intestine it is necessary to take with the food daily from two-thirds of an ounce to one or two ounces of cellulose. This indigestible material or roughage should not be taken at a single dose but should be taken at each meal in such a way that it will be thoroly mixed with the various other food substances so that it will be equally distributed along the intestine. Care must be taken that requisite amount of cellulose is taken at every meal without exception. The omission to supply the necessary bulk for one single meal may give rise to stasis, the ill effects of which may last for several days."

Note 1. This is the earliest article seen (Sept. 2009) by Dr. John Harvey Kellogg advocating the importance of dietary fiber–which he refers to as bulk, cellulose, bran, and hemi-cellulose. He was one of the first American physicians to recognize the importance of dietary fiber and he emphasized its importance throughout his many years of teaching.

Note 2. This is the earliest document seen (Sept. 2009) by Dr. Kellogg that contains the phrase "changing the intestinal flora," or that advocates doing this.

Note 3. This is the earliest document seen (Sept. 2009) by Dr. Kellogg that mentions the *bifidus* bacterium or *B. bifidus. Bifidobacterium* is a genus of Gram-positive, anaerobic bacteria inhabiting the Gastrointestinal tract.

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Bifidobacteria are one of the major genera of bacteria that make up the gut flora, the bacteria that reside in the colon. Bifidobacteria aid in digestion, are associated with lower incidence of some allergies, and prevent some forms of tumor growth. Some bifidobacteria are used as "probiotics." Before about the 1960s, *Bifidobacterium* species were collectively referred to as "Lactobacillus bifidus". Address: M.D., Battle Creek, Michigan.

395. *Good Health* (*Battle Creek, Michigan*). 1918. Biologic living. 53(7):370. July.
• ***Summary:*** "We must return to the simpler life." Like the Greek and Roman poets, we need a life more in touch with the natural world. Address: M.D.

396. *Good Health* (*Battle Creek, Michigan*). 1918. Peanuts as a basis of food. 53(9):564. Sept.
• ***Summary:*** Discusses the remarkable growth of the peanut industry in the USA; it doubled during the past year to over $105 million. "There were 50 peanut-crushing establishments in 1916 and the oil produced was slightly over 26,000,000 gallons... Edible peanut oil is being substituted for olive and corn oils."

397. Morse, W.J. 1918. Re: Letter from Tennessee Board of Control. Letter to Mr. R.A. Oakley, USDA, Washington, DC, Nov. 18. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "Dear Mr. Oakley: Relative to the attached letter from Tennessee Board of control requesting information on the growing of crops in Tennessee for both farm and vegetable products, will say that the soy bean has given most excellent results, both for forage and for food. It might be well to call the Board's attention to the work being done by the Nashville Agricultural and Normal Institute located at Madison, Tennessee. This Institute has a very large farm and produces practically all of its food for the members of the Institute as well as the Sanitarium.

"The Horticulturist in charge of the Institute is Prof. Floyd Brailliar, who has done a considerable amount of work with different food products from the soy bean. At the present time they have a factory for canning several different soy products from the soy beans which are grown on their farm.

"Of course, the Cowpea is another crop which may be used both for forage and for food. The Blackeye have given very good results in Tennessee and no doubt would furnish them with a great amount of food. I am attaching here with our available publications on the Soy Bean and Cowpea.

"Very truly yours,..."

Note: This is the earliest document seen (Dec. 2013) that mentions soy in connection with the Nashville Agricultural Normal Institute (NANI, in Madison, Tennessee; named Madison College after 1937).

Location: National Archives, College Park, Maryland. Record group 54–Bureau of Plant Industry, Soils and Agricultural Engineering. Subgroup–Div. of Forage Crops and Diseases. Series–General Correspondence, 1905-29. Box 92–Morgan-Morse.

Sent to Soyinfo Center by Matthew Roth of Rutgers Univ., March 2012. Address: Forage-Crop Investigations, Bureau of Plant Industry, USDA, Washington, DC.

398. *Madison Survey* (*Madison, Tennessee*). 1919. The triple alliance. 1(1):2. Feb. 26.
• ***Summary:*** "The triple alliance is complete when a health food factory is conducted in connection with a school and a sanitarium, and the three are located on the land...

"Never in the history of our country has there been such a demand for vegetable meats. Scientists are experimenting with new vegetable products and new processes of food combination. The school at Madison has had its experience in raising soy bean and other leguminous crops, and has recently begun the manufacture of health foods."

Note: *The Madison Survey* began publication on 26 Feb. 1919 and was still being published quarterly (circulation 800+) in March 1993.

399. *Madison Survey* (*The*) (*Madison, Tennessee*). 1919. Serial/periodical. Madison, Tennessee: The Nashville Agricultural Normal Institute (later renamed Madison College). Vol. 1, No. 1. 26 Feb. 1919. Frequency: Weekly.
• ***Summary:*** See next page. This periodical, printed by the Madison College Printing Department, documents the college's pioneering work with soyfoods, soybeans, vegetarianism, and wheat gluten–as well as with a totally new kind of education. The school, founded in 1904 by seven Seventh-day Adventist friends, was located about 10 miles north of Nashville on the Cumberland River. It was known initially as the Nashville Agricultural Normal Institute (NANI). It did not take the name "Madison College" until 1937.

A 1936 article in *The Madison Survey* (July 15, p. 116) states: "Long before the Printing Department assumed its present proportions, it began printing and circulating the little sheet which for nineteen years has been making its weekly visits to the homes of thousands. The circulation has varied from seven thousand to ten thousand copies each issue. It literally goes to the ends of the earth... The message of the Survey has been constant through the years. It is a message to lay church members to train for more efficient service to the Master. It has been the advocate of rural life, rural education, rural health centers. It speaks for the school and all its activities at Madison.

By April 1939 *The Madison Survey*, which was published twice a month, had a mailing list of 14,500. It was mailed to every U.S. state and to 44 foreign countries.

Concerning the title and subtitle of the newsletter on page 1, before 19 April 1939 the subtitle read: "Published by

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The Madison Survey

Published by
The Nashville Agricultural Normal Institute
Madison, Tennessee

VOL. I MARCH 5, 1919 No. 2

The New School

THE War emphasized the importance of a change in educational methods. Intensive training, as demonstrated in the preparation of soldiers, has laid bare the faults of pre-war methods in many institutions.

Practical subjects are coming to the front, and all unnecessary matter is being weeded out. "A genuine change of thoughts and methods of teaching" was called for a number of years ago, and as our younger schools were started these were told "that in our educational work we are not to follow the methods that have been adopted in our older established schools. There is among us, too much clinging to old customs, and because of this we are far behind where we should be."

We have "laid yokes on the shoulders of our students." These yokes are prolonged courses of instruction, packed and crowded to the limit with a large amount of subject matter that the student cannot, and never should use in after life. "If we had a thousand years before us, such a depth of knowledge would be uncalled for."

❖

STUDENTS are baited on by degrees and diplomas to spend year after year in study when they should have a "speedy preparation" and hasten out into the world to do their God-appointed tasks.

"I hope that no one will receive the impression from any words I have written that the standard of the school is to be in any way lowered. There should be most diligent and thorough education in our schools." We are not to cheapen education, but we are to sift out the chaff and lay greater emphasis upon essentials.

❖

ATTENTION has been called especially to the need of strengthening the courses of instruction and improving the methods. *The New York Independent* of January 28, 1919, contains an article concerning the opening of an educational institution in New York City, called "a novel departure from traditional methods." The qualifications for entrance are not "so many units of language, mathematics, and science, dutifully acquired." Nobody is debarred "for lack of a college or high school diploma."

Describing the methods of this "novel departure," *The Independent* says, "It will try to get rid of the perfunctory reading, the mere listening to lectures, and the mechanical examinations of the ordinary university. The teaching will be personal and informal, and 'field work' is to be a special feature."

❖

THAT it is Madison's effort to keep abreast of the times in the development of practical education and intensive training is shown by recent agitation. The school has been studying better methods of work in its manual departments, and endeavoring to determine how to place all manual work on a stronger educational basis.

Manual work should be an expression of

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Nashville Agricultural Normal Institute, Madison College, Tennessee." By 19 April 1939 it read: "Published by Madison College [Nashville Agricultural Normal Institute]." The words "Madison College, Tennessee" now appeared on the same line as the volume and issue number, and the date.

400. *Madison Survey* (*Madison, Tennessee*). 1919. Beans. 1(2):5. March 5.
• ***Summary:*** "During the past two years the school [Nashville Agricultural Normal Institute, renamed Madison College in 1937] has tested many varieties of soy bean, arriving at the following conclusions: *Ito San* and *Manchu* are perhaps the earliest edible seeded varieties, but the plants are too small to be profitable for a general hay crop.

"*Haberlandt* is a heavy yielder of the edible seeded varieties.

"*Mammoth Yellow* proves the best general bean for this locality.

"*Peking*, the black seeded variety, produces the most good hay.

"*Virginia* grows full six feet tall, is a semi-climber, and so goes well with ensilage corn. It is a very heavy seeder, but by most people is considered too strong in flavor for human food.

"The soy bean lima, or *Hito* [sic, probably *Hahto,* see Pelton 1920], is an exceptionally good garden vegetable, making a very heavy yield of seed. The green beans are as large as a small lima, and many people think they have a better flavor."

Note 1. The school got these soybean varieties from W.J. Morse of the USDA. (See *Madison Survey,* 14 May 1919, p. 4, and 22 Oct. 1919, p. 4).

Note 2. This is the earliest issue of the *Madison Survey* and the earliest document (Aug. 2011) seen that mentions the "soy bean lima" (see also 14 May 1919 issue).

401. *Madison Survey* (*Madison, Tennessee*). 1919. Seven reasons for not eating meat. 1(2):4. March 5.
• ***Summary:*** "People discarding the use of flesh foods, and physicians prescribing a non-flesh dietary are often asked to give their reasons.

"1. Muscular strength does not depend on the use of flesh food. This fact is attested by millions who know only a non-flesh diet. Had meat been essential, it would have been a part of man's prescribed diet in the beginning.

"Showing that, biologically, man is not a carnivorous animal, Cuvier, the great naturalist, says that the natural food of man, judging from his structure, appears to consist of fruits, roots, and the succulent parts of vegetables. And this is corroborated by the Scripture (Genesis 1: 28) that originally man's diet was fruit, grains, and nuts.

"2. The meat eater runs a heavy risk of overloading his system with protein. Chittenden and others have proved that the proteid requirements of the human body are so small that it is difficult to add animal flesh to other ordinary foods without going beyond the prescribed limit. Graham Lusk tells us that the stimulating effect of flesh foods, due to the poisons and toxins they contain, tempt one to over-eat as he is not tempted by vegetable proteins.

"3. Meat-eating shortens the life by introducing toxins and poisons. Over-loading the system with protein in any form is a frequent cause of disease, but that the protein of meat brings added burdens to the eliminative organs is the testimony of Doctor Bishop, recognized authority on arteriosclerosis,–premature old age,–who says, 'Vegetable protein foods are free from toxins with which flesh foods abound.' Doctor Bishop insists that a diet free from animal proteins is the most essential part of his treatment for hardening of the blood vessels.

"4. Meat eating is an active cause of tuberculosis and cancer. 'People are continually eating flesh that is filled with tuberculous and cancerous germs. Tuberculosis, cancer, and other fatal diseases are thus communicated.'

"The American Medical Journal is authority for the statement that, in view of the diseased condition of animals, practically all meat on the market contains more or less disease.

"Bulkley, an authority on cancer, boldly announces that flesh foods are the most important cause of cancer, and his treatment consists 'in an absolutely vegetarian diet.'

"5. Meat eaters are more susceptible to fatigue than non-meat eaters. So says Buttner. The reason is apparent, for the meat eater has added to the usual work of his eliminative organs that accumulation of animal poisons that was on its way to excretion when the animal was slaughtered.

"6. A diet of grains, fruits, nuts, and vegetables contains all the nutritive properties necessary to make good blood. A flesh diet is stimulating, and creates an appetite for condiments, tobacco, and strong drink.

"7. A meat diet is anything but economical. That it requires over thirty pounds of corn to produce one pound of beefsteak, has been determined by Professor Henry of the University of Wisconsin."

402. *Good Health* (*Battle Creek, Michigan*). 1919. The protein of the soy bean. 54(3):185. March.
• ***Summary:*** "The extensive use made of the soy bean in Japan and China as a food has led in recent years to a careful study of its composition, both by chemical methods and by the new method of biological analysis through feeding experiments developed by Mendel and Osborne, Funk, McCollum and others. These experiments have shown that the protein of the soy bean is highly superior in character."

403. *Madison Survey* (*Madison, Tennessee*). 1919. Sweet clover. 1(9):2. April 23.
• ***Summary:*** "Early ensilage corn and soy beans were planted the first week in April."

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404. Nashville Agricultural Normal Institute, Food Department. 1919. Re: Soy bean and peanut products. Letter to Mr. George Washington Carver, Tuskegee Normal and Agricultural Institute, Tuskegee, Alabama, April 29. 1 p. Typed, without signature on letterhead. [1 ref]

• ***Summary:*** "Yours of April 10 received. We have sent you two cans of our Soy bean product. We also can soy beans in three ways, plain, with tomato, and with nut meat.

"We do not know as anything we have would do to exhibit except our soy bean flour, and that you say you make yourself. We have never seen a sample of the milk though we have tried to make it many times. We would be much pleased to receive a little sample of you. Do you think you can make a success of producing milk from the soy bean? I hope the soy bean food reaches you O.K." Initials Dp or Sp.

Handwritten note on bottom of letter: "Is the wood stain you made from the soy bean of much use? Would be pleased to hear how you are succeeding with these experiments.

Note 1. Names printed at the top of this letterhead are E.A. Sutherland, M.D., N.H. Druillard, W.F. Rocke [farm manager of the Madison school], and M. Bessie De Graw.

Note 2. Letter from Sam Yoshimura. 1981. March 19. When Sam attended Madison College from 1937-1943 Nut Meat was made from peanuts, water, and seasonings.

Location: Library of Congress, Washington, DC. Microfilm of The George Washington Carver Papers in the Tuskegee Institute Archives, Roll 6 #0152. Address: Madison, Tennessee (near Nashville). Phone: Walnut 1789-W.

405. Kellogg, John H. 1919. The peanut a great food producer. *Good Health* (*Battle Creek, Michigan*) 54(4):197. April.

• ***Summary:*** "The peanut is making great progress these days as a food resource, and deservedly so." "But the superior character of the peanut as a food producer becomes still more apparent when compared with meat production. To produce a fat steer requires two acres of pasture land and two years, or the equivalent of four acres, to produce 75 lb of protein and two hundred and forty lb of fat, or 18.75 lb of protein and 60 lb of fat for one acre.

"In other words, the peanut produces ten times as much protein and five times as much fat to the acre as can be obtained from one acre of pasture in the form of beef, and this not taking into account the corn and other concentrates fed to complete the fattening for market."

"Sometimes the farmer turns his pigs into the peanut field instead of harvesting the nuts. He imagines that he is in so doing achieving a wonderful economy, whereas he is wasting at least nine-tenths of the food which he has toiled to produce. It will take from ten to twenty lb to make a pound of pork; and the value of the pork as a foodstuff when produced, will be less than that of an equal weight of peanuts."

406. **Product Name:** Nut Meat (Made from Peanuts).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1919 April.
Ingredients: Peanuts, water, seasonings.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Nashville Agricultural Normal Institute, Food Department. 1919. April 29. Letter to Mr. George Washington Carver, Tuskegee Normal and Agricultural Institute, Tuskegee, Alabama. "Yours of April 10 received. We have sent you two cans of our Soy bean product. We also can soy beans in three ways, plain, with tomato, and with nut meat."

Madison Survey. 1919. July 16. p. 4 "The Food Factory." "A visitor finds the big oven full of crackers, and hundreds of pounds on the cooling racks... The steam cooker is filled with cans of nut meat; mills at the south end of the room are grinding peanut butter, hundreds of pounds; and the blancher, tended by one of the young women, is handling peanuts, not by the pound but by the ton."

Madison Survey. 1922. March 8. p. 3. "Madison Food Factory products." "The food factory puts out Nut Meat, Savory Meat, and Soy Bean Meat."

Note: Madison Foods started in 1918. The first manager and treasurer was Mrs. Nellie Druillard (affectionately called "Mother D"). Mr. and Mrs. Andrew Wheeler were the first in charge of food production.

407. **Product Name:** Peanut Butter.
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1919 April.
Ingredients: Incl. peanuts.
New Product–Documentation: Madison Survey. 1919. July 16. p. 4 "The Food Factory." "A visitor finds the big oven full of crackers, and hundreds of pounds on the cooling racks... The steam cooker is filled with cans of nut meat; mills at the south end of the room are grinding peanut butter, hundreds of pounds; and the blancher, tended by one of the young women, is handling peanuts, not by the pound but by the ton."

Madison Survey. 1922. June 14. p. 3. "The Food Factory." "A man and his wife, members of the faculty, have charge of the food department, where are manufactured various nut and soy bean meats, malted nuts..., peanut butter, and other health foods."

Note: Madison Foods started in 1918. The first manager and treasurer was Mrs. Nellie Druillard (affectionately called "Mother D"). Mr. and Mrs. Andrew Wheeler were the first in charge of food production.

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408. *Madison Survey* (*Madison, Tennessee*). 1919. From the farm. 1(11):3. May 7.
• ***Summary:*** "The first soy beans for grain and seed were planted the 23rd of April. This is rather earlier than previous plantings of the main crop. The object is to have the beans mature before the fall rains."

409. *Madison Survey* (*Madison, Tennessee*). 1919. Beans. 1(12):4. May 14.
• ***Summary:*** "From the United States Department of Agriculture, the school has received one and one-half bushels of the soy bean lima [for use as a green vegetable], description of which was given earlier in *The Survey* [probably March 5, p. 5]. It has received, also, 15 pounds of a new, edible, yellow-seeded soy bean [probably Hahto or perhaps Easy Cook], similar to Mammoth Yellow, but better for table use as it cooks more readily than any other soy bean known. Of this yellow-seeded soy bean Professor [sic, Mr.] Morse writes that the Department was testing the cooking qualities of about 800 varieties of soy beans when it discovered that this particular bean cooked in about twenty minutes, while other soy beans needed to be cooked from three to six hours."

410. *Madison Survey* (*Madison, Tennessee*). 1919. The city problem. 1(14):1-3. May 28.
• ***Summary:*** "Come out of the cities has been Madison's slogan. By precept and example this call has been given for the past fifteen years." Ellen G. White, leader of the Seventh-day Adventist movement, has said: "In many cities it is advisable for a restaurant to be connected with treatment rooms. The two can co-operate in upholding right principles."

Madison has established a vegetarian cafeteria in nearby Nashville, Tennessee. "Miss Mabel Robinson gave a number of interesting features of the cafeteria work. She told also of the training course for cafeteria workers, and of the need of help in the form of good bakers, efficient cooks, and people capable of presenting the diet question to enquirers."

411. *Madison Survey* (*Madison, Tennessee*). 1919. Instead of meat. 1(15):3. June 4.
• ***Summary:*** "That it is not necessary to take nourishment in the form of flesh meats is demonstrated all about us. The government is spending thousands of dollars to place before people the food value of different vegetables and other products of the soil. Nothing illustrates this better than the agitation of the soy bean question. Here is an edible seed, that until a few years ago, was practically unknown to our country. The Orient was feeding its multitudes before we were awake to the value of a large class of legumes."

"Miss McKay has returned to Madison after several months at Carthage, Missouri, and she tells of the desire she met from people of all classes to learn how to prepare health foods. In response to urgent requests, she held classes and gave demonstrations. When people wanted to know where to buy foods that will take the place of meat, she told them of the Madison food factory, and of its vegetarian meat and various soy bean products."

412. *Good Health* (*Battle Creek, Michigan*). 1919. Vegetarian Orientals. 54(6):307. June.
• ***Summary:*** "Confucius, the great Chinese philosopher, said: 'I have never known the taste of meat.' And through all the centuries the Chinaman has known from this fact that meat is not essential for the development of mind or body, and so has eaten little meat. Millions of Chinese are consistent Buddhists and refuse to eat flesh of any sort."

A Chinese poem, titled "The Cow's Lament," reads: "When I'm a man and you a cow.

"Then I'll treat you as you treat me now."

"The Chinese and the Japanese, as well as our own learned chemists and physiologists, have demonstrated the competency of the soy bean to take the place of meat."

413. *Good Health* (*Battle Creek, Michigan*). 1919. What we lose in rejecting bran. 54(6):307-08. June.
• ***Summary:*** This article begins: "The bran of wheat contains the chief store of some of the most precious elements of the grain." It is the chief source of lime [calcium] as well as of roughage. Dr. Kellogg recommends that we consume "entire wheat" [whole wheat] in the form of bread.

414. *Madison Survey* (*Madison, Tennessee*). 1919. The food factory. 1(21):4. July 16.
• ***Summary:*** "A visitor finds the big oven full of crackers, and hundreds of pounds on the cooling racks... The steam cooker is filled with cans of nut meat; mills at the south end of the room are grinding peanut butter, hundreds of pounds; and the blancher, tended by one of the young women, is handling peanuts, not by the pound but by the ton."

Note 1. Though soy beans are not mentioned, they were being canned at the food factory by April 1919.

Note 2. Some of this food is probably going to the Nashville Cafeteria.

415. *Madison Survey* (*Madison, Tennessee*). 1919. The Atlanta cafeteria. 1(21):3. July 16.
• ***Summary:*** Brother and Sister Book, Seventh-day Adventists, have recently opened a small vegetarian cafeteria in Atlanta, Georgia. It "gives opportunity to reach people who are anxious for a scientific vegetarian diet."

416. *Madison Survey* (*Madison, Tennessee*). 1919. Madison activities. 1(23):3. July 30.
• ***Summary:*** "From the bimonthly report of department activities, read at Union Meeting on the thirteenth of July, the

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following data is gleaned:... Ensilage corn has been planted on the barley stubble, and soy beans on the oat stubble, after discing with a tractor.

"Products of the food factory are becoming known. The largest order during the week called for over $400.00 worth of foods, to be used at one of the state meetings.

"Six to ten quarts of goats milk is being used daily by members of the school family."

Note: This is the earliest document seen (Feb. 2003) that mentions the use of a tractor for soybean production.

417. Palen, L.S. 1919. The romance of the soya bean. *Asia and the Americas* 19(1):68-74. July. Illust.

• ***Summary:*** The author, who begins by acknowledging his indebtedness to Dr. Yamei Kin, Dr. John Harvey Kellogg, and Mr. W.J. Morse for much of the material in this article, gives an overview of the soya bean worldwide. The article contains excellent photos (many by Adachi): (1) Stacks of soya bean cake in open storage on Dairen wharves, South Manchuria. (2) Horses plowing soybean fields in North Manchuria. (3) Modern machinery [a huge steam-powered tractor] used in bean cultivation in remote parts of Manchuria where foreign interests are involved. A Western man and woman ride horses nearby. Caption: "To the Manchurian farmer, with his laborious methods of hand cutting and hand winnowing, the introduction of modern Western farming methods would spell many-fold prosperity." Note: This is the earliest document seen (Feb. 2003) that shows a photo of a tractor in connection with soybeans. (4) Stacks of soybeans piled high in sacks in Manchuria as far as the eye can see. (5) Soybeans stored in huge cylindrical, 20-foot-high osier bins, each covered with a conical top.

Soy oil is purified and flavored with an admixture of olive oil for use as a salad oil. It also forms the basis of some of our butter and lard substitutes. "What Mr. Li Yu-ying accomplished in Paris in the establishment of a Laboratory of Research and of a factory for the production of all the products derived from the soya has been the forerunner of activity on the part of certain independent Chinese companies in America and of government and private investigations."

"In general the use of whole soya beans has not been attended with much success because of the ever present flavor of the oil content and because, with the ordinary method of cooking, they remain hard and unpalatable; but it has been found that cooking at a temperature somewhat above the boiling point, say from 220 to 230 degrees, breaks up the cellulose structure and develops a richness of flavor that is not obtainable with the lower temperature."

"By far the most extensive use of the soya is in the products manufactured from it. And it is here that Dr. Yamei Kin, the talented Chinese physician, is making her chief studies under the direction of the Pure Foods Division of the Department of Agriculture, with the purpose of spreading a knowledge of the soya among Americans. For convenience of consideration the products studied may be divided into sauces, curds, cheeses and milk.

"Of the sauces the liquid form is already familiar, although unrecognized, perhaps, by a large percentage of Occidentals through the work of early English traders in bringing back the base of the now famous Lea and Perrins Worcestershire Sauce. This original Chinese *shi-yu* was highly spiced and became a well recognized adjunct to many an English meal. Following the example of Lea and Perrins, others have put out sauces with the same base without, however, attaining the same success, because the makers did not understand that there are many kinds of soya sauce. While they are all made by the same ferments and in the same general way, they differ very greatly in quality according to the locality and to the manufacturer, just as wine, though made from the identical kind of grape and by the same process of fermentation, may be a very different article from different hands. It takes several months to make this liquid form of sauce, while the best kind requires a year or more to attain the finest flavor and mellowness. The hot condiment added by Lea and Perrins is not favored by the Chinese, since according to their taste it detracts from a wide use of the soya sauce."

Tofu (spelled to-fu) is discussed in detail. "There are records to show that it has been used since at least nine hundred years B.C. *To-fu* making is a staple industry in every little community. Usually it is done at night so that the fresh curd will be ready for the morning demand in the market, or for peddling around the streets. It provides, for the fraction of a cent, the indispensable equivalent of meat and affords very often the explanation of how the Chinese laborer does so much work on what is purely vegetable diet, popularly supposed not to contain much protein. *To-fu* is made in many different forms and the bean stalls occupy quite as large and prominent places in the city market as the fish and meat stalls...

"Cheeses are also made from the growth of cheese-making moulds on *tofu.* The Chinese resident in America regularly import a certain highly flavored red bean cheese for their own use...

"Perhaps the greatest contribution of the soya to the life of the Occident will be in its form of milk. Back in the golden era of peace there had been established in London a soya bean milk factory which was prepared to place its product regularly on the market, and there were said to be plans consummated for the erection of two others at Manchester and Liverpool; but of what the development has been we have no definite information. In Shanghai, Peking and Dalny Chinese companies are supplying hospitals and individuals with an 8 or 10 ounce bottle of concentrated milk per day at a cost of $1.00 Mex per month.

"In its competition with the cow the legume has in its favor the following facts: Soya milk can be produced with

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less contamination; it is tuberculosis-free; its caseins break down much more readily than the caseins of cows' milk and do not form curds in the stomach in the same degree...

"By those who advocate and urge a vegetarian diet, a very strong bill can be drawn in favor of this oriental substitute. In these days when war has thrown new light on many of our life problems, it will be easier to secure acceptance for their contention that the world must for both economic and physiological reasons adopt the biological diet. It has been calculated that, roughly speaking, it takes 100 pounds of foodstuffs to produce 3 pounds of beef and that a given acreage of land can support five times the population if the necessary protein can be derived directly from vegetable sources rather than going through the roundabout way of an animal form, imposing upon the body the burdens incident to taking in the toxines [toxins] resultant from the catabolism of the cells of the animal, and from possible putrefaction. In China the Buddhist priests and people who enter the various temperance societies all depend on varieties of *to-fu."*

418. *Madison Survey* (*Madison, Tennessee*). 1919. City and rural work co-ordinated. 1(27):4. Aug. 27.
• ***Summary:*** Nashville is within easy reach of the school and the vegetarian cafeteria there is operated by its Seventh-day Adventist students. "It is nearly two years since the effort began. The misses Robinson and Stout were the pioneers, assisted in the beginning by Brother Guy Jenkins. Later Miss McKay united with the young women, and Mrs. Gotzian, for years a friend of Southern self-supporting enterprises, and others assisted financially in equipping new quarters for the cafeteria." Some 120 to 150 people are fed daily.

"The cafeteria is an educational institution quietly yet surely training the appetites of its patrons. For instance, it stresses the use of whole wheat or graham bread, and at present only two or three patrons even ask for white bread. Serving no meat, no tea, no coffee, selecting the combination of foods for those who are not well, it is a real factor in the proclamation of the truth of healthful living, called 'the right arm of the message.'"

The treatment rooms in Nashville also serve a meatless diet.

419. *Madison Survey* (*Madison, Tennessee*). 1919. Asheville Cafeteria. 1(33):3. Oct. 8.
• ***Summary:*** "When one walks into the Asheville Vegetarian Cafeteria [in North Carolina], he finds himself glancing about the walls and reading the striking notices and signs posted in conspicuous places. The cafeteria is conducted by I.E. Seibert and wife, formerly of California, and once Madison students. The room is centrally located, and is easily pointed out because it is opposite the post office."

One of the posters reads: "I have eaten the cow that ate the bran, And I felt like a cannibal man. I chewed up corpses, fresh and stale, And washed the down with a bottle of ale..."

420. *Madison Survey* (*Madison, Tennessee*). 1919. Soy bean lima. 1(35):4. Oct. 22.
• ***Summary:*** "Professor [sic, Mr.] W.J. Morse, forage crop expert of the United States Department of Agriculture, spent the day with the School family not long ago, and soy bean limas, one of the new variety of beans which he introduced into the country, were served for dinner that day. Professor Morse sent us the seed last spring, about one-half bushel of it. This was the largest amount of seed furnished to any one outside Government experiment stations, consequently the School will have the largest stock of seed this fall to be found anywhere in this country aside from that grown directly by the Government.

"The soy bean lima as it grows is hard to shell, but Government tests demonstrate that if the green beans are immersed in boiling water for three to five minutes they shell easily. We have tried it, and it is true. This bean is about the size of the Sieva lima, or the Southern butter bean, and it is the mildest and best flavored of all soy beans." Note: This is the earliest English-language document seen (Jan. 2009) that uses the word "Sieva" in connection with lima beans, or that uses the term "Sieva lima" to refer to a type of butter beans.

421. *Madison Survey* (*Madison, Tennessee*). 1919. Adzuki beans. 1(35):4. Oct. 22.
• ***Summary:*** "The School [Nashville Agricultural Normal Institute, renamed Madison College in 1937] has been experimenting with a half dozen varieties of the Chinese bean, the Adzuki, which is harvested the latter part of September. One variety proves of special merit because it carries the pods well above the ground so that it can be mown with a machine without cutting the pods, and it does not scatter seed easily. It cooks readily, has a flavor somewhat similar to lentil, and is very agreeable to those who have tasted it."

422. *Madison Survey* (*Madison, Tennessee*). 1919. Food factory. 1(38):6. Nov. 12.
• ***Summary:*** It "has been necessary to raise the price of foods. It is our purpose to make healthful foods, and since this is not a money-making enterprise, prices will be kept as low as possible."

423. *Madison Survey* (*Madison, Tennessee*). 1919. City work. 1(38):6. Nov. 12.
• ***Summary:*** "The Nashville Cafeteria reports having the largest patronage in the history of its work, serving something over two-hundred [vegetarian] dinners on Tuesday. Thursday evening Misses Stout and Robinson of the cafeteria force assisted in a food demonstration at the tent on North Nashville, and there has come to us a neat folder containing sample menus, recipes, and suggestive food

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combinations given to the public at this demonstration."

424. Hansen, I.A.; Miller, H.W. 1919. Medical missionary department: What shall we eat?–No. 2. *Advent Review and Sabbath Herald* 96(49):29-30. Dec. 4.
• ***Summary:*** "White bread, white rice, and similar demineralized foods have certainly weighed in the balances and found wanting. Analysis of whole grain shows it to contain elements corresponding quite closely to those found in the structures of the body..."

"Secure natural brown rice from the grocers and cook the cereal until well done, letting the water boil away so as to leave it fairly dry and not 'soupy.' Cook whole wheat in a fireless cooker overnight." Address: 1. Secretary; 2. M.D., Asst. Secretary: General Conference Medical, Takoma Park, Maryland.

425. *Madison Survey* (*Madison, Tennessee*). 1919. Medical missionary volunteer activities. 1(43):1-3. Dec. 17.
• ***Summary:*** "A group of workers, including Miss McKay, formerly a member of the Madison faculty, has opened a cafeteria in Birmingham, Alabama. Their card reads: Vegetarian Cafeteria–Number 3. Health Foods. Home Cooking. 117 1-2 N 21st St., Birmingham, Ala. This group has purchased a farm as a rural base for city work."

426. *Good Health* (*Battle Creek, Michigan*). 1919. Biologic living. 54(12):681. Dec.
• ***Summary:*** An outline of the main tenets of Biologic living on the front page of this issue. It begins: "Biologic living is simple, sane, scientific, successful and satisfactory."

427. Kellogg, John Harvey. 1919. The new method in diabetes: The practical treatment of diabetes as conducted at the Battle Creek Sanitarium, adapted to home use, based upon the treatment of more than eleven hundred cases. Battle Creek, Michigan: The Modern Medicine Publishing Co. 195 p. See p. 64-65, 124-26, 166. Illust. Index. 19 cm.
• ***Summary:*** Although not indicated on title page, this is a revision of the 1917 edition. The information on the soya bean in the chapter titled "The feeding of diabetics" is identical to that found in the 1917 edition of this book. But the chapter titled "Recipes for foods suitable for diabetics" (p. 119-84) contains the earliest soyfoods recipes seen published by any Seventh-day Adventist. In this chapter are recipes for "Cream of soy bean soup" and "Soy bean and tomato soup" (p. 124-25; each with "soy bean purée" [cooked ground soybeans]), and "Soy bean salad" (with "½ cup cooked soy beans," p. 166).

Note 1. This is the earliest book seen (Oct. 2004) written by a Seventh-day Adventist that contains one or more recipes using soybeans or soy ingredients.

Note 2. This is the earliest English-language document seen (June 2013) that uses the term "cooked soy beans" (or "cooked soy-beans") to refer to whole soybeans that have been cooked and ground.

The book contains many recipes which use wheat gluten: Gluten egg toast (p. 152), Gluten bread, Gluten bran bread (p. 156), Gluten bran puffs, Gluten griddle cakes, 40% gluten puffs (p. 157-58), 80% gluten puffs, Gluten wafers (p. 158), Cream of gluten gruel, and Gluten mush (p. 170).

Also discusses: Almonds, peanuts (p. 63), bran (p. 56, 170), lentils (p. 174), vegetarian diet (p. 61). Address: Chief Medical Director of the Battle Creek Sanitarium, Battle Creek, Michigan.

428. Smith, Joseph Russell. 1919. The world's food resources. New York, NY: Henry Holt and Company. 634 p. See pages 326-27, 360-65. [1 ref]
• ***Summary:*** Contains a brief overview of the soybean, soybean production, and soybeans as a food product, with several long excerpts from Dr. J.H. Kellogg, and the *USDA Year Book of Agriculture* (about food uses, including shoyu or soy sauce).

A photo shows "Soy bean curds and cheeses in a Japanese factory," in large earthenware containers (p. 362). Note: This photo of "curds and cheeses," taken by Frank N. Meyer, shows the production of fermented tofu, probably in a Chinese factory (See: {1} Morse 1918. "The Soy-bean Industry in the United States." Plate IV, fig. 2; {2} Piper & Morse. 1923. *The Soybean.* p. 242).

Concerning use of food resources, in the USA and Canada, the chief goal of agriculture is not to feed humans but to feed animals. This was true even in the food crisis of 1918 [at the end of World War I]. About 5,191 million bushels of grain are now grown in the USA; in descending order of importance (in million bushels) they are corn (2,863), oats (1,422), wheat (643), barley (195), rye (54), and buckwheat (14). Of this total of 5,191 million, the American people eat less than 550 million (14.1%). Adding the 340 million bu exported, the total amount used for human food was 900 million bu (17.3%). "The rest, 4,300 million, went to our four-footed brethren, who outnumber us and whose food requirements, because of their greater size, are several times our own.

"In addition to the grain, they get all of the 85,360,000 tons of hay grown on 54,618,500 acres. (More than ten per cent of the half billion acres under cultivation in the United States). They also roam over millions of acres eating all the grass. It is therefore plain that more than four-fifths [80%] of the produce of American agriculture, even in 1918 [a war year], went to feed beasts." Address: Prof. of Geography, Columbia Univ., New York.

429. *Good Health* (*Battle Creek, Michigan*). 1920. Vegetarian meat extract. 55(1):58. Jan.
• ***Summary:*** Yeast is used in the manufacture of beer and other fermented liquors; it converts the starch of grain into

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alcohol. So much yeast is used by the industry that it has become a major waste product. However, yeast is rich in proteins and in flavors practically identical with those found in meat.

A recent article in *Scientific American* (1919 Aug. 23, p. 191) discusses the process of utilizing yeast. "The enzyme, endo-tryptase, breaks down the complex protein molecule into simpler compounds–albumoses, peptones, amido [amino] acids, and ammonia in consecutive order. If the process is stopped by sterilizing at 70ºC, thus destroying the enzymes at a point at which peptones and amido acids predominate, the product becomes a splendid food... When well made, it has the same taste as beef extract and is easily digested. The sale as 'vegetable extract' has been large in England."

430. U.S. Bureau of the Census. 1920. Joseph Lambert in the 1920 U.S. Census in Cincinnati, Ohio. Cincinnati, Hamilton County, Ohio. Enumeration District No. 72. House No. 802. Dwelling No. 39.

• ***Summary:*** This census record, enumerated on 5 Jan. 1920, shows that Joseph Lambert is living with his wife, Daisy in Cincinnati, Ohio. He is age 54, married, and born in Massachusetts. His father was born in Canada and his mother in Ireland. Both of his parents spoke English as their mother tongue. Occupation: Machinist.

His wife is age 44, born in Missouri. Her parents appear to have both been born in Pennsylvania. Her occupation: None.

431. *Good Health* (*Battle Creek, Michigan*). 1920. The soy bean. 55(2):71-73. Feb.

• ***Summary:*** Contents: Introduction. Soy-bean milk. Soy-bean cheese. Soy sauce. Soy-bean sprouts." Photos show: (1) A typical soy bean plant with leaves and pods. (2) A large basket full of "sprouted soy beans, which are sold and used as a green vegetable" [in China].* (3) "Large blocks of freshly made bean curd, 'Tofu' [on a round wooden table], ready to be cut up into squares and sold to the housewife."*

Note 1. This article consists mainly of long quotations from the following article: Morse, W.J. 1918. "The soy-bean industry in the United States." *Yearbook of the U.S. Department of Agriculture* p. 101-11. For the year 1917. * = Photographed by Frank N. Meyer, USDA Plant Explorer.

Note 2. The cover of this issue reads: "Edited by John Harvey Kellogg, MD, LLD. Devoted to race betterment and biologic living."

432. Kellogg, John Harvey. 1920. Vegetarianism: The kindly fruits of the earth. *Arbitrator* (*The*) 2(9):3-6. Feb.

• ***Summary:*** Presents various arguments in favor of a biologic or non-flesh [later called "vegetarian"] diet. "Within the last fifty years there has been a veritable revolution in matters pertaining to diet. Seventy-five years ago, when Sylvester Graham was making his famous campaign for dietetic righteousness, he was not only made the butt of ridicule by the laity, but was vigorously combated by scientific men of all classes.

"It was true that Cuvier, Bell, Gassendi, and scores of other naturalists had testified to the fact that a man was near relative of the higher apes, with whom he constitutes the family of primates, and that his diet must, consequently, be essentially the same as that of his forest cousins. But this great biologic fact seemed to make no impression upon the writers of books on dietetics other than the few heretics who were regarded as quite outside the pale of authority.

"When the writer first became interested in the biologic diet by reading the works of Graham, now more than 50 years ago, not a single medical authority could be found who recommended a non-flesh dietary. On the contrary, it was unanimously maintained that flesh food was essential for the maintenance of sound health and vigor, notwithstanding the fact that men and women were to be found in India and other countries who had never tasted flesh food and who ancestors for many centuries had abjured the flesh of animals from religious scruples.

"But a new day has dawned. Within the last twenty years, a number of physiologists have admitted the adequacy of a fleshless diet, and at the present time not a single authority of standing on the subject of diet maintains the necessity of using flesh. Nearly all, in fact, readily admit that flesh food may be wholly dispensed with and that, without injury."

Discusses the writings of Dr. Graham Lusk, Hindhede, Professor Elliott, Ovid, the Hebrew scriptures, Professor Price (Univ. of Chicago), Lord Byron, the diet of Indian Brahmins (who are "vegetarians"), and the benefits of eating "vegetable proteins."

"The protein of eggs, milk and of nuts and soy beans, according to the world's most eminent authorities, may replace the proteins of meat; and this fact is so clearly established that the Inter-Allied Scientific Food Commission considered it unnecessary to fix any minimum meat ration, since meat may be wholly eliminated from the dietary without injury.

"It may be positively stated, in fact, that any one may at once drop all meats of every description from his dietary without suffering any loss whatever, provided he will take care to include in his daily bill of fare two or three glasses of milk."

Note: This is the earliest document seen by Dr. John H. Kellogg (Dec. 2013) that mentions "vegetarians" or "vegetarianism." Yet he referred to the diet he advocated as "the biologic diet" and his broader system as "biologic living." Address: M.D., LL.D., Fellow American Medical Assoc., Fellow of the Royal Society of Medicine.

433. *Good Health* (*Battle Creek, Michigan*). 1920. Peanut

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butter. 55(4):190. April.
• ***Summary:*** "Peanut butter was introduced to the world through *Good Health*. The first article ever written upon the subject was written by the editor of *Good Health*, under whose supervision the first peanut butter was made. The nuts, after careful preparation, were roasted in the ordinary peanut roaster, then ground into a paste, and named 'peanut butter.' This was nearly thirty years ago.

"The purpose of preparing peanut butter was to present the nuts to the digestive organs in a form easy of digestion. European physiologists had shown by experiment that when eaten in the ordinary way a large part of the peanut passes through the alimentary canal without digestion, and hence without being utilized.

"The use of peanut butter was for sometime confined to the Battle Creek Sanitarium, but it gradually became known to the public, and a little later its manufacture rapidly developed to the proportions of a great industry. In the meantime, the discovery was made at the Sanitarium that the process of roasting rendered the nuts somewhat indigestible on account of the high temperature to which they were exposed. When highly heated, fats are decomposed, and these burnt fats are highly irritating and greatly disturb the digestive organs. Accordingly, peanut butter, though at first very popular, fell under the taboo of the Sanitarium physicians, and practically disappeared from the dining-tables.

"After extended experiments, a method was found for making a palatable nut butter without roasting the nuts, thus avoiding the disadvantages which are adherent in roasting nuts because of the irritating effects of burnt fats."

434. *Peanut Promoter* (*The*) (*Suffolk, Virginia*). 1920. The first peanut butter. 3(5):84. April.
• ***Summary:*** "Some one likely would have started to manufacture peanut butter sooner or later, but it is reported to us that the honor for being the first to market this product is claimed by the Bayle Food Products Co., of St. Louis [Missouri].

"In 1894 this company was manufacturing a brand of cheese put up in small glass jars. A customer persuaded them to begin the manufacture of 'Cheese-Nut,' cheese flavored with peanut butter or ground nuts. 'Cheese-Nut' did not find favor with the housewives and soon was dropped from the lists of products put up by this company, but the nut butter itself was found to be in demand.

From one small grinder in the St. Louis office of the Bayle Company the peanut butter industry has grown until it is found on the shelves of every corner grocery, and the industry itself employs thousands of people the year round in the manufacture of this delectable eatable.

"Prior to 1894, peanuts were ground and the product, peanut butter, eaten, but its use had been largely restricted to sanitariums, notably that at Battle Creek, which was made by Mr. Lambert, who was later the founder of Lambert Machine Company, Marshall, Michigan. It is claimed by the Bayle Company that they were the first to see the possibilities as a food, free from any health doctrines or policies.

"Almost from the first peanut butter found favor with the housewives, and soon the Bayle Company found their field full of competitors, as the demand grew too large for them to supply.

"Mr. George A. Bayle, Sr., head of the firm in 1894, is still in charge and ready to discuss the peanut market, peanuts and peanut butter with any trade visitor to their plant and offices in St. Louis.

"Bosman & Lohman started to manufacture peanut butter in 1900, which was made in an iron mortar and pestle, and the second lot in a small meat chopper.

"Then, in 1904, the company that was to *put peanut butter 'on the map'* appeared–the Beech-Nut Packing Company–and to them the peanut butter fraternity will have to take off their hat for the wide publicity this peanut product has had."

Note 1. This is the earliest document seen (Dec. 2012) that mentions George A. Bayle or his Bayle Food Products Co. (St. Louis, Missouri) in connection with peanut butter. The lack of earlier documents makes this claim by Bayle look suspicious. There is no mention of a St. Louis doctor or physician being involved with this peanut butter.

Note 2. This is the earliest document seen (Dec. 2012) stating that Mr. Lambert made the first peanut butter at the Battle Creek Sanitarium [run by Dr. John Harvey Kellogg] in Michigan. Mr. Lambert later founded the Lambert Machine Company in Marshall, Michigan. His machines were used to make peanut butter.

Note 3. In 1897 Lane Bros. of Kokomo, Indiana, was making and selling peanut butter commercially. The earliest article about this appeared in the *Kokomo Daily Tribune* on 16 Nov. 1897 (page 4).

435. Grohens, Albert P. 1920. History and development of the peanut butter industry. *Spice Mill* (*The*) 43(6):976, 978-80. June.
• ***Summary:*** "It was in the year 1896 that the peanut butter industry had its origin, when Joseph Lambert, who, a few years before while in the employ of that institution, made the first peanut butter at the Battle Creek Sanitarium, started in business for himself, manufacturing this and other nut food products. At the same time, he devised crude machines, mostly to be operated by hand, cuts of which are here shown, to be used for manufacturing peanut butter.

"The group of three small machines, intended for family use, constituted the original peanut butter outfit. They consisted of a toy roaster, equipped with a hand crank, to be placed on the top of an ordinary cook stove; a tiny blancher, also operated by hand, and a hand nut grinding mill."

Original illustrations show the Lambert Baby Peanut

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Roaster, Lambert Baby Peanut Butter Blancher, and Lambert Baby Peanut Butter Mill (each dated 1896). Lambert sold his 3 machines with one or more sacks of raw shelled peanuts from his warehouse at Battle Creek, Michigan. Illustrations of improved and larger scale models of the machines are also shown (dated 1898 to 1900). "The writer's connection with Joseph Lambert dates back to 1900. In 1901 the Lambert Food Company was organized and its headquarters transferred to Marshall, Michigan... The company continued to make peanut butter until 1908, but after that focused on selling machinery for the manufacture of peanut butter.

"There are now scattered all over the United States large peanut butter manufacturing plants, some producing as high as 50,000 pounds daily; and the most flourishing are those which adhere strictly to high-grade quality."

436. *Madison Survey* (*Madison, Tennessee*). 1920. Outside activities. 2(28):2. July 14.
• ***Summary:*** "Cafeteria [vegetarian] and treatment rooms in Nashville [Tennessee] are prospering. Similar centers are conducted in Birmingham [Alabama], Louisville [Kentucky], and Asheville [North Carolina]."

437. Grohens, Albert P. 1920. Peanut butter: History and development of the peanut butter industry–Just one of the products made from peanuts. *Peanut Promoter* (*The*) (*Suffolk, Virginia*) 3(8):65, 67, 69, 71, 78. July.
• ***Summary:*** "It was in the year 1896 that the peanut butter industry had its origin when Joseph Lambert, who a few years before, while in the employ of that institution, made the first peanut butter at the Battle Creek Sanitarium, started in business for himself, manufacturing this and other nut food products.

"At the same time he devised crude machines, mostly to be operated by hand, cuts of which are here shown, to be used for manufacturing peanut butter.

"The group of three small machines, intended for family use, constituted the original peanut butter outfit. They consisted of a toy roaster, equipped with a hand crank, to be placed on the top of an ordinary cook stove; a tiny blancher also operated by hand and a hand nut-grinding mill.

"To introduce his outfit Mr. Lambert took pains to attend gatherings and conventions in various parts of the country, at which topics relating to foods and diet were discussed, where he distributed literature describing the virtues of peanut butter and how to make it. He also embraced this opportunity to secure a list of names of persons interested in vegetarian diet and which list formed the basis of a small mail order business.

"He mailed club offers, comprising the three small machines mentioned and one or more sacks of raw shelled peanuts, either of the Spanish or Virginia varieties, a stock of which he carried in his warehouse at Battle Creek, Michigan. It is well to state here that the No. 1 Spanish peanuts were at that time obtainable at about 3 cents per pound.

"Through this means peanut butter was introduced into private families scattered throughout a large portion of the United States. They in turn introduced it to their friends and neighbors. Some of these persons who had purchased Lambert outfits worked up small trades in their respective neighborhoods. Gradually, as the product became known, the demand for it increased until it became necessary to construct larger machines in order to produce an adequate supply. This led to the next advance step in the development of the peanut butter industry. The three larger machines shown in the second group constituted the first peanut butter equipment to be operated with power. These machines, which could also be operated by hand, were placed on the market about the year 1898. All have long been supplanted by more up-to-date and larger machines.

"Mr. Lambert continued his campaign of education by preparing leaflets and booklets showing the high food value of nuts and peanut butter. In the year 1899 he published his large book entitled 'Guide for Nut Cookery,' which sold very rapidly until the two editions in print were exhausted. Inquiries are still received for this book, but no later editions were printed from the fact that the plant of the publishing company which had the plates and the manuscript for the book was destroyed by fire in the year 1902. Thus the work accomplished by Joseph Lambert formed the real foundation of what has now become one of the leading industries of the country in the line of food manufacturing.

"The writer's connection with Joseph Lambert dates back to 190 [sic, 1900?]. In 1901 the Lambert Food Company was organized and its headquarters transferred to Marshall, Mich. Shortly after this Mr. Lambert withdrew from the business. The company continued to make peanut butter until 1908, but having since 1900 perfected more efficient machinery for the manufacture of peanut better as well as for the roasting of coffee, it was only natural that the machinery end was given preference. The name at this time was changed to Lambert Machine Company. For a number of years the writer's entire time and attention were devoted to the study of peanut butter machinery and to the improvements which he perceived would be necessary to render the manufacture of peanut butter at once practical and economical."

"The phenomenal growth of the peanut butter industry during the period of the late war was due to the appreciation by the government of the high food value of the product."

Illustrations (line drawings) show: (1) Lambert's original hand-turned roaster, blancher, and mill. (2) A large "Eureka Roaster." (3) First peanut butter machine operated by power. (4) Motor driven blanching machine. A portrait photo (p. 78) shows A.P. Grohens. Address: President and General Manager, Lambert Machine Co., Marshall, Michigan.

438. Kellogg, John Harvey. 1920. In memoriam: Ella Eaton

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Kellogg. Battle Creek, Michigan. 52 p.

• ***Summary:*** Begins with a portrait photo of Ella (the wife of Dr. John Harvey Kellogg) in her later years. Born: April 7, 1854. Died: June 14, 1920.

On the next page is this poem:

"Death reaches not a spirit such as thine,
"It can but steal the robe that hid thy wings;
"Though thy warm breathing presence we resign,
"Still in our hearts its loving semblance clings.
"–Oliver Wendell Holmes."

Below a full-page photo showing the Kellogg home is written: "Where she is missed."

With here death "was ended a service of forty-three years to the readers of *Good Health.* Thus also was ended a life whose energies were unstintingly poured out that humanity might be bettered through knowledge."

"Through her writings in *Good Health* [where she was assistant editor from 1877 to 1920; her husband was publisher] and in other magazines and in her books she reached larger audiences. Here in itself were justification for calling hers a very fruitful life. But in her oral teaching and in her part in the upbuilding of the great Battle Creek Sanitarium she had another career which was broadly helpful. In her public activities, such as the Women's Christian Temperance Union, the Young Women's Christian Association, the American Home Economics Association, she likewise accomplished a work with far-reaching effects. But those who knew her personally will always place ahead of everything else the sympathy, the kindliness, the Christian helpfulness of her own private life, the forgetfulness of self in her efforts to replace the wrinkles of care with the smiles of contentment."

"As an out-growth of her teaching of dietetics to nurses in the Sanitarium, she founded the School of Home Economics, which has grown into an institution of wide renown. She was also graduated from the American School of Household Economics. Her philanthropy took practical form in her part in the founding of the Haskell Home for Orphan Children [1894-1922] in Battle Creek. Of this she was managing chairman for many years."

"Mrs. Kellogg was born at Alfred, in western New York, on April 7, 1853, the daughter of Joseph Clarke and Hannah Sophia (Coon) Eaton. She attended the local school and academy until she was sixteen, and soon after entered Alfred University."

"When she was just three months beyond nineteen, she received the degree of A.B. for completion of the classical course. The president spoke of her as 'the youngest Daughter of the University,' since no one before had gained her diploma at so early an age."

Most of this short book is a very beautiful and moving tribute to Ella E. Kellogg, It is followed (starting on p. 23) by a special tribute to her by her husband, titled "My Helpmeet," which tells how and when they met and many anecdotes. This section begins: "I first met my wife, then Miss Ella Eaton, in the late fall of 1876, forty-four years ago. The circumstances of my meeting her I always regarded as Providential. We were having an epidemic of typhoid fever in the West End, chiefly among the students of the Battle Creek College, which at that time had a large attendance." Ella plunged selflessly into the work, helping to save lives."

On Oct. 1, 1876, Dr. Kellogg assumed leadership of the Western Health Reform Institute (later renamed Battle Creek Sanitarium) in Battle Creek.

On Feb. 22, 1879 Dr. Kellogg and Ella Ervilla Eaton were married.

Note: Part of this 52-page booklet also appeared as an article by H.M.S. [Henry M. Stegman] in the July issue of *Good Health* (Battle Creek, Michigan). Address: M.D.

439. Kellogg, John Harvey. 1920. The almond. *Good Health* (*Battle Creek, Michigan*) 55(8):466-70. Aug.

• ***Summary:*** Contents: Introduction. Composition. Rich in food lime [calcium]. Rich in iron. An extraordinary food. Science prizes the high value of the almond [digestibility experiments]. Why nuts sometimes disagree [they are concentrated and should be used as a staple food which is well masticated, not as a dessert]. The origin of nut butters. Nut proteins equal to meat proteins [proteins are broken up into about 18 amino acids]. Meat eating involves enormous economic waste. The great food commission declared meat not necessary. Almonds are pure and safe which meat is not. A ready-to-eat food.

"The origin of nut butters: To overcome the objection that some people are unable to masticate nuts properly on account of defective teeth and to insure the proper assimilation even if not properly chewed, the writer about thirty years ago [i.e., in about 1890] conceived the idea of converting the nuts by crushing and grinding, into a paste–in other words, chewing the nuts by machinery. The peanut was first utilized in this way and rapidly won its way to public favor. Now, many scores of carloads of that nut are eaten under the name of peanut butter.

"Almonds were next used, and were found to make a delicious nut paste, or butter, which by the addition of water and a little salt, became a most delicious cream. In the form of almond cream or milk, nothing could be conceived in the way of nourishment which the body can more easily appropriate and more fully utilize" (p. 469-70).

"The Almond Grower's Association of California, with the co-operation of the U.S. Agriculture Department, in encouraging the growth of the almond is doing a work which will entitle it to an honored place in the economic history of this country; for the time is certainly coming, and it cannot be far in the future, when the animal industry will languish for lack of space for pasturage, and flesh foods for this as well as other reasons will fill a less conspicuous place in the dietary of the average man than at present" (p. 470).

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"The great food commission... The Inter-Allied Scientific Food Commission which met during the war was without doubt the most authoritative body on the subject of food and nutrition that was ever brought together." The names of the members of the commission, each a distinguished specialist on human nutrition, are given. There were generally two members from each of the following countries: France, Italy, Great Britain, United States (Profs. Lusk and Chittenden), and Belgium. "The question of a minimum meat ration was discussed by the commission, but it was decided to be unnecessary to fix a minimum meat ration 'in view of the fact that no absolute physiological need exists for meat, since the proteins of meat can be replaced by other proteins, such as those contained in milk, cheese and eggs, as well as those of vegetable origin' (beans, nuts, and especially almonds).

"Quite in line with this official action was a recent editorial in the *Journal of the American Medical Association,* perhaps the highest medical authority in the world, which states that 'man's health and strength are not dependent on the assumed superior virtues of animal flesh as a dietary constituent.'

"Within the year 1918 there were slaughtered in the United States a hundred million beeves, sheep, pigs and goats, one whole beast for every man, woman and child in the United States. Of this vast multitude of animals, the Federal inspectors examined nearly two-thirds (60,000,000) and found one and a half per cent so badly diseased that the whole or part of the carcass was condemned. In other words, nearly a million (900,000) carcasses were found seriously diseased" (p. 471).

"Almond butter with the addition of a little water is converted into a delicious cream, which, with the addition of more water, becomes a delicately flavored milk closely resembling the milk of the cow in appearance, and with the addition of sugar the resemblance to milk, especially mother's milk, becomes still more complete. Such a preparation is in fact almost a perfect substitute for milk.

"The almond is thus not only capable of taking the place of meat in the dietary but may also serve as a substitute for milk." Address: M.D.

440. *Good Health* (*Battle Creek, Michigan*). 1920. A vegetarian orphan's home. 55(9):559. Sept.
• ***Summary:*** "It is reported that the home of Tolstoy, 'Jasnaja Polijana' [Yasnaya Polyana, located 14 km southwest of Tula, Russian SSR], under the direction of his youngest daughter, is now utilized as an Orphans' Home. Eight hundred orphans are already there, and the number is constantly increasing.

"The Home is to be conducted on the plan of the Junior Republic. Children will be taught agriculture and various trades under the direction of experts. They will be reared in accordance with the principles of the simple life as expounded by Tolstoy in his works. Meats of all sorts are to be excluded from the dietary."

441. *Madison Survey* (*Madison, Tennessee*). 1920. The Thirteenth Annual Conference of Rural School Workers. 2(41):1, 5. Oct. 13.
• ***Summary:*** This two-day conference was held at Madison, Tennessee. I.E. Siebert and Mrs. Sutherland discussed "Rural Centers Solving the Food Problem." "Elder McElhany told of experiences in the San Diego [California, vegetarian] cafeteria, and of the calls for class instruction in dietetics and cooking..."

442. *Madison Survey* (*Madison, Tennessee*). 1920. The value of whole grain breads. 2(44):2-3. Nov. 3.
• ***Summary:*** "It has been abundantly proved that for use in bread making, the superfine white flour is not the best. Its use is neither healthful nor economical... Modern grain milling methods are of comparatively recent origin, having been introduced since the year 1846. And wholesale commercial production of superfine or white flour dates from about 1870... The original idea in milling white flour was to get a product which would keep indefinitely in large quantities, and which, when baked into the staff of life, would present, what was supposed to be, a more refined appearance than whole-ground meal."

"Whole wheat bread, or freshly ground whole wheat flour with recipes for making the bread from this and other grains, may be obtained from: The Nashville Vegetarian Cafeteria, 610-6th Ave. N., Nashville, Tennessee. Ask also for information concerning grinding mills."

443. *Madison Survey* (*Madison, Tennessee*). 1920. Home made bread from home ground flour. 2(46):3. Nov. 17.
• ***Summary:*** "The Medical Missionary Volunteers have begun the publication of a series of leaflets on health subjects, to meet the demand for instruction on the part of patrons of the vegetarians cafeterias."

The five vegetarian cafeterias [run by Seventh-day Adventists from Madison College] are located at: (1) 610 6th. Ave., N. Nashville, Tennessee; (2) 85 Patton Ave., Asheville, North Carolina; (3) 117 1-2 North 21st St., Birmingham, Alabama; (4) 509 South 3rd St., Louisville, Kentucky; (5) 516 Gay St., Knoxville, Tennessee.

444. *Madison Survey* (*Madison, Tennessee*). 1920. The Louisville treatment rooms and cafeteria. 2(48):2-3. Dec. 1.
• ***Summary:*** Describes the opening of treatment rooms and a vegetarian cafeteria in Louisville, Kentucky. The cafeteria opened on the ninth [probably Nov. 9], serving its first meal to fifty people. Brother F.E. Worrell temporarily supplied the money for the venture.

445. *Michigan State Supreme Court Record.* 1920. John

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Harvey Kellogg, The Kellogg Food Co., and Sanitarium Equipment Co. vs. Kellogg Toasted Corn Flake Co., et al. 3 vols. See vol. 2, p. 369.

• ***Summary:*** This court case between the Kellogg brothers, Dr. John Harvey (age 68) and Will Keith, concerned the use of the name Kellogg by the cereal company. The 3 volumes contain about 1,000 pages. In volume II, p. 368-69 Dr. John Harvey discusses his inventions, many of which have gone to market and 50-60 of which have had quite a large sale; "the most prominent are various cereal flakes and bran preparations, coffee substitutes and preparations from nuts, protoses, peanut butter, the last very popular, first made in our laboratory, one of my inventions.

"I wish to say that I was the original inventor of it in this country, but when I was over in Egypt about five or six years after I made peanut butter, I found that a similar product was made there was 'sesame,' a butter which is quite similar, was made by a process, and also somewhat similar, though not the same process, but it was independent as far as I was concerned, at the time I did it originally." Address: Michigan.

446. Kellogg, John Harvey. 1920. The health question box, or a thousand and one health questions answered. 2nd ed. Battle Creek, Michigan: Modern Medicine Publishing Co. 907 p. Illust. Index. 21 cm. 1st ed. was 1917.

• ***Summary:*** "Foreword: For more than forty years, the writer of this volume has each week stood before an audience of invalids at the Battle Creek Sanitarium to open a popular question box. During a longer period the writer has supplied each month to the monthly journal *Good Health* several columns of answers to correspondents." More than a thousand of these have been selected, with their answers, for this volume.

The following questions concern the soy bean (p. 350-53, 886; also 125, 200, 347, 349): In what respect is the soy bean superior to the navy bean and other varieties? What is soy bean curd or cheese (to-fu), and how is it made? What is the food value of the soy bean? What is the composition of the soy bean, especially in relation to the amount of carbohydrate it contains?

Concerning peanuts (p. 348-49): Is the protein of the peanut equal to that of meat or eggs? Which is the more digestible, roasted or raw peanuts? Why is it necessary to cook peanuts to prepare them for digestion?

"In North China and various other countries where the peanut flourishes, it has long held a prominent place in the national dietary; but in this country its great value has been so little appreciated that it has been scarcely recognized as a food, having been eaten as a dainty or luxury.

"Although, since the writer–some twenty-five years ago [i.e., ca. 1895]–introduced the crushed nuts, or peanut butter, into the bill of fare of the Battle-Creek Sanitarium, the use of peanuts in this form has rapidly extended and it has found its way to many thousands of tables."

One discovery has "placed the peanut upon a high pedestal among foodstuffs... It is the fact that the protein of the peanut belongs to a special class very rare among the products of the vegetable kingdom, known to the chemist as 'complete protein.' The complete protein is one which contains all the elements needed for making any of the many different kinds of tissue found in the human body. Very naturally these proteins are found in eggs, milk and meat, but they are not found in cereals or vegetables." The almond and soy bean also contain complete proteins.

Concerning the natural diet of man (p. 96-109, 124-25): What was the diet of prehistoric man? Ans: Fruits and nuts. What is the natural diet of man? Ans: Fruits, soft grains, nuts, tender shoots and juicy roots. Man is not carnivorous. What was the Brook Farm experiment? What is the simple life? What is biologic living? Ans: Living in accord with the "great biologic laws... which rule our physical being." What is Fletcherism? Ans: Thorough mastication. When eggs and meat are discarded what vegetable foods should take their place? Ans: No substitutes are needed. "Protose, Nuttolene and other vegetable meats are rich in protein. The newly introduced soy bean is more than a substitute for meat. It is rich in lime and vitamins which meat lacks. Its protein is 'complete.'" Have human beings a natural appetite for flesh? Do scientific authorities admit that animal flesh is a necessary part of the human dietary? Ans: "All modern physiologists admit that flesh food is not an essential part..." Is a meatless diet capable of maintaining the body in a state of vigorous health? Is there any authority for the elimination of flesh foods from the dietary? Does a flesh diet injure the kidneys? Is it not true that laborers universally require a large amount of meat.

Concerning roughage, bran, and constipation (p. 197-99). Diabetic foods (p. 199-201, incl. soy bean and soy bean curd). Dietary oils and butter (p. 338-41, incl. nut oils, peanut oil, olive oil, malted nuts). Concerning tree nuts (p. 341-47, 354-59): What is the food value of nuts? Ans: The "most highly concentrated of all natural foods." Tropical fats–Where do the natives of the tropics get their fat? Nuts for nursing mothers–Is there any food which will increase the flow of her milk? Ans: Nut milks, Malted Nuts. How did the Jordan almond get its name? Ans: This choicest of all almonds came originally from Malaga in southern Spain. Almond milk–Is it possible to prepare a substitute for milk from vegetables? Ans: Yes. "The writer has made large use of almond milk for thirty years [i.e., since about 1890]. It is more easily prepared from almond butter." "Almost equally good milk preparations may be made from the soy bean and the peanut." Are nuts good food? Yes, incl. peanut butter. Nuts make good "meat substitutes."

On the last page is a list of 18 health books by Dr. Kellogg, all published by the Modern Medicine Publishing Co. Address: M.D., Battle Creek, Michigan.

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447. St. Helena Sanitarium (California) (Color postcard). 1920? Sanitarium, California. 1 p. Front and back. Undated. 9 x 14 cm.

• ***Summary:*** Of the 4 color photos on the front, three show the main sanitarium building. In the upper left corner: "The largest and best equipped institution west of the Rocky Mountains. Following the Battle Creek Sanitarium system."

On the back left. "A true health resort. Located 65 miles from San Francisco, on an elevation overlooking the beautiful Napa Valley..." Postage was 1¢ in the USA, possessions, Canada, or Mexico. Foreign: 2¢. Address: Sanitarium, California.

448. *Madison Survey* (*Madison, Tennessee*). 1921. Vegetarian cafeterias. 3(3):2. Jan. 19.

• ***Summary:*** "Birmingham [Alabama] cafeteria was started about one year ago by Miss McKay, Mrs. Holst, and others... Chalkville farm, an 87-acre tract about fourteen miles from the cafeteria has been purchased as a country base... Mr. Zilke is the maker of whole wheat bread which the trade is appreciating..."

"The Knoxville [Tennessee] cafeteria is less than a month old." The whole wheat bread sells like hot cakes. "Practically no one asks for white bread."

449. Muhse, Effie Funk. 1921. The soy bean in Chinese cookery. *Good Health* (*Battle Creek, Michigan*) 56(3):108-114. March.

• ***Summary:*** Contents: Introduction. Sprouted seeds. Bean oil. Soy sauce. Bean curd.

"Sprouted seeds: Beans, along with other sprouted cereals, such as peas, wheat and barley, are on sale in the shops and market stalls, practically regardless of the season. Beans with sprouts an inch long or more are seen heaped high on bamboo trays. They are sold by the catty (one and one-third pounds) for from 3 to 6 coppers (Mex.)."

"The method of producing bean sprouts is thus described by a native. 'Soak some beans in water in a flat dish. Spread the beans out: do not let one cover another. Cover with a piece of wet cloth and water every morning. The sprouts will appear in [?] nights. They are ready to eat when they are two inches long.'"

Bean curd: Describes how bean curd is made in a commercial shop. In a large room, soy beans were soaked in water in large vats over night. "Close at hand was a stone mill consisting of two circular stones, each about 6 inches thick, and about 18 inches in diameter. The stones were securely placed over a drain, and high enough to allow a vat to be pushed in, or drawn from under. The upper stone was moved to and fro, in partial revolutions, by means of a bamboo shaft, one end inserted in the stone's center and the other in the ceiling timbers. Two men kept the mill in constant motion, each with his arm through a sling fastened to the shaft. The upper stone had a hole about 4 inches across, into which at every second revolution one man poured a half pint of beans and water, which he dipped with clock-like regularity from the vat of soaking beans.

"And into the vat beneath oozed from the edges of the mill a milky, crushed mass. A strong cloth, pocketing down into the vat, was securely tied about the vat's rim; and when the grinding ceased, the vat was drawn from under the mill, the cloth twisted into a bag, through which all the contents possible were pressed by means of a crescent-shaped, concave wooden paddle. The mass in the cloth was washed out and pressed a second time, and the water from even a third pressing served as that in which to start the next beans soaking. The waste, which was principally hulls, was placed in a bin in the court, where it was carried away, presumably to be used as fertilizer in the truck gardens round about the city. On the side of the room opposite the mill was a typical, native brick stove, with three fire-holes, on which rested metal basins about two feet in diameter and 14 inches deep. Into these the creamy mass obtained from the first and second pressings was poured, and carefully stirred during the boiling. The boiling finished, it was poured into a vat and white powder added to coagulate the mass, after which the whey was dipped off, Whether this latter found a further use was not ascertained, but it is a truth that nothing in China goes to waste. The curd was then ready for the molds and pressure.

"I have spoken of the white powder that was added to coagulate the boiled mass. In nearly every factory one would see a basket sitting about, holding four or five pounds of it, sometimes in lumps, sometimes in powdered form... I had the characters put on paper at two different factories, and always 'plaster of paris' was the translation by anyone asked about the matter, even an English chemist who was asked to verify it." Note: It was calcium sulfate.

The final process of changing the coagulated mass into products for the sales counter was very interesting, particularly since the workmen were so patient and so adept in every movement. The bulk of it was molded into masses about 3 inches thick and 16 inches square. A square wooden frame of these dimensions was laid on a slat base, and diagonally across the frame a large square of cloth was spread. The requisite amount of coagulate was poured into the cloth, the corners of which were folded over. Another frame with a bamboo slat base was then superimposed upon the one just filled, another and another, till possibly a dozen or more stood [?] in a pile; and on the top were placed large weights."

"Merchants doubtless study their localities and adapt their products to the buying power and preferences of their customers; one merchant seemed to have a brisk daily, trade in tiny raw, as well as fried, cubes which sold to children for a "cash" (about 1-17th of a cent) apiece.

In the photographs note the pile of little squares–thin bean-curd wafers about 10 inches across. They were made

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by a pressure method very similar to that by which the large masses were made. Over a mold 10 inches square was laid crosswise a cloth about the size of a man's handkerchief. On this a spoonful of coagulate [curds] was spread out and the cloth folded over. Another cloth was laid on, filled, and folded, and so on without limit, or until the mold was filled. They were then put under pressure, and in due time the reverse process was again patiently gone through with, and the wafers laid out in a pile. Eight such wafers weigh a catty, and sell two for a copper.

"In each bean-curd establishment visited there was work for seven persons, usually all men, besides the man who carried away the waste–the salesman, who also attended to the cutting of the curd; three men who coagulated and placed in the molds; one at the stove and bellows, who also attended to the boiling; and two at the water mill. The workmen in the Shanghai factories, I was told, usually came from the country villages and did not bring along their families. For their services they received a monthly wage of from four to five dollars (Mex.), a place to sleep, and their food. The bean-curd establishments are typical of industrial development in China. The master and workmen, right there in a little shop, carry to completion the process of manufacture from the raw material to the finished product, and from the shop sell the product direct to customers. Fresh bean cubes, the fresh curd cakes in boiling oil, and the wafers, were on sale in all parts off China visited.

"The Chinese cook uses the bean-curd as an ingredient for many choice dishes. It is very extensively used in the cookery of the Chinese of all classes, despite the statement that it is 'a food for the common people.' The writer has eaten bean-curd deliciously combined with beef in the home of one of the most prominent Chinese families of Shanghai, who had educated four children in American and European colleges. Another American-educated Chinese, being asked for a typical home-dinner menu of well-to-do Cantonese families, included 'bean-curd with shrimp eggs' as one of five courses."

Photos show: (1) Many large containers storing soy sauce, oil and wine in Shanghai; each is "made up of an outside covering of wicker, a thick body of clay, and a lining of oiled paper." (2) About 300 sixty-gallon earthenware vats with cone-shaped wicker tops containing yellow soybeans, salt, and water in the process of becoming soy sauce in the immense court of a soy sauce factory in Shanghai. (3) A man in the street end of a bean curd factory. (4) Scene from a bean curd factory, including many people. Caption: "All the products of the factory are to be seen,–fresh curd masses, a pile of wafers, and a tray of cooked bean curd. Beneath the table is a basket of the powder used to coagulate the boiled, crushed beans."

450. Healey, W.M. 1921. Mrs. Almeda Lambert. *Review and Herald.* May 26.

• ***Summary:*** Mrs. Almeda Lambert was born in Marquette County, Wisconsin, in 1864. She married Joseph Lambert in 1890. Died in Escondido, California, March 1921. Her daughter, a brother, and three sisters survive.

451. Mendel, Lafayette B. 1921. Re: Suitability of a vegetarian diet in a hospital (Letter to the editor). *Modern Hospital* (*The*) 17(5):431. Nov.

• ***Summary:*** Louis J. Frank, in his article titled "The Meatless Diet," reprints letters from some of America's most prominent biochemists, metabolists, and physiologists (all professors), including one "From Lafayette B. Mendell, Sheffield Laboratory of Physiological Chemistry, Yale University: 'I have given some thought to the advisability of introducing a meatless dietary into your hospital régime, and reached the conclusion that there will be no objection to this upon physiological grounds. Inasmuch as I myself lived upon a diet devoid of meat, fowl, and fish for nearly a year, for purely experimental purposes, and remained in excellent health and vigor during that period, I have no fears regarding the wholesomeness of such a procedure.

"If we consider the various aspects of the meat-free régime, the foremost criticisms will probably be as follows: (a) The ration tends to be low in calories. It is true that on a vegetarian diet the food intake is likely to be reduced for a variety of reasons, because the ration tends to be less palatable than in cookery with meat products. However, with fish, milk, and eggs permitted, as I assume they will be in the meatless dietary, the palatability can be greatly enhanced. As a substitute for meat stock or extract of beef in preparing soups, gravies, etc.,–all of which are so highly prized in a well flavored diet such as your patients are allowed,–I see no reason why the now commercially available extracts of yeast should not be used. In England 'Marmite' is sold for this purpose, and the same product is available in this country under the name of 'Vegex.' These commercial names happen to be familiar to me, but there are doubtless others, and it is not difficult to prepare a well flavored extract of yeast. Incidentally, it is rich in water soluble vitamine.

"(b) It may be said that the quality of the protein in the vegetable diet is poor. This can scarcely apply where fish, eggs, milk, and its numerous products (cheese, etc.) are surely available, as they can be without violation of the Mosaic dietary regulations. As you well know, even small quantities of 'animal proteins' serve to supplement well the proteins of the cereals, etc.

"(c) There will be no lack of suitable vitamin A, B, C, where milk and cream, green vegetables, fruits, and eggs are used in abundance. Surely meat has no virtues as a source of vitamines except in so far as the beef drippings ('oleo oils') may furnish a small amount of fat-soluble vitamine, such as the egg yolk yields in far greater abundance. Incidentally, inorganic salts will be assured quite as well on the meatless dietary, and there will be no lack of suitable 'roughage.'

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"If you have ever visited the Battle Creek Sanitarium [in Battle Creek, Michigan] you will have noted that life is possible and good health is maintained without the use of meat. I regard the diet there as too bland for your clientele, but I am sure the menus could be greatly improved by additions of further foods such as you are not interdicted from employing. Under separate cover I am sending a few reprints which are intended to support some of the comments which I have made."

Note: This is the earliest document seen (Aug. 2002) concerning vitamins and vegetarianism. Address: Prof., Sheffield Lab. of Physiological Chemistry, Yale Univ. [Connecticut].

452. **Product Name:** La Sierra Smoein (Bacon Flavored Smoked Soy Powder Seasoning).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1921.
Ingredients: Smoked soybeans.
How Stored: Shelf stable.
New Product–Documentation: This was America's first commercial soy-based meat alternative. Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline Ash, Low Starch." Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46. Interview with Charlotte Van Gundy Holmes. "He soaked soybeans, put them in perforated flats, and smoked them over a hickory fire. When dry, he ground the beans to a powder, which he packed and sold in salt shakers."

Note 1. This is the earliest known commercial soy product made by La Sierra Industries or T.A. Van Gundy.

Note 2. This is the world's earliest known meatless alternative to a pork product (bacon).

Note 3. This is the earliest known commercial roasted soy flour in the Western world.

453. Anderson, Hans Steele. 1921. Science of food and cookery. 5th ed. Mountain View, California: Pacific Press Publishing Assoc. 282 p. Illust. Index. 23 cm. [5 ref]
• ***Summary:*** This book, by a Seventh-day Adventist, advocates a vegetarian diet as "the natural diet of the human race." The first one-third (p. 1-97) is a scientific discussion of the nutritional basis for such a diet; the last two-thirds (p. 98-268) is vegetarian recipes.

Chapter 4, titled "The natural food of man" (p. 37-52) has sections on: True food satisfies hunger. Vegetarian diet and longevity. Vegetable and flesh foods contrasted. Vegetarian diet and endurance. Flesh eating a cause of disease. Ethics of flesh eating. Cruelty of flesh eating. The section titled "Vegetarian diet and longevity" (p. 39-42) notes that in the Bible, before the fall, Adam was told to eat grains and nuts. After the fall herbs of the field were added to his diet. After the flood, when all vegetation had been destroyed by water, God permitted man to eat flesh. In the 9 generations before the flood, the average man lived to the age of 912 years, but in the 10 generations after the flood this was reduced to 317 years.

The section on "Vegetarian diet and endurance" (p. 45-48) contends that "the vegetarian diet is capable of developing the highest level of strength and endurance." Soy-related recipes include: Stewed soy beans (p. 156). Rice and soy bean loaf (with soy bean purée, p. 156). Rice and soy bean patties (p. 156). Favorite soy bean coffee (p. 265).

A 6th edition was published in 1932, and a 7th edition in 1938.

Note 1. This is the earliest Seventh-day Adventist cookbook seen (Oct. 2004) that contains a recipe using soybeans or soy ingredients.

Note 2. This is the earliest document seen (Oct. 2004) concerning the Loma Linda Sanitarium (or Hospital) and its work with vegetarianism or soyfoods. Address: Dietitian, Medical Missionary College and Sanitarium, Loma Linda, California.

454. Kellogg, John Harvey. 1921. The new dietetics: What to eat and how. A guide to scientific feeding in health and disease. Battle Creek, Michigan: The Modern Medicine Publishing Co. 933 p. Illust. Index. 24 cm.
• ***Summary:*** This is the first edition of this important book; subsequent editions were published in 1923 and 1927. Contents: Foods: Food Principles. The digestive process: The liver, mastication, hunger. Metabolism: The energy of food–the calory [calorie]. The physiology of eating: The protein ration, fats, carbohydrates–starches and sugars, food salts, vitamins, cellulose, the acids of foods. Wholesome foods: Cereals (incl. wheat bran), vegetables, green vegetables, root vegetables, vegetable or garden fruits (incl. tomato, cucumber, eggplant, watermelon, muskmelon, squash, vegetable marrow, pumpkin, chayote), legumes (incl. the adsuki [azuki] bean, the Hahto bean, the soy bean, composition of the soy bean, soy bean milk, to fu [tofu], soy sauce, soy bean sprouts), fruits, nuts (incl. the ground nut, the peanut, peanut butter, flour from the peanut, peanut milk, malted nuts). Animal foods. Condiments. Tea and coffee (They are poisonous drugs, in 1921 the U.S. per capita consumption increased to 12 lb/year, chronic caffein [caffeine] poisoning, coffee raises blood pressure, tea, coffee and uric acid, coffee cripples the liver, other coffee poisons, some poisonous effects of tea and coffee, soda fountain drinks containing caffein, coffee substitutes {most consist of cereals plus molasses, roasted until part of the starch and sugar are caramelized; the roasting process makes them unwholesome}), tobacco. Ptomains–Poisoned foods. Water drinking. Medical dietetics: Introduction, scientific tests of the nutritive functions, regimens and dietaries, diet in disorders of the digestive organs, diet in disorders of nutrition, diet in joint diseases (rheumatism, arthritis,

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gout), diet in disease of the heart and blood vessels–Cardio-vascular-renal diseases, diet in disorders of the nervous system, diet in disorders of the urinary organs, diet in diseases of women, diet in management of fevers, diet in chronic infectious diseases, diet in diseases of the skin, diet in surgical cases, diet in diseases of the eye, ear, nose, and throat, infant feeding, the rice regimen. The world's foods: Making the bill of fare.

A table (p. 138) titled "Vegetable fats" lists "The principal sources of edible vegetable fats..." including: Cocoanut meats 36%, corn 5%, hemp seed 32%, palm nut 72%, peanut 52%, sesame seed 51%, soy bean 20%

A table (p. 166-67) lists the 7 main food salts [minerals] found in various foods, including soy beans, gluten (pure, 40%, or 20%), and peanuts.

Table XII (p. 170-71) lists foods rich in iron. Columns (a) shows the grains of iron in one ounce, and column (b) shows the number of ounces required to supply one day's ration of iron. Includes (in descending order of iron content): Savora (yeast extract), Gluten–pure, gluten–40%, egg yolk, dried lentils, wheat bran, soy beans, Protose, Brose (oatmeal, corn meal, bran), Nuttolene, Graham Flour, tenderloin meat, Graham bread, Zante currants.

Table XIV (p. 182) lists foods rich in lime [calcium] in descending order of lime content, with the same two columns as table XII. Includes: Cheese, yogurt cheese, mustard greens, linseed meal, turnip tops, soy beans.

Page 183 discusses "The acids and bases of foods–The reaction balance. As pointed out by Bunge many years ago, and as further shown by an extensive research conducted by Sherman of Columbia University, foodstuffs differ in relation to their acid and basic contents... The waste products of the body are predominantly acid, consequently it is desirable that the foodstuffs should be predominantly basic... The predominance of acids gives rise to a condition known as acidosis (p. 719), and care must be taken to protect the body from injuries which result from this condition... Meats of all sorts, especially the lean meats, tend to acidify the tissue fluids to a marked degree. Eggs tend in the same direction, though less strongly than do meats."

In the chapter titled "Diet in disorders of the digestive organs," pages 654-55 discuss soy flour, yeast extract (Savita, Marmite–which is a very useful source of iron and vitamins), Malted Nuts, 20% gluten meal, and the "Gluten-feeding method."

In the section on diabetes, page 703 gives a recipe for gluten bread. Gluten is also mentioned on p. 718. The section titled "Diet for acidosis" (p. 719) begins: "The blood and tissue fluids are slightly alkaline in reaction. This slight degree of alkalinity is essential to the maintenance of health. When, through disordered metabolism, the body becomes charged with an excess of acids, so that the alkalinity of the blood and tissues is diminished, the result is a condition known as acidosis. Among the symptoms due to acidosis may be mentioned nervousness, mental depression, mental confusion, drowsiness, convulsions, and coma. Air hunger with shortness of breath is one of the early symptoms of acidosis. This condition is most pronounced in advanced cases of diabetes and is encouraged by a meat diet, particularly by the use of an excess of fats. Fasting persons always show a condition of acidosis after fasting for a day or two. Professor Fischer believes that this preponderance of acids, or chronic acidosis, is the exciting cause of Bright's disease."

The section on diet and heart disease notes (p. 738-39): The "great frequency with which arteriosclerosis is encountered in modern times is the result of the increase in flesh eating which in recent years has been very marked in all civilized countries." It "has become the universal custom among practical physicians to exclude meats, meat extracts, and broths of all sorts from the diet of patients suffering from arteriosclerosis, as the most efficient means of checking the degeneration of the arteries..." Foods containing uric acid, plus coffee and tea, should be discarded. Bran, agar, paraffin oil, and an enema should be used freely. Address: M.D., LL.D., F.A.C.S., Superintendent of the Battle Creek Sanitarium, Battle Creek, Michigan.

455. Kellogg, John Harvey. 1921. The adsuki bean (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 298. 24 cm.
• ***Summary:*** In the chapter titled "Legumes," this section states: "Another variety introduced into this country from Japan is the Adsuki, a red bean which closely resembles the Mung in composition. It is the favorite bean of Japan, where it commands the highest price. It has a delicious flavor, being wholly free from the beanny [beany] taste characteristic of the American varieties of this legume. Tests made by the Plant Introduction Bureau of the Agricultural Department show that this bean can be readily grown in this country and it will doubtless in time achieve high rank as a staple foodstuff."

Note 1: This is the earliest document seen in which Dr. Kellogg mentions the adsuki bean.

Note 2. This exact same information appeared on the same page (314) in the 1923 edition of this book. Address: Battle Creek, Michigan.

456. Kellogg, John Harvey. 1921. Peanut butter (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 358-59. 24 cm.
• ***Summary:*** In the chapter titled "Nuts" this section states: "Many years ago (1893) it occurred to me that one of the objections to the extensive dietetic use of nuts might be overcome by mechanical preparation of the nut before serving so as to reduce it to a smooth paste and thus insure

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the preparation for digestion which the average eater is prone to neglect. The result was a product which I called peanut butter. I was much surprised with the readiness with which the product sprang into public favor. Several years ago I was informed by a wholesale grocer of Chicago [Illinois] that the firm's sales of peanut butter amounted on an average to a carload a week. I think it is safe to estimate that no less than one thousand carloads of this product are annually consumed in this country."

"The ordinary method of preparing peanut butter renders the product more or less indigestible by setting free and decomposing some of the oil which constitutes nearly 50 per cent of the peanut. The ordinary commercial peanut butters are objectionable on this account.

"Peanut butter may be prepared at home by the following method: Obtain the desired quantity of shelled nuts. Dry in an oven not hot enough to roast, loosen the skins. Place in a gunny sack and remove the skins by rubbing on the outside of the sack. Pick over carefully and exclude all skins and defective nuts. Place in thin layers, on flat pans in an oven containing also a basin of hot water. The nuts should remain in the oven until slightly browned. Great care should be taken to avoid scorching, which produces poisons, 'phenolic substances' which are highly objectionable. After the nuts are cooked they may be ground to a smooth paste in one of the numerous patterns of nut mills now easily obtainable."

Note: This document contains the earliest date seen for Dr. John Harvey Kellogg's interest and involvement in peanut butter (1893). Address: Battle Creek, Michigan.

457. Kellogg, John Harvey. 1921. Flour from the peanut. Peanut milk (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 359. 24 cm.

• ***Summary:*** These two sections appear in the chapter titled "Nuts." "Flour from the peanut: It has been found that by special treatment of the press-cake obtained after the extraction of the oil from the peanut an excellent flour, containing only five per cent oil, may be made. The flour contains a high percentage of an excellent protein."

"Peanut milk: The protein of the peanut is quite soluble in hot water, and the fat being in a finely divided state, it is easy to prepare from peanut butter a very palatable cream or milk by the simple addition of hot water." Address: Battle Creek, Michigan.

458. Kellogg, John Harvey. 1921. Malted Nuts (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 359-60. 24 cm.

• ***Summary:*** This section appears in the chapter titled "Nuts" (p. 359). "Nearly thirty years (1892-93) the writer, in seeking to supply the needs of invalids unable to eat cow's milk, conceived the idea of combining malt-digested cereals with nuts to prepare a substitute. The result reached after many experimental efforts was the product known as 'Malted Nuts,' which much resembles malted milk in appearance, while having a delicate and very agreeable nutty flavor. This product has been produced in considerable quantities and has come to be somewhat widely used. The following is the analysis as made by Atwater, as published by the U.S. Department of Agriculture:" Water 2.6%, protein 23.7%, fat 27.6%, carbohydrate (malt sugar and dextrin) 43.9%, and ash 2.2%. Calories per ounce: 140.

"It was soon discovered that 'Malted Nuts' had certain characteristic properties which rendered it of special value as a nutrient. One of these is its richness in food iron of which it contains double the amount found in ordinary beefsteak. Another... is its influence upon the milk secretion in nursing mothers. This discovery was first made by a mother who by its use was able to double her milk production and to nurse the child of a neighbor in addition to her own. Later, Dr. Hoobler, of Detroit, superintendent of a lying-in hospital, independently undertook an extended series of experiments, the interesting results of which, largely attained by the use of malted nuts, were reported in the *Journal of the American Medical Association* for August 17, 1917. The purpose of the research was to determine the influence of diet upon the milk production of nursing mothers... Studies were made of the effects of meat, eggs, cow's milk, a strictly vegetable dietary (fruits, grains and vegetables) and nuts.

"The influence of the diet was judged by the following points: 1. The amount of milk produced [by the nursing mother]. 2. The food value of the milk. 3. The effect upon the mother in loss or gain of weight.

"It was found that a diet consisting largely of nuts (fifty per cent), was far superior to any other dietary and in every particular. The amount of milk was larger than the average (14.8%), the food value was greater (30%), and the mother did better. It was noted that the mothers 'took the diet directly and in fact enjoyed it.'"

"'Malted Nuts' has been demonstrated practically the best substitute for milk which has thus far been found. It is relished by bottle-fed infants and 'agrees' when cow's milk is not tolerated."

Note: We are not told what kind of nuts were used to make Malted Nuts. But other sources (Schwarz 1970, p. 121) explain that this nondairy product was made principally from peanuts and almonds, and resembled malted milk. Address: Battle Creek, Michigan.

459. Kellogg, John Harvey. 1921. The soy bean. Composition of the soy bean (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 299-302. 24 cm.

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• ***Summary:*** In the chapter on "Legumes," the section titled "The Soy Bean" (p. 315-21) has the following contents: Introduction and history (incl. a long extract from a publication by W.J. Morse (1918), and discussion of soy beans and diabetic diets). Composition of the soy bean (according to Bailey and Street 1915). Soy bean milk. To fu (tofu). Soy sauce. Soy bean sprouts. Composition of soy bean sprouts compared with mung bean sprouts.

The section begins: "The soy bean has been used in China since 2838 B.C. It was introduced into France in 1740, England 1790, and this country not until a century later. This bean requires a long season and does best in the Southern states on this account. It is quite hardy, however, and some varieties have been found which mature as far north as Canada.

"The soy is the best of all beans. It differs decidedly from other beans in its composition. It contains 40% protein, practically no starch, and nearly 20 per cent fat, giving it characteristics approaching those of the peanut more closely than those of ordinary beans.

"More than one thousand varieties have now been tested by the U.S. Department of Agriculture. Twenty varieties are at the present time being handled by growers and seedsmen in this country. The green and yellow varieties are best adapted for food. The black and brown are chiefly for forage.

"In China, the soy bean is very little used in the manner in which beans are used in this country. Instead, according to W.J. Morse [1918], of the U.S. Department of Agriculture, 'the beans are soaked in water and roasted, the product being eaten after the manner of roasted peanuts.'" Dr. Kellogg then quotes two passages from Morse; one about roasted soybeans, and the other about soy beans which, when three-fourths or more grown, can be used as "a most palatable and nutritious green vegetable."

"This bean not only contains a large amount of protein, more than is found in the same weight of beef, but its protein is of a particularly fine quality. Heretofore, the casein of milk has enjoyed a unique reputation as a protein of finest quality, but now 'the protein of the soy bean appears to be as valuable as the casein of milk.' In view of the shortage of milk, which is likely to increase, it is gratifying to know that a protein has been discovered equally valuable as casein, and one which may be produced in unlimited quantities.

"For promotion of growth, it is not only necessary for the food to contain 'complete' protein in proper amount, but it must also contain a sufficiency of the two vitamins, designated as fat-soluble A and water-soluble B. Osborne and Mendel demonstrated that the soy bean contains an adequate supply of both fat-soluble and of 'water-soluble vitamins,' in which respect it is superior to all seeds heretofore examined, with the possible exception of flaxseed and millet.

"The soy bean is destined to become one of the great food staples, not only of this country but of the world. It is capable not only of supplying the essentials for growth and maintenance, but may also act as a complement to other imperfect foods, such as corn for example, in combination with which it has shown most excellent experimental results.

Composition of the soybean: A table shows the composition of the soy bean, compiled from various sources. "The above analysis clearly shows the soy bean to be a most remarkable food product. Its composition is in some respects more like that of a nut than that of other legumes. In this respect it very much resembles the peanut. Its protein content, nearly 40 per cent, is higher than that of any other foodstuff. Even lean meat affords but half as much. Its high percentage of fat gives it a very high food value and makes it a rich source of oil for various industrial purposes as well as for food.

"The soy fills the place of meat as well as milk in the dietary of many millions of sturdy Orientals. Since the composition of the soy has been understood, it has been much used as a food for diabetics. It is evident from the above [table] that it contains little which can be objectionable in diabetes. The small amount of dextrin and sugar may be easily removed, when necessary, by parboiling.

"Experiments by Holmes [1920], of the office of Home Economics, U.S. Department of Agriculture, have shown that the well cooked soy bean (cooked for two hours under steam pressure) is very easily digestible, and is an exceptionally wholesome article of food, superior to most other legumes.

"The soy bean may not become really popular until the pressure cooker comes into general use, which may be some time. In the meantime, while the patent pressure cooker is coming, any resourceful housewife may improvise a perfectly good and satisfactory pressure cooker from inexpensive materials close at hand. Get a stone jug or jar that can be hermetically sealed. The little stone jars in which apple butter is sometimes sold are well adapted to the purpose. After soaking the beans over night put [them] in the jug with a little salt and enough water to cover, seal up tight and secure the cover well, remembering that the pressure will be from within. Set the jug in a saturated solution of common salt, place over a smart fire and boil for one to two hours. The salt solution boils at a temperature of 220ºF. and so the beans are exposed to a higher temperature than in ordinary boiling... Cooking at the higher temperature not only softens the cellulose and so renders the foodstuffs tender, but greatly improves the flavor.

Note: This is the earliest document seen (Sept. 1996) that uses the term "pressure cooker" in connection with soy beans. Address: Battle Creek, Michigan.

460. Kellogg, John Harvey. 1921. Soy bean milk (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 302-03. 24 cm.

• ***Summary:*** "In Japan infants are sometimes nourished artificially on milk prepared from the soy bean by methods

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for a long time kept secret. Soy milk is now well known and quite extensively in use in France and England, and likely soon to be introduced into this country. The writer has prepared, experimentally, a quite palatable milk from the soy bean, and has for twenty-five years made use of milk prepared from the almond and other nuts.

"The beans may be prepared either by grinding to a fine flour or by soaking over night and crushing to a pulp between rollers. The dry meal is most convenient. Add to the dry meal sufficient water to a little more than saturate. Allow to soak for two hours. Add five times the quantity of boiling water. Boil for ten minutes, stirring. Filter through a fine cloth. The milky liquid thus obtained has properties very closely resembling cow's milk. It is rich in protein and fats. The fat is well emulsified and easily digestible, and the protein very closely resembles that of milk, being what is known to chemists as a complete protein which may replace the casein of milk as food. The soy milk is rather deficient in salts, both lime and iron. It contains vitamins but less than milk, and it contains no carbohydrates. To be used as milk it should be sweetened by the addition of 2 per cent of cane sugar or 4 per cent of milk sugar. To suit most palates a little salt should be added also. The flavor is different from that of cow's milk, but it is wholesome and not unpalatable and may to a considerable extent take the place of cow's milk by persons who are sensitized to milk or when milk is not available. A similar preparation may be made from peanuts.

"Soy bean milk, according to Adolf and Kiang, has the following percentage composition: Protein 4.22, fat 1.87, salts 0.40, water 93.51.

"The composition of the milk will vary, of course, with the amount of water used in its preparation. It will be noted that soy milk contains no sugar and is very poor in salts, containing only half the amount of salts found in cow's milk. All these may be easily added, however, and so soy milk is a possible resource for lacteal food in case of scarcity of the bovine product; but it seems to the writer doubtful that soy milk will ever be able to compete with cow's milk as a nutrient for human beings, and especially the feeding of infants." Address: Battle Creek, Michigan.

461. Kellogg, John Harvey. 1921. To fu (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 303-04. 24 cm.
• ***Summary:*** "This is a cheese like preparation made from the soy bean, much used in China. The method is as follows:

"Prepare soy bean milk. While it is boiling add one-fifth its volume of a one-half per cent solution of citric acid, stirring. Strain through a cloth to separate the curds.

"To fu omelet is more palatable and more wholesome than ordinary egg omelet. It is made as follows: Four ounces of to fu, one rounded teaspoonful of graham flour, milk sufficient to give the mixture the consistency of pancake batter. Add one well beaten egg. Cook in the usual way. This to fu or soy bean omelet is more wholesome than the ordinary egg omelet and is more easily digestible. Made without the addition of flour the to fu omelet is a valuable dish for diabetics.

"The following is the [percentage] composition of to fu as given by Adolf [sic, Adolph] and Kiang [1920]:

"Protein 10.22, fat 3.66, salts 1.09, [nitrogen-free] extract 4.13, water 80.90." Address: Battle Creek, Michigan.

462. Kellogg, John Harvey. 1921. Soy sauce (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 304. 24 cm.
• ***Summary:*** "'Soy or shoyu sauce is a dark brown liquid prepared from a mixture of cooked and ground soy beans, roasted and pulverized wheat (Barley is sometimes used), salt, and water. This mass is inoculated with a culture known as rice ferment (*Aspergillus oryzae*) and left in cakes to ferment from six months to a year, or sometimes longer.

"In odor and taste this sauce suggests a good quality of meat extract, though perhaps more salty and a trifle more pungent." Address: Battle Creek, Michigan.

463. Kellogg, John Harvey. 1921. Soy bean sprouts (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 304-05. 24 cm.
• ***Summary:*** "'Several species of beans are sprouted and used as a garden vegetable by the Chinese. Soy beans are used to a very considerable extent for this purpose, as these sprouts are larger and firmer than those of most other legumes. Bean sprouts may be used as a home winter vegetable, for the dried beans are sprouted easily in a short time under proper conditions of heat and moisture.

"Mr. Shih Chi Yien [1918] of the Foochow [sic, Soochow] University gives the following directions for preparing bean sprouts, for which purpose either yellow or green soy beans or the Mung beans may be used." There follow two paragraphs of instructions.

"Another method of sprouting is to spread the beans one layer thick on a wet cloth and cover with a heavy wet, dark colored cloth which must be kept damp by frequent sprinkling.

"Bean sprouts are used as a green vegetable at all seasons of the year. In this country they would be especially useful in the winter season because of their richness in vitamins. They have been much used in combating beri-beri and other deficiency disorders. Their use in this country should be encouraged.

"The sprouts may be served raw as a salad or cooked as a green vegetable. They are a constituent of the famous Chinese dish, 'chop suey.'"

Note: This is the earliest document seen (Jan. 2013)

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that uses the word "vitamins" in describing one of the nutritional benefits of soy bean sprouts, or that notes that soy bean sprouts are used in chop suey. Address: Battle Creek, Michigan.

464. Kellogg, John Harvey. 1921. Cellulose. The laxative diet. Diet in constipation. Rules for care of the colon to combat constipation (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 198-208, 580-82, 628-29, 632-34. 24 cm.
• ***Summary:*** Four sections of this book contain Dr. Kellogg's most complete statement to date about the health benefits of what would later come to be known as dietary fiber or complex carbohydrates. By the 1980s he was considered one of the pioneers in the Western World on this subject.

(1) In the chapter titled "Cellulose" (p. 198-208) are three sections after the introduction: Bran does not irritate, Agar-agar, and Manyalla (Partially digested reindeer moss eaten by the Koraks and all other Siberian tribes as a substitute for bread). "Bran does not irritate (p. 203): That bran is an excellent laxative is not a new discovery... The general failure to resort to bran for the relief of constipation has probably been due to the wide-spread but erroneous notion that bran is irritating. We are glad to find this view which we have so long defended endorsed by the most eminent of medical authorities, *The Journal of the American Medical Association* (Dec. 6, 1919, p. 1768)." A long quotation follows about the laxative value of bran. The section on Agar-Agar (p. 205-08) gives details on the production and use of this product in Japan based on an account from Mr. George U. West, American Consul of Kobe, Japan.

(2) In the chapter titled "Regimens and Dietaries" is a section on "The Laxative Diet" (p. 580-82) which states: "This dietary is chiefly addressed to the colon, although its beneficial effects are participated in by the whole body, and not only indirectly through improved elimination, but directly through the rich supplies of vitamins, lime [calcium], iron and other essential food minerals which this dietary affords.

"The most laxative foods are those which contain the largest amount of cellulose. The amount of cellulose found in each one of the ordinary foodstuffs is shown in tables given elsewhere in this work. (See pages 200, 201). The foods in the following list are especially rich in cellulose..." Thirty foods are listed, including wheat bran, oatmeal, beans, peas, lentils, barley, and many vegetables and fruits.

Next comes a subsection titled "Bran" (p. 580): "When it is necessary to combat obstinate constipation, it is usually essential that wheat bran be used in liberal quantities. The laxative virtues of bran have long been known and utilized by stock raisers, but it is only within the last twenty years that the value of this article as a food laxative has begun to receive the recognition it deserves. When the writer first began the advocacy of bran as a laxative some forty-five years ago [i.e., in about 1878], it was very hard to convince the average man that in taking bran he was not running great risk of doing violence to his stomach and intestines, perhaps creating ulceration, inflammation, hemorrhoids, or some other distressing disorder. On purely theoretical grounds and perhaps with a commercial purpose, some one [someone] years ago launched the notion that bran irritates the gastric and intestinal mucous membrane. The patent flour manufacturers have industriously cultivated this false notion until it has come to be widely held and deeply rooted in the popular mind. The millers can well afford to spend a considerable amount of money in persuading people to eat fine flour bread, for this will make them constipated so that they will later be obliged to resort to the use of the same miller's bran, for which they will be asked to pay 15 to 25 cents a pound after having paid one or two cents extra per pound for the superfine flour which has made them ill. Thus the miller by his shrewd scheme not only makes an extra profit on his superfine flour, but gets triple price for the precious bran which should never have been separated from the other components of the wheat berry.

"It should be remembered that *bran does not irritate; it titillates.* It passes through the mouth without inflicting injury and likewise passes along over the mucous membrane of the whole alimentary tract, stimulating the intestine to action but doing it no damage.

"The amount of bran required to produce decided laxative effects is considerable. A quarter ounce at each meal is often needed, and it must be taken without exception. The quantity should be increased until the desired effect, three bowel movements daily, is produced.

"There are many convenient methods of using bran. Here are a few. Bran 'brose' may be prepared by mixing together equal measures of bran, cornmeal, and steel-cut oats. Stir into boiling water and cook 3 to 10 minutes, never longer. This is an excellent breakfast dish. Dry bran may be served upon the table and eaten with corn flakes or rice flakes, oatmeal, cream of wheat or other breakfast foods. One or two heaping tablespoonfuls is not too large a dose for the average individual. Some require more. At dinner bran may be added to the soup or mixed with mashed potatoes or purées of some sort.

"Bran bread, bran gems and other similar combinations will be found efficient and satisfactory The important thing is to use a liberal quantity of bran and take it at every meal without exception. Agar, another form of cellulose, is equally efficient in many cases and occasionally produces more satisfactory results than does bran.

"It is to be remembered, also, that bran is rich in lime [calcium], iron and vitamins and so has a real food value aside from its laxative properties."

The next subsection is titled "When the Laxative Diet is

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Indicated" (p. 582).

(3) In the chapter titled "Diet in Disorders of the Digestive Organs" (p. 624-85) the section on "Diet in Constipation" (p. 628-29) states: "Cellulose is found only in vegetable foodstuffs; hence animal foods of all sorts, meat, eggs and dairy products are constipating. Being wholly digestible and absorbable, they leave behind little residue. But the small residues of these animal substances which reach the colon readily undergo putrefaction, and the products of putrefaction being alkaline paralyze the colon, which is rendered inactive by alkalies and stimulated to activity by acids. In addition to increasing the bulk of food, lubrication is usually required. This may be secured by the use of paraffin of some form." "For best results, either bran or agar and the lubricating paraffin should be mixed in the entire meal instead of being taken before or after the meal... It is the meal itself which needs the roughage and lubrication. These physiological aids to bowel movement do not act by irritation but by promoting physiologic action."

(4) Several pages later (p. 632-34), the section titled "Rules for Care of the Colon to Combat Constipation" gives 20 basic rules. Rule number 9 states: "Eat no white flour bread and avoid condiments, meat and other constipating foods." Number 10: "Eat whole grain breads and cereals. Add an equal measure of bran to oatmeal and other cereals. Eat liberally of greens, fresh vegetables, dates, figs, prunes and all laxative foods." Address: Battle Creek, Michigan.

465. Kellogg, John Harvey. 1921. The peanut (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 357-58. 24 cm.
• ***Summary:*** In the chapter titled "Nuts" this section states: "Though usually classed with nuts, the peanut is really a legume and botanically should be classed with beans and peas. In chemical composition, however, it much more closely resembles a nut than a bean. The peanut is a native of Central America. It is now grown, however, in all parts of the world. It is used extensively as a food in various parts of Africa, where it is known as the monkey nut.

"Peanut oil has been extensively used as a substitute for butter and in the adulteration of olive oil. It must be remembered, however, that these vegetable oils do not contain the fat-soluble vitamins which abound in butter and which are essential for good nutrition.

"Evidence is constantly accumulating to show the great food value of the humble peanut. Dietary studies made by the office of home economics of the U.S. Department of Agriculture have shown that the peanut is not only easily digested but that the fat and protein, which are its chief constituents, are of a very superior character. The oil of the peanut is easily digested and the protein has been shown to have about twice the value of the proteins of wheat. It is well known that experimental animals can not be brought to normal development on a diet of bread alone, but bread consisting of three parts of wheat flour and one of peanut flour will secure normal growth.

"A bushel of peanuts contains 21 pounds of meats and 9 pounds of shells. As an average of 34 bushels can be produced to the acre, an acre will yield 714 pounds of shelled peanuts to the acre. One bushel of peanuts yields a gallon of fine edible oil which may take the place of olive oil for table use. A field of peanuts 200 miles square (25,000,000 acres) would furnish a year's supply of food fat for the United States."

Note: On page 356, Dr. Kellogg discusses "The Ground Nut: A native of this country which was eaten to considerable extent by the North American Indians in aboriginal times. It is nutritious and wholesome but not at present produced in quantities sufficient to give it more than a very minor place in the world's bill of fare." Address: Battle Creek, Michigan.

466. Kellogg, John Harvey. 1921. Animal foods (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 363-435. 24 cm.
• ***Summary:*** Dr. Kellogg confines to this one chapter all of his discussion of meat, poultry, fish, eggs, and milk. Contents: Introduction: Special characteristics of animal foods. Meats: The iron of meats, the lime [calcium] content of animal foods, beef, mutton, goat, venison, pork, fowls, fish, "sea foods," oysters, meat extractives, the poisons of meat, viscera highly objectionable. "high" meats, putrefaction products in meat, the bacteria of meat, acidosis from a flesh diet, effect of flesh eating on animals, parasites of meat, flesh meat not essential, meat unnecessary, raw beef not antiscorbutic, special contraindications of flesh foods. Eggs: Introduction, egg yolk, egg white, the cooking of eggs, influence of hen's food on eggs, eggs and biliousness, the food iron of eggs, the lime content of eggs, egg substitutes, preserved eggs, bad eggs, candling of eggs, egg poisoning, when eggs should not be eaten. Milk: Introduction, table showing composition of cow's milk and milk products, why milk sours while meat putrefies, the special value of milk proteins, milk rich in vitamins, influence of food of cow upon milk, milk rich in salts, dried milk, cream, butter (rich in vitamins), butter color, cheese, skimmed milk, canned milk, buttermilk, whey, modified milk, the iron content of milk, the lime [calcium] content of milk and cheese, "yogurt cheese" (fermented using pure cultures of the *bacillus acidophilus*), whey, milk must be clean, sour milk, bitter milk, slimy and colored milk, bacteria on milk bottles, infections due to unclean milk, infected milk a cause of tuberculosis, injurious effects of sterilizing or pasteurizing milk, buddized milk (sterilized with peroxide of hydrogen), certified milk (and specifications established by the American Association of Medical Milk Commissions), a person may be sensitized to milk, medical uses of milk, how

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to eat milk (it must be chewed to mix it with saliva, not just swallowed; never eat it with meat), milk a cheap food, table showing composition of milk of various animals (human milk is the lowest in total protein {2.01%} and reindeer milk is the highest {10.90%}), table showing the composition of certain infant foods.

Photos show: (1) The appearance of eggs when candled (4 types). (2) The Battle Creek Sanitarium dairy barn (very clean, with cows standing in two long rows), (3) Beefsteak preserved in buttermilk for 15 years.

Note: Dr. Kellogg advocated a vegetarian diet. He opposed the consumption of meat, fowls (poultry), fish, or sea foods. Eggs are good food if they are fresh and properly cooked to make them digestible–at a low temperature (150-160ºF) until they are "soft boiled." Milk is an excellent food (good source of protein, calcium, and vitamins; and inexpensive) if it is fresh and clean (ideally certified), and comes from cows which have been fed upon fresh grass or other green food (which supplies vitamins). Unsanitary milk may contain disease-producing organisms such as those of typhoid fever, tuberculosis, and diphtheria. Butter is the most important of all animal fats because it is rich in vitamins. Fresh, unripened cheese (especially cottage cheese) and yogurt cheese are good foods. Fresh, clean milk is better than clean eggs. Address: Battle Creek, Michigan.

467. Kellogg, John Harvey. 1921. Vitamins (Document part). In: J.H. Kellogg. 1921. The New Dietetics: What to Eat and How... Battle Creek, Michigan: The Modern Medicine Publishing Co. 950 p. See p. 185-197. 24 cm.
• ***Summary:*** Contents: The anti-scorbutic vitamin. The antineuritic or anti beri-beri vitamin. Yeast extract very rich in vitamins. The fat-soluble vitamin. How vitamins are destroyed. The unique value of the tomato.

This chapter begins: "These subtle elements, which have been in recent years proven to be absolutely essential to life and health, are present in food in such small quantities that notwithstanding the prodigious amount of work which has been bestowed upon them, their chemical composition is not yet known. The proof of the existence of this class of food principles and their importance to human life rests upon numerous observations which have shown that in their absence various disorders known as deficiency diseases make their appearance.

"Vitamin appears to be an essential constituent of nerve tissue. Funk found vitamin in ox brain and other investigators have found vitamin in the spinal cord.

"When vitamins are not present in the food in sufficient amount, the vitamin constituent of the nerves is gradually lost and degeneration of the nerve tissue with paralysis follows as the result."

"Vitamins are necessary to promote growth. In their absence young animals do not develop, reproduction does not take place, mothers are not able to nurse their young, appetite and nutrition and various diseases develop, among the best known of which are scurvy, beri-beri, rickets, perhaps pellagra, and certain diseases of the eye."

The section on "The antiscorbutic vitamin" (p. 187) notes: "The Chinese have long made use of sprouted seeds in the form of salad and combined with vegetables in various ways. Sprouted soy beans is one of the constituents of the famous chop suey. Recently Chick and Delf, of London," have found that peas and lentils, when soaked of 24 hours in water and then sprouted for 48 hours at room temperature "were five to six times as active as dry seeds in preventing scurvy, and is this respect compared well with many fresh vegetables. So small a quantity as one and one-fourth grams (one-third dram) of the sprouted seeds fed daily was found sufficient to prevent scurvy in guinea pigs." "The antiscorbutic power of germinated seeds is considerably lessened by boiling. Holst tells us that Cartier, on his last voyage to Newfoundland [Canada] in 1535, cured his crew of 103 men, who with the exception of three were sick with scurvy, by administering to them a freshly prepared decoction of pine needles."

"A very good salad may be prepared from sprouted soy bean seeds which have been allowed to grow to the length of about an inch. Sprouted soy bean seeds also add an excellent quality to vegetable soups. The property which these seeds have of producing highly valuable vitamins makes very desirable the encouragement, in this country, of the use of sprouted seeds." The author then describes how to grow sprouts at home. Address: Battle Creek, Michigan.

468. *Madison Survey* (*Madison, Tennessee*). 1922. Health foods and how to make them known. 4(2):2-3. Jan. 11.
• ***Summary:*** "Teachers in the pulpit and teachers in the class room should be prepared to instruct in the care of the body. They should understand the science of physiology and hygiene, and should teach those under their direction the sacredness of the human body and the laws of its life."

"Simple preparations are to be made, the price of which will fall within the reach of the poor, and many are to be taught to make their own foods rather than to depend upon factory-made foods.

"Every cafeteria, every sanitarium, every school, and likewise, every home table, should be a practical demonstration center of foods properly prepared to give health of body and mind."

469. *Madison Survey* (*Madison, Tennessee*). 1922. Madison Food Factory products. 4(10):3. March 8.
• ***Summary:*** The factory's loaf of whole-wheat bread is riding a wave of popularity. "With many who are studying diet problems the first question is, 'What shall I prepare in place of meat?'

"There are vegetable preparations just as rich in food elements as the flesh of animals, and not only more easily

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prepared than meats, but lacking in those undesirable points that are driving a good many people to give up the use of flesh foods. The food factory puts out Nut Meat, Savory Meat, and Soy Bean Meat.

"Recipes for dishes made from these vegetable meats are sent with every order.

"Much is being said and written against the free use of cane sugar, and cane sugar products."

Note: This is the earliest document seen (Aug. 2013) that mentions "Savory Meat" in connection with Madison College. This product may have been made with wheat gluten. The last mention seen of Savory Meat in the *Madison Survey* is on 2 July 1922, page 3.

470. **Product Name:** Soy Bean Meat.
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1922 March.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Madison Survey. 1922. March 8. p. 3. May 10. p. 3. Canned. Probably made from whole mature soybeans. It is not clear what ingredients (in addition to soy beans) were used or how it was made. This was America's second commercial soy-based meat alternative (meat analog).

Note: This is the earliest known commercial soy product made in Tennessee.

471. *Madison Survey* (*Madison, Tennessee*). 1922. Bits of news. 4(14):4. April 5.
• ***Summary:*** "The Louisville [Kentucky, vegetarian] cafeteria workers have been giving food demonstrations at the health institute conducted at the Louisville church, and Mrs. Sutherland spent the weekend with them, giving instruction on dietetics.

"Two members of the family, Mrs. Scott and Dr. Caroline Hilborn, spent the week visiting the cafeterias in Chattanooga, Knoxville [both Tennessee], and Asheville [North Carolina]..."

472. *Madison Survey* (*Madison, Tennessee*). 1922. Instead of meat. 4(19):3. May 10.
• ***Summary:*** "The Food Department of the Madison School puts out a number of foods to take the place of flesh meats, such as Nut Meat, Soy Bean Meat and Savory Meat." Two recipes for serving Nut Meat or Savory Meat are given.

473. *Madison Survey* (*Madison, Tennessee*). 1922. Added facilities for a growing institution. 4(19):1-2. May 10.
• ***Summary:*** "A number of years ago when the flakefood business was being pushed, a large food factory was erected near Madison. The promoters had a big institution on their hands before the people of the country had been educated to eat the products of the concern. The plant passed from one group of men to another [including Jethro Kloss, who took over this Nashville Sanitarium Food Factory in about 1915], each finding that it was too large and expensive to operate with profit. Finally, it was decided to scrap it.

"It seemed a pity to do this, for the enterprise stood for the manufacture and sale of health foods which the public needed. With the help of friends, the food factory was purchased and rebuilt on a more simple plan on the school grounds. It has since been operated, as are other departments of the institution, with student labor, and has contributed its share to the support of students who meet expenses by work while in training.

"The demand for health foods is on the increase. The latest advance has been in the manufacture of malta [probably made from malted grains], a grain sweet which is more wholesome than cane sugars and cane syrups. A small house was built for the manufacture of malta."

Note 1. According to W.C. Sandborn (1953, p. 123), the food factory was opened at Madison in 1918. This date was verified by Elmer Bush who helped move the factory.

Note 2. This is the earliest document seen (May 2009) related to Jethro Kloss, although his name is not mentioned.

474. *Madison Survey* (*Madison, Tennessee*). 1922. Is flesh food essential to health. 4(22):1-3. May 31.
• ***Summary:*** "Many times the patrons of our vegetarian cafeterias and sanitariums ask why flesh food is discarded."

"The flesh eater is getting his food second-hand. It is a little strange that people who would shrink from using second-hand clothing will eat second-hand food without giving the matter a passing thought. There is no advantage in passing vegetable food through the body of an animal before it is consumed by a human being."

"McCullum, an authority on diet has stated, 'We could entirely dispense with meats without suffering any ill effects whatever.'"

Discusses the benefits of a vegetarian diet and cites numerous authorities who advocate such a diet.

475. *Madison Survey* (*Madison, Tennessee*). 1922. The food factory. 4(24):3. June 14.
• ***Summary:*** "A man and his wife, members of the faculty, have charge of the food department, where are manufactured various nut and soy bean meats, malted nuts, malta, whole wheat and bran crakers [sic, crackers], whole wheat bread, peanut butter, and other health foods." Various pieces of food processing equipment, including a peanut blancher, prepare "health foods for the market, for the city cafeteria, and the home table."

476. *Madison Survey* (*Madison, Tennessee*). 1922. Health foods manufactured at Madison. 4(26):3. July 2.
• ***Summary:*** "For the benefit of those who are inquiring

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about foods put on the market by the food department of the Madison School, we give the following list: Unleavened Breads–whole wheat fruit crackers, sweetened whole wheat crackers, unsweetened whole wheat crackers, bran crackers, whole wheat beaten biscuit, whole wheat beaten sticks, breakfast crisps.

"The vegetable meats, in cans of various sizes, are–Nut meat, Soy bean meat, Savory meat.

"There are soy beans, plain canned... Steamed whole wheat is put up in 16-ounce cans, and sterilized bran and forty per cent gluten flour are for sale."

477. *Madison Survey* (*Madison, Tennessee*). 1922. The manufacture of health foods an important part of our work. 4(30):1-2. July 26.

• ***Summary:*** "For a number of years before the establishment of the school, a food factory was operated in this section of the South. It was in the days when flake foods had been popularized, and this factory was started as a money-making enterprise. Although it was in no way connected with the work of the denomination, yet our people were looked upon as responsible for the project, and when it failed they received the censure.

"In order to keep alive the health food industry, the factory was purchased and operated for a number of years by the conference. The location was unfavorable and the labor problem a perplexing one, and so in spite of the fact that good foods were manufactured, the enterprise was a losing one, and it was decided to close.

"Finding it difficult to dispose of the property to any company whose object was the making of money, it was decided to scrap the plant, but Brother Jethro Kloss, who had a keen interest in the food work, and who had some experience in a small way in the manufacture of foods in Minnesota, decided to buy. He operated the factory for several years. He was enthusiastic over the production of foods, not so much from the financial as from the philanthropic side of the question. But the labor problem was still a difficult one. He could not pay the prices demanded, and the factory was again to be shut down.

"When the Madison School faced the closing of the food factory,–the only one then operating in the South for the manufacture of health foods,–and considered the statement made in the early history of the institution, that Madison should interest itself in the food work in the South, the management of the School decided it to be their duty to keep the health food business alive.

"This was in the time of the Great War [World War I], a time of unusual stress everywhere. But with the assistance of Sister Josephine Gotzian, who has befriended more than one struggling health food enterprise, the Madison School faculty purchased the plant. The buildings were wrecked and brought to the School farm. Here, a new factory was built. It is not large but it is well planned and thoroughly sanitary. It has cost nearly fifteen thousand dollars, and aside from Sister Gotzian's assistance the School has borne the expense. The money came out of what otherwise would have gone to faculty members as a salary. They willingly made the sacrifice because of their love for health principles and their desire to help forward this type of work in the South.

"The factory has had a moulding effect on the work in this field. It has made possible the whole grain bread campaign that is being carried forward in many other places... It is encouraging men and women to discard the use of flesh foods by providing proper foods to take the place of meat."

Note 1. Though soy beans are not mentioned, by April 1919 this food factory was canning soy beans grown on the school farm. In later years it would make many commercial soy products and sell some of them throughout the USA and the world.

Note 2. This is the earliest document seen (May 2009) related to Jethro Kloss which mentions his name.

478. Kellogg, John Harvey. 1922. Bacteriology condemns meat. *Good Health* (*Battle Creek, Michigan*) 57(7):318-20. July.

• ***Summary:*** "Recently the writer had the pleasure of visiting in his laboratory an eminent bacteriologist, professor this newest branch of this important science in one of the world's greatest universities. In the course of the conversation, the writer remarked, for the purpose of eliciting an opinion of the professor:

"'A bacteriologist ought to prohibit the use of meat, because every morsel is swarming with putrefactive organisms, Welch's bacillus, and other pernicious germs which infect the alimentary canal, particularly the colon, and so become the cause of colitis, appendicitis, and other diseases, beside producing virulent poisons which damage the liver, kidneys and other bodily structures in a great variety of ways.'"

"'Yes,' said the professor, 'as meat comes from the butcher shop, as it is ordinarily eaten by people, it is filled with putrefactive bacteria. I entirely agree with you. *Meat is unnecessary as an article of food and is harmful.'*

"Dr. Tissier, one of the most eminent and celebrated bacteriologists of the Pasteur Institute of Paris, for many years assistant of the late Professor Metchnikoff, and later his associate, was among the first to make a careful study of the bacteria of the colon. He then made a study of meat, obtaining specimens first from the butcher shops. He found every specimen swarming with the bacteria of putrefaction... Dr. Tissier then went to the slaughterhouse and obtained specimens of meat from the slaughtered animals as quickly as possible after the animal was killed." The same putrefactive germs were found. "As a result of these experiments, Dr. Tissier abandoned the use of flesh foods, and for more than twenty years has prohibited the

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use of flesh foods by his patients. He treats his patients by changing the intestinal flora. This he accomplishes by implanting cultures of the protective germs which discourage the growth of putrefactive germs in the colon. These germs are implanted in the infant's intestine within a few hours after birth. Nature starts out in life every young warm-blooded animal, every calf, every kitten, even puppies and chickens, with a stock of protective germs (*B. bifidus* and *B. acidophilus*). So long as these germs flourish, the animal remains in health. Through errors in diet, particularly by the use of meat, these germs are lost. The autointoxication begins, with all the evil consequences which follow." Address: Battle Creek, Michigan.

479. **Product Name:** Soy Beans (Plain Canned).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1922 July.
Ingredients: Incl. whole soybeans.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Madison Survey. 1922. July 2. p. 3. Gray. 1936. All About The Soya Bean. p. 123.

480. *Good Health* (*Battle Creek, Michigan*). 1922. The constipation problem simplified. 57(8):323-27. Aug.
• ***Summary:*** The three keys are: (1) Avoid laxatives and drugs that act by chemical effects. (2) Add protective, beneficial bacteria, *B. acidophilus* and *B. bifidus* to change the intestinal flora. (3) Consume a diet rich in roughage.

481. Brook, Harry Ellington. 1922. Care of the body. *Los Angeles Times.* Sept. 10. p. XI22. Sunday magazine.
• ***Summary:*** The section titled "Vegetarian restaurants" states: "The vegetarian restaurant site on Hill street is now occupied by one of our leading grocery stores. For many years, it was conducted by the Seventh-Day Adventists, and, according to the tenets of that sect, was closed on Saturday. Since then, it has changed hands several times, gradually falling into 'innocuous desuetude.'

"It seems as if there should be a good field for several vegetarian restaurants in this city, where there are thousands of people who do not eat meat. The explanation may be that of late the restaurants and cafeterias have come to cater more and more to this class of customers.

"There are several raw food restaurants in Los Angeles." Address: N.D. [Naturopathic Doctor].

482. Hollister, M.A. 1922. The relation of the church to city treatment rooms, vegetarian cafeterias, and rural community work. *Madison Survey* (*Madison, Tennessee*) 4(41):4-5. Oct. 18.
• ***Summary:*** "The work of the church is the saving of souls, and since the real object of such enterprises as our cafeterias and treatment rooms is to save men, the attitude of the church and conference should not be mere toleration of these enterprises, but they should encourage and foster by active participation and cooperation."

"The vegetarian cafeteria [in Nashville] is a most excellent line of work, as it serves healthful foods to the people and gives instruction in healthful cookery. We are told that the cafeteria should be a school–not merely a place to feed people but to educate them... Many of the same things may be said of treatment rooms... The workers in these city centers should be examples of neatness, Christian courtesy and with a character above reproach."

483. **Product Name:** Savory Meat.
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1922.
New Product–Documentation: *Madison Survey* (Madison, Tennessee). 1922. March 8. p. 3 "Madison Food Factory products." "There are vegetable preparations just as rich in food elements as the flesh of animals, and not only more easily prepared than meats, but lacking in those undesirable points that are driving a good many people to give up the use of flesh foods. The food factory puts out Nut Meat, Savory Meat, and Soy Bean Meat."

Madison Survey (Madison, Tennessee). 1922. May 10. "Instead of meat." "The Food Department of the Madison School puts out a number of foods to take the place of flesh meats, such as Nut Meat, Soy Bean Meat and Savory Meat." Two recipes for serving Nut Meat or Savory Meat are given. Note: Nowhere can we find any proof that Savory Meat contained wheat gluten. Yet it was a meat alternative that probably did not contain soy. The last mention seen of Savory Meat in the *Madison Survey* is on 2 July 1922, page 3.

Letter from Mavis Sutherland. 1994. July 3. "I may have solved the gluten question [What was the first commercial product made by Madison Foods that contained gluten?] but I can't prove it. I will send copies of the *Madison Survey* which cause me to feel that gluten came on the scene in 1921 or 1922. It was called Savory Meat."

Note: Madison Foods started in 1918. The first manager and treasurer was Mrs. Nellie Druillard (affectionately called "Mother D"). Mr. and Mrs. Andrew Wheeler were the first in charge of food production.

484. **Product Name:** Loma Linda Smokene (Seasoning).
Manufacturer's Name: Sanitarium Food Co. (Changed name to Loma Linda Food Co. on 6 Feb. 1933).
Manufacturer's Address: Anderson Street, Loma Linda, California.
Date of Introduction: 1922.
Ingredients: In 1973: Toasted soy powder, dried yeast, soy

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sauce, condensed wood smoke.
Wt/Vol., Packaging, Price: By 1969: 2.5 oz shaker bottles.
New Product–Documentation: Ad in *Health* (Mountain View, CA). 1934. April. p. 33. The product is now named Smoteen.

Today's Food. 1961. Summer. p. 6. "Smokene."

Loma Linda Food Co. 1969. "Wholesale Price List." Smokene is now sold in 2.5 oz shaker bottles, which retail for $0.30 each.

Interview with Charlotte Van Gundy Holmes. 1981. She says that this was produced as an imitation of the soy-based Smoein developed several years earlier by her father, T.A. Van Gundy, at La Sierra Industries in nearby La Sierra, California.

Karen Misko. 1973. *SeVa Longevity Cookery Cookbook.* p. 101. "Smokene: smoked seasoning spice made from toasted soy powder, dried yeast, soy sauce and condensed wood smoke. It is used for flavoring soups and sauces (Loma Linda Foods)."

Talk with Ty Myers of Washington state. 2004. Jan. 30. His aunt, who also lives in Washington, has a bottle of Smokene with some of the product still in it. She had it when he was a boy, and he is now age 40. He tried some not long ago. A powder, it adds a delicious smoky flavor when sprinkled on almost anything. Ingredients include soybeans and yeast. It comes in a glass bottle, 3 inches tall, with a shaker top and a metal cap. The design looks like it was made in the 1940s. He will send color photos to Soyfoods Center.

Note 1. This is the earliest known commercial soy product made by Loma Linda Foods or its predecessors.

Note 2. This is the 2nd earliest known commercial roasted soy flour in the Western world (after Smoein).

485. Arnbrecht, Jacob. comp. 1922. Hygienic cook book: A collection of choice recipes carefully tested. Revised and enlarged. Battle Creek, Michigan: Shaw Printing Company. 416 p. Index. 21 cm. [10 ref]
• ***Summary:*** This is a Seventh-day Adventist vegetarian cookbook (which includes dairy products and eggs), containing much basic information about nutrition and hygiene. A full-page table titled "Typical foodstuffs representative of each food nutrient" (p. 14) lists soy beans as a food that contains protein, but less than is found in eggs, meat, milk, or cheese. It also notes that soy beans are "Starchless." A half-page table titled "Classification of proteins" (p. 18) states that the proteins legumin and glycenin [sic, glycinin] are found in soy beans. The chapter titled "Entrees" contains a recipe for "Soy bean loaf" which includes 1½ cups soy bean puree and ½ cup peanut butter. This is the only soy recipe in the book. This same chapter contains many recipes using "substitutes for flesh meats" (such as Protose, Nuttolene), and other innovative ingredients (gluten meal, ground nut meats, vegetable butter, nut butter) made by Seventh-day Adventist companies. Recipe names include: Vegetable meat. Vegetarian beefsteak. Mock veal pie.

Cellulose (p. 26): It "has no nutritive value, but because it is not digested in the human body it forms the larger part of the ballast or bulk of our food which is so necessary to a normal intestinal movement. It stimulates peristalsis by acting as a gentle mechanical irritant." Those who have a tendency to "sluggish intestinal movement" may want to add bran to their food or consume a diet consisting of "a greater proportion of foods which contain a large amount of 'roughage' or ballast, such as green vegetables, fruits, and whole grain products."

Note: This is the second earliest Seventh-day Adventist cookbook seen (Oct. 2004) that contains a recipe using soybeans or soy ingredients.

Also discusses: Lecithin (p. 28; soy is not mentioned). Food combinations (good, fair, and bad; p. 44). Acid and alkali forming foods (p. 48). Natural diet of man. Shall we eat meat? Dangers of disease in meat. Was flesh first used before or after the flood? (p. 50-55). Diet for constipation: Lists of laxative foods to be recommended and avoided (p. 147-49). Sago is used in puddings (p. 237). Many desserts contain a great deal of sugar, plus eggs and milk; others use "vegetable gelatine" (p. 262). Pies use butter, peanut butter, granola, etc. Whole wheat bread/flour is different from Graham bread/flour (p. 293). Recipes for gluten bread, and Gluten biscuit or sticks (p. 301), and Gluten mush (p. 319). Chapter 32, titled "Nut preparations" (p. 375-77) contains a recipe for peanut butter using two processes, one of which calls for a Quaker City Mill. Recipes for Almond milk (p. 382). Peanut candy (p. 394).

486. Cooper, Lenna Frances. 1922. The new cookery. 8th ed., revised. Battle Creek, Michigan: The Modern Medicine Publishing Co. 449 p. Index. 23 cm.
• ***Summary:*** Contents: 1. Food values. 2. The art of preparing foods. 3. Beverages. 4. Cereals. 5. Fermented breads. 6. Unfermented breads. 7. Sandwiches. 8. Dairy products. 9. Cream soups. 10. Plain soups. 11. Meat substitutes and entrees. 12. Macaroni and Italian pastes. 13. Eggs. 14. Gravies and sauces. 15. Vegetables. 16. Salads and relishes. 17. Toasts. 18. Fruit Desserts. 19. Custards and cold desserts. 20. Frozen desserts. 21. Pastry and pies. 22. Cakes. 23. Cake fillings and frostings. 24. Hot puddings. 25. Sauces for puddings. 26. Canning and preserving. 27. Special dishes for invalids. 28. Balanced menus."

Soy is not mentioned in this Seventh-day Adventist vegetarian cookbook; soy flour was mentioned in 9th edition (1924).

This book is dedicated to the author's mother. Page 13 states: "The author wishes to express her indebtedness to Dr. and Mrs. John Harvey Kellogg, of the Battle Creek Sanitarium, who have inspired her with a love for the study

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of foods and their scientific preparation and who have since been constant sources of help and encouragement."

With each recipe is given the calories in the recipe and per serving from protein, fat, carbohydrate, and total. Interesting items: Cereal coffee, Kaffir tea, and Health Koko (p. 33). Yogurt buttermilk and Orange yogurt (p. 34-36). Sterilized bran (p. 44). Graham mush with dates, Gluten mush, and Creamed gluten mush (with 1 cup 20% Gluten Meal, p. 47). Granola fruit mush (p. 49-50). Graham bread (p. 54-55). Peanut butter sandwiches (p. 84-85). Protose sandwiches (p. 85). Cream of almond soup (p. 104-05). Noodle soup with Savora (p. 126-27). Chapter 11, titled "Meat substitutes and entrees" contains many interesting recipes, including some commercial products made by SDA companies: Roast Protose with dressing (p. 129). Protose fillet (p. 130). Nut fillet (with Protose and Nuttolene, p. 131). Fillet of nut meat (with Protose and Cereal Coffee, p. 131). Nut meat loaf (with Protose and Nuttolene, p. 143). Vegetarian ham (with Nuttolene, Protose, and Savora, p. 143). Nut patties. Nut chops (with peanut butter, p. 144-45). Peanut roast (p. 145-46). Jellied peach (with 1 cup sugar, p. 284). Spanish cream (with 3 cups hot milk, 3 eggs, and ½ cup sugar, p. 285). Hot Malted nuts (with ¼ cup dry Malted Nuts, p. 386). Hot Malted Milk (with 4 tablespoons Malted Milk, p. 386). Almond cream (p. 388). Meltose ice cream (with 1 cup Meltose, p. 389). Almond ice (with 6 tablespoons almond butter, p. 389). Frozen malted nuts (with 1½ cups Malted Nuts, p. 390). Gluten bread (with 3.75 cups 40% Gluten Flour, p. 390-91). Gluten puffs (with 1 cup 40% Gluten Flour, plus soda and hydrochloric acid p. 391). Note: In 1923 Lenna F. Cooper was secretary of the American Home Economics Association (see *Journal of Home Economics*, Oct. 1923, p. 588). Address: Director of the Battle Creek Sanitarium School of Home Economics, Head Dietitian of the Battle Creek Sanitarium [Battle Creek, Michigan].

487. Hamburger's Grocery Store. 1923. Go to Hamburger's Grocery Store for Health Foods (Ad). *Los Angeles Times.* Feb. 7. p. II20.
• ***Summary:*** "We carry the most complete line to our knowledge on the West Coast. Established 1881. 'Some ha' meat who canna' eat'–then it is they seek the most appetizing, most nutritious health foods. Hamburger's has searched this country and abroad to bring the best to you. One entire department is given over to health foods alone..." Two lines of health foods are advertised: Eugene Christian Vitamin Foods (Vegex brand), and Battle Creek Sanitarium Health Foods. For the latter: "- new goods arriving daily. Laxa–a combination of sterilized wheat, bran and Ceylon agar. Calax, Paramels, Paralax, Lactose, Dextrine, Acidophilus Lactose, Dialtetic [sic, Diabetic] Bran, Cooked Bran, Soy Biscuit, Black Fig, White Fig and Prune Marmalade, Gluten Meals, Malted Nuts, Yogurt Tablets. Among the many meat substitutes are Protose, Nuttose and Nuttolene."

"Free delivery, convenient charge account and special phone service." Groceries delivered free twice a day.

Note: A similar but larger ad appeared in 11 April 1923 issue, p. II22. Here we read "Diabetic Bran, Soy Biscuits." Address: Fourth Floor [Broadway at Eighth, Los Angeles]. Phone: Broadway 3940.

488. **Product Name:** Soy Biscuit or Soy Biscuits.
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1923 February.
New Product–Documentation: Ad in *Los Angeles Times.* 1923. Feb. 7. p. II20. "Go to Hamburger's Grocery Store for Health Foods." This store carries a complete line of Battle Creek Sanitarium Health Foods, including "Soy Biscuit" (also called "Soy Biscuits").

Note: This is the earliest known commercial soy product made in Michigan.

489. *Madison Survey* (*Madison, Tennessee*). 1923. Nashville Cafeteria. 5(20):3. May 9.
• ***Summary:*** A story in the *Nashville Banner* explains that the "Vegetarian Cafeteria, closed for some months, reopened today in attractive new quarters, 151 Sixth avenue, North, in a building which has been remodeled for the purpose. The cafeteria, with the treatment rooms in the same building, which will be reopened early in May, is a branch of the Nashville Agricultural Normal Institute and Madison Rural Sanitarium at Madison, and has a large clientele in Nashville."

490. *Madison Survey* (*Madison, Tennessee*). 1923. News about the place. 5(21):4. May 16.
• ***Summary:*** "When a new department is opened, the school cannot well hire experienced help to operate it; it must train its own help. This was the case when the food factory was opened. It was the policy to begin in a small way, educate workers step by step, and make gradual growth. Mr. and Mrs. Andrew Wheeler were placed in charge of the work of this department in counsel with Mrs. Druillard, who has had years of experience in other institutions. Mr. and Mrs. Wheeler have grown up with the work."

491. *Good Health* (*Battle Creek, Michigan*). 1923. Food value of the soy bean. 58(8):15-16. Aug. Advertising section.
• ***Summary:*** D.W. of Louisiana asks in a letter, "What is the food value of the soy bean?" Answer: "The soy bean is rich in fat, containing twenty times as much as the navy bean. It is also rich in protein, of which it contains fifty per cent more than the same weight of meat. The protein of the soy bean closely resembles that of milk, being a 'complete' protein and capable of replacing the protein of eggs, meat or milk.

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This has been demonstrated by animal feeding experiments.

"A milk closely resembling cow's milk may be prepared from the soy bean, and also cheese... In China and Japan the soy is used only in the form of *to-fu,* or curd... The half-grown beans of certain varieties are delicious."

492. Kellogg, John Harvey. 1923. Intestinal stasis: Its significance and means of combatting it. *State Hospital Quarterly* (*Michigan*). Aug. *
Address: M.D., Battle Creek, Michigan.

493. Kloss (Jethro) Health Food Co. 1923. Health foods (Ad). *Naturopath* (*New York City*) 28(9):488. Sept.
• ***Summary:*** "We manufacture an unusual line of Health Foods. Have thirty-four years of experience along the Naturopathic line. Our years of experience in Institutional feeding of the sick, as well as out of Institutions, watching the results obtained from feeding Natural Products, has enabled us to present something to the public that is of infinite value."

"We manufacture a line of foods that most perfectly takes the place of meat, milk, eggs and butter. There are no animal products used in the manufacture of our foods. We have used no animal products in our home for over eight years [i.e., since 1915], no meat for over 30 years [since 1893 or before].

"We are just completing a book, which will be off the press in September, on Natural Products of the earth,..."

"Send for the price list of our health foods and complete description of our new book." Address: Brooke, Virginia.

494. *Madison Survey* (*Madison, Tennessee*). 1923. Reason for reform in diet. 5(41):2-3. Oct. 10.
• ***Summary:*** "Men do not love pain, but most of them are loath to attribute suffering to errors in diet and other wrong habits of life... However no less an authority than Dr. E. V. McCullum of the School of Hygiene and Public Health of Johns Hopkins University, tells us 'that a dietary reform is essential as a part of any general program of public health work.'

"The legumes such as soy beans, lentils, peas, and beans of all kinds are rich in lime [calcium], much richer than the cereal grains."

Note: This is the earliest document seen (Oct. 2001) concerning dietary/health reform and soy.

495. *Madison Survey* (*Madison, Tennessee*). 1923. A city church cooperates with the cafeteria. 5(43):3. Oct. 24.
• ***Summary:*** "The city treatment rooms and the vegetarian cafeteria [in Nashville] are well known among the business men."

496. Kellogg, John Harvey. 1923. The new dietetics: A guide to scientific feeding in health and disease. Revised ed. Battle Creek, Michigan: The Modern Medicine Publishing Co. 1021 p. Index. 24 cm.
• ***Summary:*** About the principles of physiology, metabolism, dietetics and vegetarian nutrition (for both healthy and sick patients) as practiced at the Battle Creek Sanitarium. Dr. Kellogg was a pioneer in emphasizing the importance of dietary fiber, as illustrated in the following four sections. The content of these sections is nearly identical to that of the 1921 edition (which see for details).

(1) In the chapter titled "Cellulose" (p. 211-22) are four sections: Bran, Bran does not irritate, Agar-agar, and Manyalla.

(2) In the chapter titled "Regimens and Dietaries" (p. 572-670), following a section on "The Laxative Diet," are long sections titled "Bran" (p. 626-27) and "When the Laxative Diet is Indicated" (p. 627).

(3) In the chapter titled "Diet in Disorders of the Digestive Organs" (p. 671-755) is a section on "Diet in Constipation" (p. 682).

(4) Several pages later, the section titled "Rules for Care of the Colon to Combat Constipation" (p. 686-87) gives 20 basic rules.

Note 1: This book is widely cited by Trowell (1979) and others as the one in which Dr. J.H. Kellogg stimulated the study of fiber in the United States, and was thus a pioneer in this field worldwide. However most of the information about fiber in this 1923 edition first appeared in the original 1921 edition.

Note 2. The section titled "The soy bean" (p. 315-321) is quite similar to that in the 1921 first edition of this book, but on different pages. Changes appear on the following pages: 316, 318, 320-21. Address: M.D., LL.D., F.A.C.S., Superintendent of the Battle Creek Sanitarium, President of Battle Creek College, Battle Creek, Michigan.

497. Kellogg, John Harvey. 1923. The natural diet of man. Battle Creek, Michigan: The Modern Medicine Publishing Co. 386 p. Illust. Index. 20 cm. [50+* ref]
• ***Summary:*** This classic of vegetarian literature contends that a vegetarian diet is the natural diet of man. Contents: 1. Man not naturally a flesh-eater: Modern civilized life unnatural and unbiologic, animal dietaries, lessons from the monkey, porcine wisdom in diet, animals classified by diet, the ancient family of primates, all mammals originally vegetable feeders, when germ diseases were unknown, kinship of higher apes and men, flesh-eating never a universal human custom.

2. Twenty popular delusions about flesh foods: D-1. That meat is superior as a blood-making food, and, hence, is needed in anemia. D-2. That meat is essential as a flesh-building food. D-3. That a flesh diet is essential to support severe or prolonged activity; that is, promotes endurance. D-4. That flesh-eating is necessary to produce physical courage. D-5. That vegetarian races are inferior physically

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and mentally to races using a mixed diet. D-6. That flesh foods are more refined and more easily digested and, hence, more nutritious than are foods of vegetable origin. D-7. That man is naturally omnivorous. D-8. That flesh foods are stimulating and thus supply an element needed especially by brain workers. D-9. That beef tea is a useful nutrient. D-10. That a meat diet is required to prevent or cure gastric acidity. D-11. That a meat diet is desirable in tuberculosis. D-12. That a meat diet is necessary in diabetes. D-13. That a flesh diet is essential in the treatment of obesity. D-14. That meat is required in beri-beri. D-15. That meat is essential as a "building-up" or restorative food. D-16. That meat is needed by growing children. D-17. That meats are needed as a stimulus to appetite. D-18. That the beef industry is a necessary part of our national economic system. D-19. That a meat diet is necessary to insure reproductive activity. The law of diminishing returns versus flesh-eating. D-20. That meat is a harmless luxury.

3. Scientific objections to the use of meat: Human liver not adapted to meat diet; important differences between meat and milk; meat deficient in vitamins and food lime; Eskimos eagerly seek vegetable food; ill effects of meat diet on Arctic explorers; meat saturated with tissue poisons; meat readily putrefies, natural foods do not; the poisons of meat; meat extracts; why viscera are especially objectionable; bacteriology condemns meat as food; vast numbers of bacteria in meat; putrefactive products of meat; why physicians forbid meat in cases of kidney disease and high blood pressure; how flesh-eating causes constipation ("partly because the flesh diet is lacking in the roughage or indigestible material required to stimulate the intestine to action").

4. Diseases due to flesh eating: Tuberculosis in animals, cancer from meat eating, cancer rare and appendicitis unknown among flesh abstainers, meat-eating causes disorders of nutrition, acidosis from a flesh diet, a meat diet and scurvy, meat eating and arteriosclerosis, pernicious effects of a meat diet experimentally proven, recognized meat contraindications, the peregrinations of a deadly parasite, typhoid germs in meat products, flesh poisoning, no protection for meat-eaters, oyster poisoning, converting sewage into food.

5. Experimental evidence against flesh eating: McCollum's experiments, Dr. S. Weir Mitchell endorses the meatless regimen, an eminent scientist on meat diet, Fauvel's observations, greater endurance of flesh-abstainers, the death rate reduced by meatless diet, flesh-eating does not develop intelligence, meat-eating and race degeneracy, meat-eating a city habit, non-meat diet best even for carnivorous animals, the Scotchman's dog, the effects of a meat diet on rats, the effects of a flesh diet on rabbits, flesh-eating animals short lived. 6. The ethical argument.

7. Historical facts and authoritative opinions: Biblical teaching about flesh eating, apostles who were flesh abstainers, the Essenes were flesh-abstainers, the diet of the ancient Greeks, King Cyrus a flesh-abstainer, Julius Caesar's army ration, diet of Peruvian soldiers, diet of athletes of ancient Greece, ancient philosophers were flesh-abstainers, Plutarch's essay on flesh-eating, fleshless diet of a Roman emperor, meatless diet endorsed by Gautier, views of Seneca, diet of the ancient Sumerians [today's Iraq], eminent modern flesh abstainers, vegetarian monks, Thoreau on the fleshless diet, a Chinese statesman's experience, the views of two great naturalists, the poet Shelley a food reformer, a child's natural repugnance to meat, Liebig on the advantages of a non-flesh diet, Sylvester Graham's diet reform movement.

8. Interesting facts concerning the dietary habits of various peoples. 9. The marvelous adaptation of the natural diet to human needs. 10. How to discard meats comfortably and safely.

11. Is the disuse of meat advisable from a practical standpoint? The U.S. Department of Agriculture shows the use of less meat to be safe and economic, the importance of planting nut trees, avoidance of meat is necessary to change the intestinal flora, vegetable substitutes for meat, the recent low protein movement in the United States, the half century experience of the Battle Creek Sanitarium with a fleshless diet.

12. Newspaper and magazine misinformation: An "eat-more-meat" campaign, Professor Fisher of Yale University [Connecticut] refuses to support the "eat-more-meat" campaign of the [Chicago, meat] packers, pernicious piffle.

Soy is mentioned in many places. The section titled "Flesh-eating never a universal custom" states (p. 33-34): "According to Mori, the Japanese peasant of the interior is almost an exclusive vegetarian. He eats fish once or twice a month and meat once or twice a year... The soy bean is held in high esteem and used largely in the form of *miso*, a purée prepared from the bean and fermented; also *to-fu*, a sort of cheese; and *cho-yu* [shoyu, soy sauce], which is prepared by mixing the pulverized beans with wheat flour, salt, and water and fermenting from one and a half to five years. The Chinese peasant lives on essentially the same diet, as do also the Siamese, the Koreans, and most other Oriental peoples. Three-fourths of the world's population eat so little meat that it cannot be regarded as anything more than an incidental factor in their bill of fare."

Page 45: Complete "proteins are found in milk and eggs as well as in most nuts, peanuts, and the soy bean..."

Page 73: "The protein of milk, of the soy bean, and of nuts is known to be superior to meat as a source of body nitrogen." Address: Superintendent of the Battle Creek Sanitarium, Battle Creek, Michigan.

498. Kellogg, John Harvey. 1923. The soy bean (Document part). In: J.H. Kellogg. 1923. The New Dietetics: A Guide to Scientific Feeding in Health and Disease. Revised ed. Battle Creek, Michigan: The Modern Medicine Publishing Co.

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1021 p. See p. 315-21. 24 cm.
• ***Summary:*** This section is quite similar to that in the 1921 first edition of this book, but on different pages. Changes appear on the following pages: 316 (addition of a paragraph stating that the soy bean is a highly valuable food for persons suffering from diabetes), 318 (deletion of the statement that the writer "has for twenty-five years made use of milk prepared from the almond and other nuts."), 320-21 (addition of a table, supplied by William Morse of the USDA, giving the composition of soy beans sprouts and mung bean sprouts). Address: Battle Creek, Michigan.

499. Kellogg, John Harvey. 1923. The ethical argument (Document part). In: J.H. Kellogg. 1923. The Natural Diet of Man. Battle Creek, Michigan: The Modern Medicine Publishing Co. 385 p. See p. 216-27.
• ***Summary:*** Page 221 states: "When man slays to eat, what a picture arises! *'Deaf to the calf that lies beneath the knife, / Looks up, and from her butcher begs her life; / Deaf to the harmless kid, that, ere he dies, / All methods to procure thy mercy tries, / And imitates in vain thy children's cries! / Where will he stop who feeds with household bread, / Then eats the poultry which before he fed?'*

Kellogg continues: "Man rears his cattle, his sheep, and his poultry much like household pets. His children make his lambs their playmates. Side by side his oxen toil with him in the field. In return for kindness, they give affection. What confidence they repose in him! how faithfully they serve! With winter's frost an evil day arrives,–a day of massacre, of perfidy, of assassination and bloodshed. With knife and ax he turns upon his trusted friends,–the sheep that kissed his hand, the ox that plowed his field. The air is filled with shrieks and moans, cries of terror and despair; the soil is wet with warm blood, and strewn with corpses.

"Is there a brute on earth that would be capable of such a crime? In such an act have we not the veritable spirit of murder in an aggravated form? Let us listen to the appeal of a pagan who lived five centuries before Christ (Pythagoras):

'Whoever was the wretch (*and cursed be he*) */ That envied first our food's simplicity, / The essay of bloody feasts on brutes began, / And after forged the sword to murder man,–/ Had he the sharpened steel alone employed / On beasts of prey that other beasts destroyed / Or man invaded with their fangs and paws, / This had been justified by Nature's laws / And self-defense: but who did feasts begin / Of flesh, he stretched necessity to sin. / To kill man-killers, man has lawful power, / But not the extended license to devour. / Take not away the life you can not give; / For all things have an equal right to live: / Kill noxious creatures, where 'tis sin to save; / 'Tis only just prerogative we have: / But nourish life with vegetable food; / And shun the sacrilegious taste of blood.'*

"Well did Plutarch say, 'Alas, for our savage inhumanity! It is a terrible thing to see the tables of rich men decked out by those layers-out of corpses, the butchers and the cooks.'" Address: Director, School of Hygiene and Public Health, Johns Hopkins Univ., Baltimore, Maryland.

500. Kellogg, John Harvey. 1923. Vegetable substitutes for meat (Document part). In: J.H. Kellogg. 1923. The Natural Diet of Man. Battle Creek, Michigan: The Modern Medicine Publishing Co. 385 p. See p. 334-36.
• ***Summary:*** "By the combination of nuts and cereals, a product very closely resembling meat may be prepared. The process for doing this was discovered by the writer many years ago in a series of experiments undertaken for the purpose by the request of Professor Dabney, then assistant professor in the Department of Agriculture. Recognizing that the increase of population would ultimately lead to an increase in the price of foodstuffs and particularly of meats, and possibly a scarcity of meats, Professor Dabney requested the writer to solve the problem by a production of a vegetable substitute for meat. The result of the experiment undertaken was Protose, a nut-cereal preparation, which to a considerable degree resembles meat in appearance, taste and odor, having a slight fibre like potted meat.

"Earlier experiments made by the writer led to the production of peanut butter, which has since developed into a great industry and has increased enormously the size and value of the peanut crop of the South. From a food standpoint, a pound of peanut butter is more than equal to the same amount of pork or meat of any sort.

"In Malted Nuts, another product of our experiments, is provided a product [probably peanut milk] resembling Malted Milk, which has been extensively used as a substitute for milk by those unable to tolerate cow's milk.

"No doubt the future will develop a large number of vegetable products which will so fully supply the place of various meat products and dishes that all of these unwholesome products may be dropped from the bill of fare without being missed. As a matter of fact, it is now recognized by the most eminent authorities in dietetics that the flavor of meats is about the only reason or apology which can be offered for their use." Address: Director, School of Hygiene and Public Health, Johns Hopkins Univ., Baltimore, Maryland.

501. Kellogg, John Harvey. 1923. The natural diet of man (Continued). Battle Creek, Michigan: The Modern Medicine Publishing Co. 386 p. Illust. Index. 20 cm. [50+* ref]
• ***Summary:*** Continued: Page 74: "Vegetable extracts (yeast extracts and soy sauce) are now prepared which are finer in flavor than the best meat extracts..."

Page 191: "Complete proteins are found in the almond and also in the soy bean and the peanut, a fact which accounts for the large use of the soy bean and the peanut in China and other Oriental countries as a supplement to a diet of rice and green vegetables."

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Page 198: "The soy bean contains more protein than does beef, and 20 per cent of oil."

Page 282: G. Yukawa reports that the diet of Japanese monks "consists exclusively of vegetable products, rice being the staple, supplemented with soy beans and vegetables. The diet contained an average of 70 grams of protein, 15 grams of fat, 514 grams of carbohydrates, an average energy intake of 2,500 calories. The experimenter concluded that the absolute vegetarian diet of the Buddhist monks of Japan is entirely adequate to maintain perfect health."

Page 285: "Some years ago (1899) the Emperor of Japan appointed a commission to determine by investigation whether it was necessary to add meat to the national dietary to improve the physique of the race, especially to increase their stature. As regards the use of meat, the commission reported 'that the Japanese had always managed to do without it, and that their powers of endurance and their athletic prowess exceeded that of any of the Caucasian races. Japan's diet stands on a foundation of rice.' The rice diet of the Japanese is supplemented by the free use of peanuts, soy beans, and greens, which supply all that rice lacks to constitute a wholly sufficient bill of fare."

Page 306: "The experiments of McCollum and numerous others have in recent years demonstrated the entire feasibility of living exclusively upon a diet of purely vegetable origin. It is only necessary to make such a selection of foodstuffs as will supply the body with all the elements necessary for complete nutrition; and this may be easily done, as has already been indicated. It has also been shown that two widely used legumes, the soy bean and the peanut, as well as nuts, supply complete proteins and may be used in supplementing the incomplete proteins of cereals and vegetables. This fact explains the great rôle played by the soy bean in the bills of fare of the Orientals."

Pages 313-14: "Certain proteins known as complete proteins, when taken into the body in proper quantities may be wholly utilized in tissue building, because they contain exactly the elements needed, no more and no less, for the building of muscles, nerves, glands, and other nitrogenous tissues." "The protein of the soy bean, the peanut, the almond, and various other nuts has, however, been shown to be of high quality, practically equal to the protein of flesh... When meat is discarded, it is evidently necessary that care be taken to supply in its place an adequate amount of protein derived from the soy bean, the peanut, the almond, or other nuts, or from milk or eggs. Four or five ounces of soy beans, peanuts, or almonds afford an abundance of protein for a day's ration. See also p. 320.

Page 322: "But even in the absence of milk and eggs, an abundant supply of protein could be readily secured by the planting of peanuts and the soy bean, two remarkable legumes which, pound for pound, supply more nourishment than beef or pork and of finer quality." "Nuts, together with the peanut and the soy bean, afford a protein which is equivalent to that of meat at a cost far below the cost of meat proteins. For example, an acre of very ordinary ground will produce twenty bushels, or twelve hundred pounds of soy beans, which contain 40 per cent, or four hundred and eighty pounds of excellent protein. It takes an acre of ground and two years to produce seventy-five pounds of dried protein in the form of beef. The same land will produce in the same length of time nearly one thousand pounds of soy bean protein. In other words, an acre of ground devoted to soy beans will produce more than thirteen times as much protein as the same ground used as a pasture for fattening steers..."

Page 338: The section titled "The recent low protein movement in the United States," notes that the daily protein requirement for a person weighing 120 pounds could be "provided by 2½ pints of milk or by 6 ounces of almonds, 5 ounces of peanuts, 6 ounces porterhouse steak, 6 ounces navy beans, 4 ounces soy beans, 5 ounces lentils, 5 ounces black walnuts."

Page 359: "Animals furnish us a good object lesson on this subject. Compare the agility, alertness, curiosity and intelligence of the fruit-eating chimpanzee with the dull stupidity of the lion and the tiger; or the vivacity and progressiveness of the rice- and soy-eating Japanese, with the dull-witted, decaying Eskimo."

Nuts are discussed favorably on pages 56, 297, 327-31 but neither peanuts nor peanut butter are mentioned specifically.

Dr. Kellogg was a pioneer in promoting the importance of dietary fiber. The following terms appear: Bran or wheat bran (p. 40, 155, 157, 201, 301). Bulk, bulky, or bulky diet (referring to "roughage") (p. 70, 135). Cellulose (p. 57, 70, 297, 303). Constipation (p. 10, 66, 135-138, 148, 157, 161, 332, 382). Roughage (p. 57, 135, 297, 301). But none of the following terms appears in the index: Laxative, laxatives.

The author lived 1852-1943.

Note: This is the earliest English-language document seen (June 2004) that contains the term "natural foods" and that also discusses soy. Address: Superintendent of the Battle Creek Sanitarium, Battle Creek, Michigan.

502. White, Ellen G. 1923. Counsels on health, and instruction to medical missionary workers. Mountain View, California, Kansas City, Missouri [etc.]: Pacific Press Publishing Assoc. 696 p. 19 cm. *

503. Brook, Harry Ellington. 1924. Care of the body. *Los Angeles Times.* Jan. 13. p. H24.

• ***Summary:*** In the section titled "Dietetics" is a long quotation from John Harvey Kellogg, M.D. that begins: "Regulation of the diet is perhaps the most important of any single measure, in the treatment of chronic disease."

The section titled "Organic and inorganic salts" states: "In *Rational Diet,* Otto Carque writes: 'We must draw a

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sharp line of demarcation between organic and inorganic salts, as well as between vitality and chemical energy.'" Organic salts come from living things, such as plants or animals. "'It is only through the life-process of the plant that the constituents or air and soil become vitalized.'" Address: N.D. [Naturopathic Doctor].

504. Hamburger's. 1924. Established 1881 (Ad). *Los Angeles Times.* March 2. p. A15.
• ***Summary:*** This full-page ad shows that Hamburger's is a full-service department store selling silks, fine clocks, draperies, framed mirrors, floor lamps and shades, Chinese rugs, talking Panama parrots, etc.

A box at the top of the ad shows that it also sells: "Health Foods: Headquarters for the famous Battle Creek Health foods. We carry the most complete line of these foods on the Coast. (Hamburger's–Fourth floor)." Address: Fourth Floor [Broadway at Eighth, Los Angeles]. Phone: Broadway 3940.

505. May Co. (The). 1924. Battle Creek health foods! Have you tried them? (Ad). *Los Angeles Times.* Aug. 3. p. I25. Sunday magazine.
• ***Summary:*** "Others have had astounding results... If necessary you can make three delicious meals a day from these famous foods." The May Co. is "headquarters for Battle Creek health foods;... we have a dietician to advise you."

"Paralax–lubricates the intestinal walls. Acidone–supplies gastric acid when deficient. Acidophilus–combats autointoxication. Protose, Nuttolene and Nuttose–meat substitutes. Almond butter–for soups, sandwiches, etc. Soy biscuit–for diabetics."

On the 4th floor. "The May Co. Formerly Hamburger's." Address: Broadway at Eighth, Los Angeles, California. Phone: BRoadway 3940.

506. May Co. (The). Formerly Hamburger's. 1924. Health first! (Ad). *Los Angeles Times.* Sept. 7. p. I25.
• ***Summary:*** "The May Co. headquarters for Battle Creek [Michigan] and other famous health foods! Yogurt Tablets, a Battle Creek product that makes very superior buttermilk. Vegex–a vitamin food in four different forms and sizes. Cubes, almonds, paste and fruit wafers. 10¢ to $11.50.

"Fruit and Nut Bromose–health chocolates and meltose sweets. Zo–Vitamin breakfast food (Battle Creek Food Co.) rich in food iron and other food salts.

"For a full list of Battle Creek and other health foods, also catalog of fine groceries, write for Bklet [Booklet] 67T." Address: Fourth Floor [Broadway at Eighth, Los Angeles].

507. Battle Creek Food Co. 1924-1933. Special tests. Battle Creek, Michigan. 115 p. Unpublished manuscript.
• ***Summary:*** This is a bound, lined laboratory notebook used for recording the results of experiments, which were then reported back to Dr. John Harvey Kellogg. Most of the experiments involved the vitamin content of plant foods. Pages 4-5 (dated 12 Dec. 1924) shows graphs of the weight of rats fed soy bean flour as the sole source of protein and vitamin B. H.S. Mitchell was the experimenter.

Page 7 (dated 9 Nov. 1928) is a test of soy bean flour which "had been subjected to a process for removing the bad flavor. Dr. Kellogg was "anxious to see whether the vitamins A and B have been removed." A test on rats showed that they grew equally well on regular soy bean flour and the processed soy bean flour.

Page 22 (dated 1929-30) describes an experiment which shows that soy milk and soy bean meal are equally good sources of vitamin B. Many tests were conducted on the vitamin content of Savita, Savita Bouillon Cubes, and Savita yeast, compared to Fleischmann's yeast. Address: Battle Creek, Michigan.

508. Cooper, Lenna Frances. 1924. The new cookery. 9th ed., revised. Battle Creek, Michigan: The Modern Medicine Publishing Co. 475 p. See p. 76-77. Index. 23 cm.
• ***Summary:*** The Preface (p. 12) states: "The author wishes to express her indebtedness to Dr. John Harvey Kellogg, of the Battle Creek Sanitarium, and to his wife, the late Mrs. Kellogg, both of whom have inspired her with a love for the study of foods and their scientific preparation and have been constant sources of help and encouragement.

In the chapter on "Unfermented breads," the recipe for "Soy cakes and waffles" (p. 76) calls for "2 cups Soy flour."

The section titled "Unusual foods referred to in this book" (p. 462-64) states that the following are made by the Battle Creek Food Company, Battle Creek, Michigan: Protose (a meat substitute made from cereal and nuts), Nuttolene (a pure nut product with the consistency of brick cheese), Savita (a pure vegetable meat flavoring), Meltose (malt honey), Meltose Sugar, Sanitarium Cooked Bran (an appetizing food that supplies the necessary roughage, stimulates intestinal activity, and is rich in vitamins), Vita-Wheat (rich in gluten, lime, iron, and Vitamin B–the anti-neuritic vitamin), Branola (breakfast food that is 2/3 bran and 1/3 wheat), Zo (a body-building, ready cooked cereal breakfast food), gluten flour (contains 44% of wheat gluten), Malted Nuts ("A delicious nut cream–Contains the same nourishing food values as human milk and is even richer in its tissue building elements. It has an appetizing flavor and can be used with excellent results by those with whom cow's milk is found to disagree. It is excellent for those who wish to gain weight"), Minute Brew (a cereal coffee), Kaffir Tea, B. Acidophilus Culture (Bacillus Acidophilus is the strongest known lactic acid producing organism), Vegetable Gelatine or Agar (Made "from Ceylon moss, a seaweed that grows off the coast of Japan." It is "a form of cellulose resembling bran in chemical composition but somewhat like animal gelatine

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in physical appearance").

Note 1. This is the third earliest Seventh-day Adventist cookbook seen (Oct. 2004) that contains a recipe using soybeans or soy ingredients.

Note 2. The first edition of this book was copyrighted in 1914, the 11th edition in 1929. There is no mention of soya in Mrs. E.E. Kellogg's *Science in the Kitchen* (revised ed., 1892. Battle Creek, Michigan: Health Publishing Co.), nor in H.S. Andrews' *Science of Food and Cookery* (1921. Pacific Press Publishing Co.), nor in George Cornforth's *Good Food* (1920. Review and Herald Publishing Assoc.). Address: Dean of Home Economics, Battle Creek College; formerly, Head Dietitian of the Battle Creek Sanitarium; and later, Supervising Dietitian, United States Army (1918-1919).

509. Kellogg, John Harvey. 1924. The new method in diabetes. Third revised ed. Battle Creek, Michigan: The Modern Medicine Publishing Co. 300 p. Plus 6 unnumbered pages of [color] plates. See p. 205-06, 229-30. Index.
• ***Summary:*** The soy bean is discussed in the chapter titled "The Best Foods for Diabetics," under the heading "Legumes." "The soy bean is a remarkable legume which is two-fifths fat and one-third protein, giving a food content closely resembling fat meat with the addition of a very small amount of carbohydrate."

In a table titled "Food values of legumes" it is stated that soy beans contain 32% of their calories in the form of protein, 40% in the form of fat, and 28% in the form of carbohydrates. They have 120.0 calories per ounce, more than lentils (103.9), beans (111.0), or peas (112.0).

Soy-related recipes include: Cream of soy bean soup (with soy bean puree, p. 229-30). Hahto bean and tomato soup (p. 231).

Gluten-related recipes (all calling for gluten flour) include: Gluten bread (p. 267). Gluten bran bread (p. 267). Gluten bran puffs (p. 267). Gluten griddle cakes (p. 268). Sandwiches (all on gluten bread, p. 268-71). Gluten bran bread sandwich (on gluten bran bread, p. 270). Cream of gluten cereal (p. 272). Gluten wafers (p. 286). Address: Battle Creek, Michigan.

510. Fair (The). 1925. The popular price store (Ad). *Chicago Daily Tribune.* Jan. 18. p. C6.
• ***Summary:*** Within this full page ad is a section titled "Bargain basement: Pure food store," states: "Battle Creek Sanitarium Health Foods. Mrs. Toppe, a direct representative from Battle Creek, Michigan, and an expert on Battle Creek Health Foods, is in charge of our demonstration. Complete line of these health foods are on display and Mrs. Toppe will give you very valuable information in regard to their use and preparation." Battle Creek Lextro-Dextrine [Lacto Dextrine?] sells for 98¢ per package. Address: State, Adams and Dearborn Streets.

511. May Co. (The). 1925. Grocery store (Ad). *Los Angeles Times.* Jan. 23. p. 8.
• ***Summary:*** "Listed below are many of the rare, out-of-the-ordinary delicacies to be found in this complete Grocery Store–helpful suggestions for the discriminating hostess."

"China and Japan: Jasmine tea. Hong Kong ginger in crocks. Shoyu sauce. Boiled bamboo shoots."

"Imported health foods–from Dr. Huedebert, Paris; Dr. Charasse, Marseilles; Brusson Jeune, Ville Mur–for diabetes, dyspepsia, constipation, indigestion and reducing weight." Includes Aleurone bread muffins, Gluten bread, Levulose powder, Mignonettes of gluten–small bread balls for soup.

"Battle Creek Sanitarium Health Foods [Michigan]. These famous preparations will also be found in our Health Food Section, and include Colax, an agar biscuit; Lacto auxiliary food; Lacto Dextrine, antitoxic food; Casein-Gluten Flour, a superior food; Canned fruits, vegetables for restricted diet; Charcoal tablets; Vegex–the wonderful vitamine food." Address: Broadway at Eighth. Grocery store–Fourth Floor [Los Angeles].

512. Lust's Health Food Bakery, Inc. 1925. Moving to larger headquarters (Ad). *Naturopath* (*New York City*) 30(1):90. Jan.
• ***Summary:*** A full page ad. Louis Lust's bakery will move to their new, large headquarters in the double buildings at 309-311 East 56th St., New York City. Phone: Plaza 7687. This location will also have a modern "Retail Department, where a full line of all their own Health Food products as well as a department of the Battle Creek Food Co.'s products [Michigan] and many other noted health food quality products will be kept on sale."

"The old stand at the corner of 105th Street and Park Avenue, established since 1903, will be continued as their Harlem Retail Branch, which will be supplied twice daily" with the company's freshly baked goods. Phone: Lehigh 2111.

513. *Naturopath* (*New York City*). 1925. Notes on the proceedings of the Twenty-Eighth Annual Convention of the American Naturopathic Association. Los Angeles, California, Nov. 20-22, 1924. 30(3):[205]-09. March.
• ***Summary:*** Summarizes presentations by Dr. Starr White–"The true physician." Dr. J. Haskel Kritzer–"Iridiagnosis." Otto Carqué–"The value of fruits." Dr. Harvey Hazel–"The doctor's reward." Dr. James Faulkner–"Unfired foods." E.C. Burton–"Battle Creek [Michigan] and Dr. John Harvey Kellogg." Harry G. Cubbison [husband of Sophie C. Cubbison, health food pioneer in Los Angeles]–"The value of whole wheat." Dr. C.A. Newcombe [former police surgeon in New York City]–"Treating incorrigible inmates at Sing Sing penitentiary with a vegetarian diet."

514. Evans, Newton; Risley, E.H. 1925. High protein ration

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as a cause of nephritis. *California and Western Medicine* 23(4):437-42. April.
• ***Summary:*** Rats fed a series of high-protein diets invariably showed kidney damage. The authors urge limited use of meat and increased use of fruits and vegetables in the prevention and treatment of nephritis. Whole soy beans, wheat gluten, peanuts, and meat were among the foods fed to the rats. Address: M.D., Depts. of Biochemistry and Pathology of the College of Medical Evangelists, Loma Linda, California.

515. Health Food Products Co. 1925. The Health Center News (Ad). *Los Angeles Times.* Nov. 29. p. K25. Sunday.
• ***Summary:*** This large square ad looks like the reduced front page of a newspaper titled *The Health Center News.* Above the title on a banner: "In business for your health." In the middle of the title in white on a bold black background: "1000 W. 7th St." Below the title in large bold letters: "Published by the Health Food Products Co." In smaller all-capital letters running across the page: "Mail and phone orders given special attention. Phone VAndyke 4063."

There are then 5 boxes, each promoting something different: (1) "Inner-Clean removes cause of every sickness." This is an "aromatic herb-vegetable compound perfected by Prof. Arnold Ehret, originator of the Mucusless Diet Healing System" [MDHS]. "Prof. Arnold Ehret's 'M.D.H.S.' lesson course sent anywhere in the U.S.A., $1.50 postpaid."

(2) "Free health lectures, Health Center Hall, 1000 W. 7th St. Tues, Dec. 1, 8 P.M.,–Prof. Paul Bragg. Subject: 'Breathe your way to health.' Fri., Dec. 4, 8 P.M.–Dr. John Dequer (Decker), America's foremost health lecturer. Subject: 'Conquering ill health through seasonal foods.'"

(3) "Disease questions and health answers. Questions of health will be answered in this column or by personal letter. Address communications to Chief Clinician [Bragg], Health Center, 1000 W. 7th St., Los Angeles. Enclose stamped envelope." There are 2 questions. Each answer recommends the purchase of one or more products sold by the Health Center. For example: Q2. "A doctor tells me I must quit coffee. I have tried one or two coffee substitutes, but don't like flavors. What do you recommend? E.A.H." Ans: "Minute Brew, made by the Battle Creek Food Co. [Michigan], contains many of the elements of flavor and aroma that appeal to coffee drinkers and is absolutely free from caffein [caffeine]. Kafex is a coffee substitute made of cereals with an especially delicious flavor. Our Health Food Store carries all these fine beverages."

(4) "Wanderlusters' hike next Sunday, Dec. 6th."

(5) "By special appointment we are headquarters for Battle Creek Sanitarium Foods. Ask for valuable booklets and samples. Health Food Products Co. Phone VA. 4063. Free city delivery. 1000 W. 7th St."

Note: The basic concept and format of this ad is very similar to that titled "Healthy News" and run by the Health Foods Products Co. on 14 Dec. 1924. Moreover, Paul Bragg contributed an article to that ad in Healthy News. Address: 1000 West Seventh Street, [Los Angeles, California]. Phone: VAndike 4063.

516. Kellogg, John Harvey. 1925. Nuts the real meat–Flesh the substitute. *Good Health* (*Battle Creek, Michigan*) 60(12):34. Dec. [1 ref]
• ***Summary:*** "So thinks Prof. Henry C. Sherman, of Columbia University. In his admirable textbook, *Food Products*, Professor Sherman says:... 'Looking at the matter in evolutionary perspective, it might be more logical to speak of meats as "nut substitute" instead."' Prof. Sherman believes that nuts were a staple in the diet of primitive man.

"The teeming millions of India and China which constitute nearly half of the whole human race, live on rice and the soy bean. The thronging millions of Central Africa thrive on corn, peanuts, manioc, sweet potatoes and melons." Address: M.D.

517. Loma Linda Food Co. Bread and Health Foods. Wholesale Only (Photograph). 1925. Loma Linda, California.
• ***Summary:*** See next page. The original building and staff in 1925. Address: Loma Linda, California.

518. Olsen, Mahlon Ellsworth. 1925. A history of the origin and progress of Seventh-day Adventists. Washington, DC, South Bend, Indiana, and Peekskill, New York: Review and Herald Publishing Assoc. 768 p. Illust. Portraits. Index. 22 cm. Reprinted in 1972 by AMS Press. [31 ref]
• ***Summary:*** Prof. R. Numbers, in *Prophetess of Health: A Study of Ellen G. White* (1976, p. 209), calls this the best history of Seventh-day Adventists written to date. It is widely considered a valuable account of the denomination's history and activities worldwide into the early 20th century.

The Preface and Introduction state: "The history of a denomination is best understood when viewed in its relation to church history as a whole, and especially to that history in its early stages" (p. 11).

Chapters 8 and 22 are about publishing work and publications. Chapters 11, 31, and 34 are about health and temperance work. Contains a good bibliography and a chronology of key events in the history of the Advent movement from 1831 to 1924. On 1 Oct. 1860 the name "Seventh-day Adventist" was adopted by the denomination. In 1865 the first health publication, titled "How to Live," was published. It was written and compiled by Mrs. Ellen G. White. On 1 Aug. 1866 the first denominational health journal, titled *Health Reformer,* was published. Later that year, on 5 Sept. 1866, the Health Reform Institute (later Battle Creek Sanitarium, Battle Creek, Michigan) was opened for patients.

W.W. Prescott had general charge of Adventist work in Great Britain from 1897 to 1901. During this time

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beginnings were made toward a health magazine and a health food factory. Note: The factory was operated by The International Health Association Ltd., founded in 1899; the Association was renamed Granose Foods Ltd. in 1926.

"The health food factory, situated in Surrey [it began operating in 1899], burned to the ground [in 1907]; but through the efforts of H.G. Butler the business was put on its feet again, the factory moved to Birmingham, and a good patronage built up" (p. 368-69).

Note: In 1907 all SDA institutions in England, including the food factory, were centralized at Stanborough Park, Watford, Hertfordshire (see next page).

"The Stanborough Park Sanitarium, located on grounds adjacent to the college of that name, was dedicated on July 3, 1912." A health food factory was also built at Stanborough Park [in about 1907-09]. A photo (p. 377) shows this health food factory.

"An important feature of our medical education is in the operation of our College of Medical Evangelists at Loma Linda and Los Angeles, California. This unique institution, the only one of its kind in the world, was established for the purpose of training medical missionary physicians and other medical evangelists" (p. 648-49).

"Our health food factories are flourishing. With ten food factories, many food stores, cafés, and cafeterias, this feature of our health work occupies a wide field of usefulness. The health food business of the Australasian Union deserves notice. With several factories, a large wholesale depot, many

THE HEALTH FOOD FACTORY

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retail stores, and a system of affiliated cafés, it represents en enterprise of widespread usefulness and influence. The food sales of a single year amount to $750,000. The profits are largely used for the support of church schools.

"Our health work stands distinctly as one of reform... This means to point out the better way of living, make plain the laws of health, and urge obedience to them. It enables us to present these laws as the laws of God, and to point men and women to Him as the healer alike of body and soul" (p. 649).

Mahlon Ellsworth Olsen lived 1873-1952.

519. Portrait of Dr. Harry W. Miller (Photograph). 1925.
• ***Summary:*** See next page. This 7-by-10 inch black-and-white photo shows Dr. Miller, wearing glasses, dressed in a coat and tie, and seated at a table with his hands folded on the table. It was taken in about 1925 in Washington, DC, by Harris and Ewing.

It was sent to Soyfoods Center by his son, Dr. Clarence Miller, St. Helena Hospital, Deer Park, California, in Nov. 1996.

520. Health Food Products Co. 1926. The Health Center News (Ad). *Los Angeles Times.* March 21. p. K25. Sunday.
• ***Summary:*** This large square ad is similar in format and appearance to that published in this newspaper on 29 Nov. 1925. However the content is different.

There are now 7 boxes, each promoting something different: (1) "Children gain health by diet and treatment." Contains the text of a letter from Cloud V. Bond of Los Angeles praising the benefits of the "personal treatments and diet schedule for myself and children." All health problems were solved. "Other letters recently received illustrate the benefits received from the Marathon Bio Bloodwash Baths." "Send today for Prof. Ehret's 'Mucusless Diet Healing System,' a 25-lesson course in healing therapy, sent postpaid anywhere in the U.S.A. for $1.50."

(2) "Health lectures free. Tuesday, March 23, 8 p.m., Prof. Paul Bragg: 'A diet for everyone.' Wednesday, March 24, 6:45 p.m., Ehret Club Dinner. By special appointment. Friday, March 26, 8 p.m. Dr. Philip M. Lovell 'Things that make for success.'"

(3) Inner-Clean is used by drugless practitioners. "Many Osteopaths, Chiropractors, Naturopaths, and other drugless practitioners" recommend it. (4) Business men like cafeteria health luncheons. At the "Corrective Eating Cafeteria" at the Health Center. (5) You are eligible to join Wanderlusters. "Inexperienced hikers should not hesitate to join this happy group of nature lovers." (6) "Health food specials this week: Unsulphured sterilized golden dates–20¢. Calimyrna figs–25¢ per lb. S & W. Sauerkraut–large can 20¢; small can 15¢.

(7) "By special appointment we are headquarters for Battle Creek Sanatorium Health Foods. Health Food Products Co. 1000 W. 7th Street." Address: 1000 West Seventh Street, [Los Angeles, California]. Phone: VAndike 4063.

521. Donaldson, Arthur N. 1926. The relation of protein foods to hypertension. *California and Western Medicine* 24(3):328-31. March.
• ***Summary:*** Blood pressures of vegetarian college students increased significantly within 2 weeks of adding meat to their diet. Address: M.D., College of Medical Evangelists, Loma Linda Sanitarium and White Memorial Hospital, Los Angeles, California.

522. Kellogg, John Harvey. 1926. Biologic living becoming popular. *Good Health* (*Battle Creek, Michigan*) 61(4):34. April.
• ***Summary:*** "Every reform movement goes through three stages. The new truth is first derided, perhaps persecuted, then tolerated, and finally applauded and adopted. The idea of... regulating one's conduct in harmony with the requirements of biologic laws, has gone through the first two stages of experience, and is well advanced in the third. In England there is today beginning a strong movement toward a reform in living habits as a necessary means of promoting race betterment. Such well-known leaders as Lord Oxford and Asquith, Ramsey Macdonald and Dr. Arbuthnot Lane, the noted surgeon, are announced as supporters of the movement, which seems to be particularly active among the nobility. The Duchess of Manchester has for some years been an ardent supporter of biologic living (since a visit to the Battle Creek Sanitarium). The following article by the Duchess of Hamilton and Brandon, contributed to the *London Daily News*, recently appeared in several American newspapers:"

A long excerpt follows; as a vegetarian, she regards the "eating of meat as objectionable both from a moral and a hygienic point of view." Address: M.D.

523. Kellogg, John H. 1926. Treatment of constipation. *Medical J. and Record.* Aug. 18. *
Address: M.D., Battle Creek, Michigan.

524. Bragg, Paul C. ed. 1926. Health Center newslets (Ad). *Los Angeles Times.* Aug. 29. p. L27.
• ***Summary:*** There is a veritable Paradise in the mountains near Los Angeles "and yet few people avail themselves of the opportunity to frolic in the sunshine and reap the benefits of an enjoyable outing. I lead a happy group of Wanderlusters every first and third Sundays, leaving the Health Center at 8:30 a.m. by bus to one of Nature's beauty spots... No dues or initiation fees. Bring your lunch for an all day's outing.

"I have been giving free health lectures for the past three years every Tuesday evening at 8 p.m. at the Health Center, 1000 W. 7th St., above [west of] Figueroa, selecting topics

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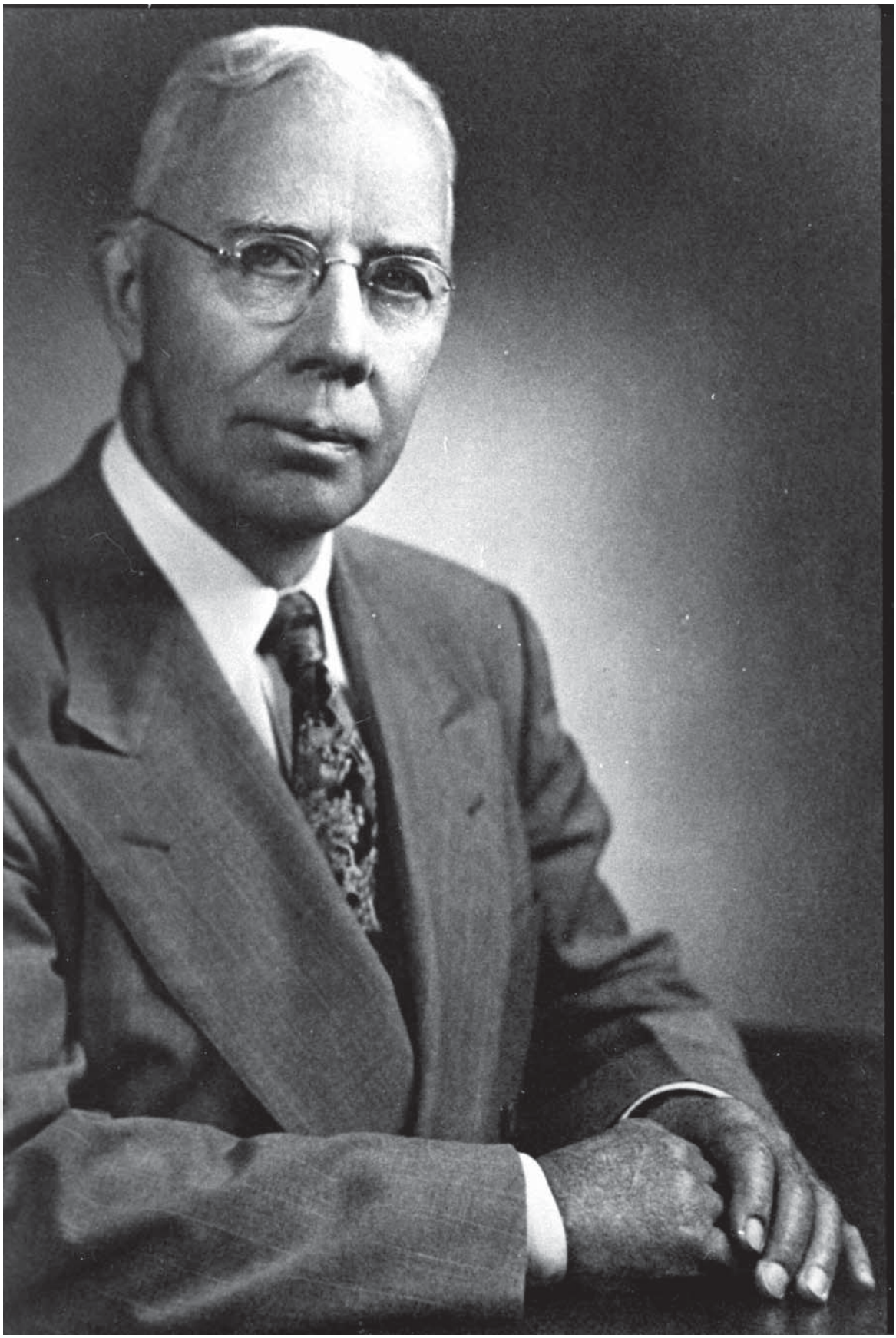

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that are inspiring... with all the bunk left out. I try to talk in understandable everyday language..."

"Someone asked me what diet I used to give me my 'splendid strength.' It is no secret. I eat the same balanced menus that are served to the public at the Health Center Corrective Eating Cafeteria, 1000 W. 7th St."

"There is a vast difference between so-called 'Health Foods' and genuine tested health foods. You will find all the recognized products, such as the Battle Creek Sanitarium foods and other nationally famous makes at the Health Food Store, 1000 W. 7th St. Write for mail order price list if unable to buy in person." Address: Prof., Chief Clinician, Health Center of Los Angeles, 1000 W. Seventh St.

525. Bragg, Paul C. ed. 1926. Health Center newslets (Ad). *Los Angeles Times.* Sept. 5. p. K27.
• ***Summary:*** A dull or lost appetite is "Nature's warning that your system is being poisoned by a clogged intestinal tract. I have found that the most effective internal cleansing medium is Innerclean Intestinal Laxative. This is a compound of aromatic herbs and vegetables developed by Prof. Arnold Ehret, originator of the famous 'Mucusless Diet Healing System.' Innerclean thoroughly removes the long accumulated filth, mucus and poisonous toxemias clinging to the intestinal walls and rejuvenates the whole digestive system. You fell like a million and have an appetite like a wolf! Innerclean is 50 cents a package at the Health Center and all druggists. The Innerclean Mfg. Co., 846 E. Sixth St, will mail a generous free sample by writing them a postal or letter."

"A proper diet will go a long way toward preventing that 'bound up' condition in the first place. Come to the Health Center... Our health food store here carries the most complete line of genuine recognized health foods to be found in the city–including the famous Battle Creek Sanitarium foods, Nutradiet, canned fruits and vegetables, a wide variety of delicious vegetable meat substitutes, whole wheat products from our own ovens, and many other items. Mail orders are given prompt attention." Address: Prof., Chief Clinician, Health Center of Los Angeles, 1000 W. Seventh St.

526. Kellogg, John Harvey. 1926. Nuts as a substitute for cow's milk. *Good Health* (*Battle Creek, Michigan*) 61(11):5-7. Nov.
• ***Summary:*** This paper, read at a meeting of the American Nut Growers' Association on 16 Sept. 1926 in Lancaster, Pennsylvania, begins by discussing nine serious drawbacks with cow's milk as a staple for adults. Dr. Kellogg first discovered that "milk disagrees very seriously with certain persons more than forty years ago." So he set out to develop a substitute for milk from nuts. He found that "the protein of nuts so closely resembles that of milk that it was by some authors described as plant casein. Oily nuts, as Sherman has pointed out, are the vegetable analogues of meat. They consist almost wholly of fat and protein." Our relatives, the primates, are extremely fond of nuts, and they know how to chew them thoroughly. More than 30 years ago it was found that nut milk is better than cow's milk in promoting the secretion of milk in nursing mothers. Two or three years later, Dr. Kellogg began making Malted Nuts for this purpose, and it is now "regularly prescribed by many physicians for nursing mothers who need assistance of this sort."

"My first experiments in an effort to make nuts more digestible led me to produce peanut butter. This was for several years produced in small quantities by consumers with the aid of small hand mills especially devised for this purpose. It has now come to be a staple food manufactured by numerous companies and may be found in every grocery in the land."

But the peanut is a legume rather than a nut. "Continuing our experiments with other nuts, especially almonds, cashew nuts, pecans, and pine nuts, we finally succeeded in producing a series of nut creams which we found highly satisfactory as substitutes for cow's milk and cream."

527. Kellogg, John Harvey. 1926. Biologic living not a modern idea. *Good Health* (*Battle Creek, Michigan*) 61(11):40. Nov.
• ***Summary:*** This article is taken from one of Dr. Kellogg's "Question Box" lectures. He begins with a long quotation from Plato's great book, *The Republic*, in which Socrates and Glaucon, his pupil, discuss how people ought to live. They conclude that eating meat requires lots of land, which increases the likelihood of war. He then talks about Pythagoras, the teacher of Socrates, who taught Plato, who taught Aristotle. Pythagoras was a vegetarian who advocated living biologically. Address: M.D.

528. *Good Health* (*Battle Creek, Michigan*). 1927. Acidophilus milk not necessary for changing the intestinal flora. 62(1):33. Jan.
• ***Summary:*** Summarizes an editorial in the *British Medical Journal* (17 April 1926).

529. Horvath, A.A. 1927. The soybean as human food. *Chinese Economic Journal* 1(1):24-32. Jan. [17 footnotes. Eng]
• ***Summary:*** Contents: The whole soybean as food: Immature or green soybeans, mature or dry soybeans, the digestibility of the boiled soybean seeds, boiled soybeans as a food of predominant importance in China, soybean coffee, soybean chocolate, soybean sprouts.

Concerning mature or dry soybeans: "In China the green seeded variety is soaked in fresh water or salted water and roasted, the product being eaten after the manner of roasted peanuts. In Japan the black soybeans are used chiefly for

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cooking, with sugar and soy sauce; the green variety is also used in this way, either in the fresh state or after being dried (Oshima). Generally speaking, the use of whole soybeans has not been attended with much success either in the Orient or Western countries, because, with the ordinary method of cooking, they remained hard and unpalatable. It has been found that cooking at a temperature somewhat above boiling breaks up the cellulose structure and develops a richness of flavor that is not obtainable at the lower temperature. Although this result can readily be secured in high pressure steam cookers [pressure cookers], the problem is to know how to accomplish this with ordinary household equipment."

Dr. J.H. Kellogg cooks the beans in a saturated solution of salt at about 107ºC. "The method of Durand does not require a special jar. The soybean seeds are soaked overnight in salt water and boiled in fresh water to which some sodium bicarbonate is added. If the foam is not allowed to flow over, the seeds will be ready for consumption in two hours. Lachaume claims that the removal of the skin of the beans after five minutes of immersion in hot water increases markedly the speed of boiling.

"Experiments by the Office of Home Economics, U.S. Department of Agriculture, and by the home economics departments of many colleges, have shown that mature or dry soybeans can be used satisfactorily after the manner of navy or other beans. Soybeans are very palatable. The lighter colored varieties, yellow and green, are best for food, as the dark ones usually have a stronger, less pleasant taste [sic]; some of the light brown varieties have a very agreeable flavor. Because of their high fat content and compactness, most varieties of soybeans do not cook soft as readily as the navy or field beans. The method of cooking, however, may cause the beans to remain hard and tough. If cooked properly, soybeans do not require much longer soaking and cooking than ordinary beans. One variety, the Easycook, has been found by the U.S. Department of Agriculture to cook fully as soft as the navy bean in less time after the preliminary soaking of 12 hours."

"Professor Haberlandt, the soybean pioneer of Central Europe, fifty years ago prepared a nourishing food, mixing boiled soybeans with potatoes or rice. This food was called *sojenta*, in analogy to the name of the Italian national food, *polenta*. At present in Central Europe boiled soybeans are mixed with boiled potatoes in the proportion of one to two, to which are added table salt and onions. Boiled soybeans may be also added to cereal gruels. In this way a food is obtained which is rich in protein and fat, and which can be completely substituted for products of animal origin.

"The digestibility of the boiled soybean seeds is, according to Lipsky, 80.5 per cent for protein and 80.8 per cent for fat. Goessman's figures of digestibility for protein and fat are on the average 90 per cent (Li Yu-ying). Oshima conducted two digestion experiments, which continued for three days. The diet consisted of cooked dried beans (outer skin not removed), eaten with a considerable amount of sugar and some shoyu (soy sauce). The per cent digested was: protein, 61.8-69.1 per cent; fat, 34.7-37.8 per cent; and carbohydrates (including fiber), 81.4-89.9 per cent."

"Liebig said that the method of preparing the food is of no less importance than its chemical composition. According to von Noorden and Salomon, the proteins of the beans give with calcium an insoluble compound; that is why hard water (rich in calcium) cannot be used for the boiling of leguminous seeds. It makes them hard and kernelly. If soft water is not available, it is necessary to add a little sodium bicarbonate, which precipitates the calcium salts. Richter demonstrated that from peas (the proteins of which behave toward calcium like those of the soybean) boiled in soft water, 10.2 per cent of the nitrogen and 19 per cent of the ash were eliminated in the stools. If boiled in hard water (the method of cooking remaining the same) the corresponding values for protein and ash in the stools were 16.6 and 42 per cent.

"The digestibility of the soybeans depends largely on the thoroughness of cooking and also on the state of division. The protein of boiled beans eaten as such is digested to 60 per cent, but if given in a state of fine division (puree) it rises to 90 per cent."

"According to von Noorden and Salomon: 'It will be correct to connect a satisfactory digestion of food with the presence and co-operation of a corresponding bacterial flora and it makes it clear why, especially in leguminous seeds, habit plays such a large and evident role.'"

"The water in China is known to be hard as a rule and this may be the chief reason why the Chinese are not using boiled soybeans in a noticeable amount. If soda [a natural product of China, being collected in Mongolia from soda lakes] were used in China for boiling the soybean seed soft, thus doubling the digestibility, it may revolutionize the nutrition of the Chinese population" (p. 31-35).

Concerning soybean coffee (p. 30-31): "During the period of the Civil War in America, the soybean was extensively used in the southern states as a coffee substitute. For a considerable time seedmen sold the Ito San variety under the name of Coffee Berry and Coffee Bean (Piper & Morse [1923]). Soybean coffee has been used in Western Europe, in Switzerland, and in the Alpine Provinces of former Austria since the introduction of the soybean to Europe. Horvath [probably the writer's father], 50 years ago [i.e., about 1877], was the first to prepare soybean coffee for the market in South Russia. In 1913 Marschner (Bohemia) put on the market a soybean 'coffee without caffein' [caffeine] under the trade mark 'Santosa.' In Germany, Fischer and Follmann (Dresden) also manufactured soybean coffee for the market... In China an 'artificial bean coffee' is prepared by the Kai Cheng Bean Products Company, Peking. (Note: Li Yu-ying is connected with the company). It is claimed to be 'a good substitute for real coffee, cures

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constipation, and improves the appetite."

Concerning soybean chocolate (p. 31): "In recent years the demand for cocoa has risen sharply and the supply has run short... Li Yu-ying's soybean products factory in the vicinity of Paris* succeeded in preparing a chocolate from soybeans, sugar, and cocoa butter. The chemical composition, the aspect and the taste are close to that of real chocolate (Footnote: *"Formerly *L'usine de la Caseo-Sojaine* [*Caséo-Sojaïne*], now *Société Française pour l'exploitation du soja et de ses dérivés*, 48 Rue Denis-Papin, Les Vallées-Colombes.)" Note: This is the earliest document seen (July 1996) that mentions Li's *Société Française...*

Concerning soybean sprouts: "Soybeans soaked in water and allowed to sprout are much relished as a vegetable by the Chinese." One kg of soybeans yields about 4 kg of sprouts. The yellow- or green-seeded varieties are generally used for growing sprouts.

Reprinted in 1927 as part of an 86-page monograph titled "The Soybean as Human Food" (Peking, China). Address: M.D., Peking Union Medical College, China.

530. Bragg, Paul C. ed. 1927. Health Center newslets (Ad). *Los Angeles Times.* Feb. 13. p. K27.
• ***Summary:*** The Health Center's "Health Food department specializes in whole wheat bakery products, unsulphured sun-dried fruits [prunes, figs and raisins] and Battle Creek Santarium foods..." Also delicious meat substitutes and coffee substitutes. Address: Prof., Chief Clinician, Health Center of Los Angeles, 1000 W. Seventh St.

531. Bragg, Paul C. ed. 1927. Health Center newslets (Ad). *Los Angeles Times.* Feb. 20. p. K27.
• ***Summary:*** The Health Center carries "unsulphured sun-dried fruits–prunes, figs and raisins–like none you've ever tasted before. There are delicious meat substitutes and coffee substitutes and the complete line of Battle Creek Sanitarium Foods."

"Prof. Arnold Ehret's brochure entitled: 'Thus Speaketh the Stomach,' (25 cents by mail) is worth reading..."

"Did you see the account in the newspapers about Miss Mable Mitchell of Santa Ana who reduced 43 pounds in 63 days of fasting? There is no surer way to get rid of excess weight."

"All disease, including obesity, in uneliminated poison. Once this is driven out through the pores, kidneys and bowels, Nature soon restores health. I have seen hundreds who had been given up to die regain splendid health..." Address: Prof., Chief Clinician, Health Center of Los Angeles, 1000 W. Seventh St.

532. Kellogg, John Harvey. 1927. A vegetarian athlete. *Good Health* (*Battle Creek, Michigan*) 62(1):32. March.
• ***Summary:*** Frosty Peters, a rising football star, is a flesh abstainer. When Battling Nelson was knocked out, he blamed it in the extra beefsteak he swiped.

533. *Good Health* (*Battle Creek, Michigan*). 1927. The dietary value of the soy bean. 62(4):36. April.
• ***Summary:*** "A recent issue of the *Lancet* calls attention to the special nutritional value of the soy bean...

"Now, however, a new phase in the use of the soy bean has been entered upon, owing to the discovery of Doctor Berczeller of Vienna [Austria] that the obnoxious constituents can be eliminated by a special milling process and fractional distillation, without interfering with the high nutritional value of the meal. This nutritional value is so great that Professor Haberlandt, years ago, prophesied that the carbohydrate stores of the potato would come to be supplemented, at least in the diet of the poorer classes, by the proteins and fats provided in such abundance in the soy bean.

"The proteins of the soy bean are, according to McCollum, distinctly more valuable from the point of view of nutrition than are those of the other legumes."

534. *Los Angeles Times.* 1927. Lima bean acreage cut: Oxnard district ranchers raising more sugar beets and other vegetables this year. May 14. p. 6.
• ***Summary:*** The California Lima Bean Growers' Association, located in Oxnard and with more than 1,100 members, has just issued a lengthy report that discusses this decrease in acreage. In 1926 the total acreage planted to regular lima beans in Southern California was about 100,000 acres. It is expected to decrease by 3,000 to 4,000 acres this year, partly because of lower prices. About 43,000 acres of baby limas were planted last year.

The report states that there is considerable interest in "lima bean flour and bread... The experiments and successful tests of Dr. D.W. Sansum, director of the Potter Metabolic clinic in Santa Barbara, in this connection, have given the lima bean association a new idea that promises to further the lima bean industry tremendously."

As a result of experiments conducted by Dr. Sansum, a good-tasting and wholesome bread, made chiefly with lima bean flour, is now on sale at several places. Dr. Sansum is prescribing lima bean muffins for his patients suffering from various forms of acidosis.

"Lima beans are the most alkaline food known... Some of the flour has been sent to Battle Creek [Michigan, to Dr. Kellogg] and also to two or three large bakeries in the East for the purpose of developing a formula by which good lima bean bread can be made."

Note 1. This is the earliest English-language document seen (July 2005) that contains the term "lima bean flour" or the term "lima bean bread."

Note 2. Bill Baker of Ojai, California, is not mentioned.

535. Horvath, A.A. 1927. Better food values for smaller expenditure. *Good Health* (*Battle Creek, Michigan*) 62(6):27,

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48. June.
• ***Summary:*** Discusses the soy bean as human food. "It is hardly too much to say that there is nothing that would help so much in solving the national and international problems, which are perplexing the world, as popularizing the use of soy beans as an article of human diet and as teaching the subject of nutrition from the standpoint of food production and efficient use." Address: Pekin Medical College, China.

536. Kellogg, John Harvey. 1927. Bran for constipation of childhood. *Good Health* (*Battle Creek, Michigan*) 62(10):40. Oct.
• ***Summary:*** "Do you advise bran for constipation in children?"

"For a child who is occasionally constipated, I would recommend bran for one thing. Another thing: Dismiss white bread from the table. I should like to see a law, such as they now have in Italy and in Belgium, prohibiting the use of white bread. It is just as unreasonable to steal the cream from the wheat as to steal the cream from the milk. When wheat is skimmed, the lime and iron and vitamins and the wholesome roughage are lost, and there is nothing to replace them unless it is supplied in some artificial way. Millers have carefully propagated the idea that bran is irritating, that the wheat must be fine and that the bread must be white. College professors have written articles explaining why fine flour is so much better than whole wheat flour. The argument they offer is that a larger proportion of the wheat will be digested if it is made into fine flour than if it is left in the form of graham flour or whole wheat flour. That is not the right kind of economy. There will not be quite as much food absorbed from the wheat, but nobody is suffering because we do not get more calories from the wheat. A little of the coarse carbohydrate, as found in bran, is needed in the colon to keep the colon clean, and to promote the growth of the acid-forming germs that protect the colon from putrefaction."

This article is on a page titled "Gleanings from Dr. Kellogg's 'Question Box' lectures."

537. **Product Name:** Soy Meal. Renamed Soy Flour by 1934, Soy Bean Flour by 1936, and Soybean Flour by Dec. 1943.
Manufacturer's Name: Battle Creek Food Co. (Marketer-Distributor). Made in the USA by A.E. Staley Manufacturing Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1927.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Horvath. 1927. The Soybean as Human Food. p. 41, 44. "This soy meal contains: moisture 5.5%, protein 53.8%, fat 9.2%. This roasted meal is manufactured from fresh press cake. The roasting greatly improves the taste, digestibility, and keeping capacity of bean meal. This procedure is largely applied to soybean meal (flour) in China and Japan."

S.S. Pierce Co. 1935. Spring and summer mail order catalog (Boston). p. 72.

L.B. Breedlove. 1936. *Chicago J. of Commerce and La Salle Street Journal.* June 25. p. 14. "Soy bean–The magic plant. Article XI." "Battle Creek Food Factory, Battle Creek, Michigan: Soy bean flour."

A photo shows commercial soy products from William Morse's office. 1936. "Soy Bean Flour." Canned, Low in Starch. Price List. 1940. Soy Flour. 1 lb or 4 lb bag. Miller. 1943.

USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. The company sells Soybean flour. Distributed through health food stores.

Price Lists. 1955 and 1960. Soybean Blue Book. 1947. p. 70.

Note: This is the earliest commercial soy product seen made by Battle Creek Foods or Dr. John Harvey Kellogg.

538. **Product Name:** Soy Gluten Biscuit (For Diabetics).
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1927.
New Product–Documentation: Horvath. 1927. *The Soybean as Human Food.* p. 57. "At present a special soy biscuit for diabetics can be obtained from the Battle Creek Food Company. Its chemical composition is: moisture 5-10%, protein 50-60%, fat 7-10%, pentosans etc. 17-22%, ash 4-6%, starch 1-3%.

Battle Creek Food Co. Catalog. 1937. Consists of equal parts soy flour and wheat gluten. Note: This is America's earliest commercial soy product that also contains gluten, according to the SoyaScan database as of May 1992.

Letter from Dr. John Harvey Kellogg to Mr. Richard Haughton, of Paoli, Pennsylvania. 1937. Sept. 21. "The Battle Creek Food Company makes a number of products from the soy bean, among which are soy gluten biscuit, which consists of equal parts of soy flour and wheat gluten. It is extremely toothsome and the most highly nourishing of all foodstuffs with which I am acquainted."

539. Kellogg, John Harvey. 1927. The new dietetics: A guide to scientific feeding in health and disease. 3rd ed. Battle Creek, Michigan: The Modern Medicine Publishing Co. 1031 p. See p. 188-93, 322-28. Illust. Index. 24 cm.
• ***Summary:*** This is an encyclopedia of food, diet, and nutrition. Earlier editions were published in 1921 and 1923. The author, a physician and a vegetarian, lists his credentials on the title page: "Fellow of the Royal Society of Medicine of Great Britain, of the American Medical Association, Member of the American Economic Association, and of the National Geographical Society, Member of the Société d'Hygiene of France, Late Member of the Michigan State

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Board of Health, Editor of "Good Health," Superintendent of the Battle Creek Sanitarium, President of Battle Creek College.

Table XIV (p. 188) lists soy beans as a food rich in lime (calcium), containing 0.46%. Pages 189-93 discuss "Acids and bases of food–The acid alkaline balance." It begins: "As pointed out by Bunge many years ago, and as further shown by an extensive research conducted by Sherman, of Columbia University, foodstuffs differ in relation to their acid and basic contents. In certain foods, bases or alkalies predominate, while in others the mineral acids predominate.

"The waste products of the body are predominantly acid; consequently it is desirable that the foodstuffs should be predominantly basic. If acids predominate in the ration, and this condition continues for a considerable period of time, the effect will be to disturb the nice balance between acids and bases which is normally maintained in the body fluids and which is essential for life. A deficiency of alkalies constitutes acidosis.

"It is necessary that the alkalinity of the blood should be constantly maintained as the only means by which the acid wastes of the body which are constantly accumulating as the result of all sorts of vital work may be promptly removed." All flesh foods leave highly acid residues. Eggs are also acidic, though less strongly than meat. Cereals and bread are acidic, though much less so than meats. Milk is slightly alkaline. Most fruits, and all green and root vegetables are strongly basic and tend to alkalinize the tissue fluids... Generally it is better to select foods which afford a large basic margin so as to add to the alkali reserve of the body, which always tends toward diminution, especially in old age. A strongly basic diet is especially indicated in cases of arteriosclerosis and disease of the kidneys, in fevers, in pregnant women, in all forms of acidosis, and in old age...

"At the present time all physiologists are agreed that the highest degree of physical vigor and efficiency may be maintained on a diet which excludes flesh foods and physiologists the world over are unanimous in advising a curtailment rather than an increase in meat consumption."

Table XVI (p. 192-93) is titled "Excess of acid or alkali in one ounce and in 100 calorie portions of common foodstuffs." The Soy bean has an excess of base (alkali), 12.0 units per 100 calories or per 1 ounce.

In the chapter on Legumes, pages 322-28 give a detailed and accurate discussion of the soy bean and various soyfoods, including the history and nutritional composition of the soy bean, soy bean milk, to fu [tofu], soy sauce, and soy bean sprouts. On the first page, Dr. Kellogg states: "The soy is the best of all beans."

In the chapter titled "Infant Feeding," under "Vegetable Milk" (p. 956), Dr. Kellogg states: "The Chinese have for ages made from the soy bean a preparation which so closely resembles the dairy product that it may not inappropriately be called vegetable milk. A much better preparation is made from walnuts, almonds, and even peanuts... Milk prepared from walnuts and almonds is used in China, the Philippines and throughout the Orient, as a food for nurslings for whom a wet nurse can not be provided. This custom prevails extensively in those Asiatic countries in which cow's milk is but little used.

"A nut milk commonly known as 'Malted Nuts' has been made in this country for more than thirty years and has come into extensive use... These plant protein milks render great service especially in the treatment of infants and invalids who are sensitized to cow's milk. They are also valuable resources in the treatment of colitis in infants and in cases in which change of the flora is found difficult, so that the suppression of all animal proteins becomes necessary."

Also discusses quinoa, kaoliang, and the adsuki bean.

Note: This is the earliest English-language document seen (Feb. 2004) that uses the word "alkalinize" to refer to making a food more alkaline. Address: Battle Creek, Michigan.

540. Kellogg, John Harvey. 1928. Treatment of colitis by changing the intestinal flora. *Bulletin of the Battle Creek Sanitarium and Hospital Clinic* (*Battle Creek, Michigan*) 23:1. Jan. *

• ***Summary:*** This article begins: "There is only one way to cure colitis and that is to change the intestinal flora; for colitis is an infection, and as in any other infection, the infecting agent must be eliminated." Roughage in the diet is also necessary and of great value; try using plenty of coarse bran, such as fig bran. "Agar may be used in place of bran, but is less efficient unless used in very liberal quantities.

"Another excellent food accessory is psyllium seed, commercially known as psylla. It is a highly mucilaginous seed of European origin." It supplies both "roughage and lubrication, which are equally necessary."

Liberal use of carbohydrates that promote growth of an aciduric flora are also required; lactose and dextrin have been found to be best for this purpose. A sufficient quantity must be taken to ensure that some of it reaches the colon to encourage lactic acid formation.

Note 1. This is the earliest document seen (June 2004) that mentions psyllium seed or psylla as a source of dietary fiber. Note 2. *Webster's Dictionary* defines psyllium seed (derived from the New Latin *psyllium* which was derived from the Greek *psyllion* meaning "fleawort"), a word first used in 1930, as "the seed of a fleawort (esp. *Plantago psyllium*) that has the property of swelling and becoming gelatinous when moist and is used as a mild laxative–called also *psyllium."* Address: M.D., F.A.C.S., Battle Creek Sanitarium, Battle Creek, Michigan.

541. Stop & Shop. 1928. Buy your Sunday dinner at this store (Ad). *Chicago Daily Tribune.* Feb. 24. p. 12.

• ***Summary:*** One section is titled "Stop & Shop now offers

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Battle Creek Sanitarium Health Foods to you–Every day in the year a complete line of standard Battle Creek foods... Battle Creek expert always in charge of this department." Featured: "Savita–a valuable substitute for meat extracts; rich in vitamin–excellent for diabetics. Has the fine flavor of mushrooms and rivals the finest meats. 50¢ jar. Protose–looks like meat, smells like meat, tastes like meat; has the composition of meat yet is purely vegetable. 35¢ jar." An illustration shows 11 products, including Psylla [from psyllium], Gluten Flour, Malted Nuts, Lacto Dextrine, Zo, Savita, Protose, and Laxa. Address: 16 N. Michigan and 12 W. Washington.

542. Kellogg, John Harvey. 1928. Constipation. *Good Health* (*Battle Creek, Michigan*) 63(4):42. April.
• ***Summary:*** Why does constipation come and go? The mind has a great deal to do with it. If a person becomes angry, or despondent, or worried, the colon becomes spastic.

543. Kellogg, John Harvey. 1928. Bran for children. *Good Health* (*Battle Creek, Michigan*) 63(5):42. May.
• ***Summary:*** A child two years of age may take bran as a good source of roughage.

544. Kellogg, John Harvey. 1928. The rise of bran. *Good Health* (*Battle Creek, Michigan*) 63(5):36-37. May.
• ***Summary:*** The article begins: "The rise of bran in public esteem and general use as an article of diet has in recent years been so rapid as to be almost spectacular."

"Of course bran is not a new discovery... All primitive grain eaters... made use of the bran along with the rest of the grain."

"In this country the interest in bran began with the diet reform movement started by Sylvester Graham in the forties of the last century." He lectured widely, "advocating the use of whole meal flour. The graham flour and graham bread, with which everybody is familiar, and the great interest in bran, are the results of his efforts."

Dr Morris Fishbein, editor of the *Journal of the American Medical Association,* and one of the most prolific of modern medical writers, wrote about the importance of bran in the April 1928 issue of *Scientific American.* Hippocrates was also a believer in bran.

545. Cooper, Lenna Frances; Barber, Edith M.; Mitchell, Helen S. 1928. Nutrition in health and disease [1st ed]. Philadelphia, Pennsylvania: J.B. Lippincott. viii + 546 p. June. Illust. Index. 21 cm. [37 ref]
• ***Summary:*** This is the first edition of this classic text. Contents: Part I: Principle of nutrition. 1. Nutrition and the health program. 2. Summary of digestion and absorption. 3. Water and cellulose. 4. Minerals. 5. Vitamins. 6. Carbohydrates. 7. Fats. 8. Proteins. 9. Energy metabolism. 10. Food value determinations. 11. Feeding of normal children. 12. Diet in old age. 13. Foods of the foreign born. 14. Cost of food. 15. Public health and the food supply.

Part II: Food selection. 16. The development of cookery and the service of food. 17. Menu planning and hospital dietaries. 18. Beverages. 19. Fruits. 20. Vegetables. 21. Cereals. 22. Salads. 23. Milk. 24. Eggs, cheese and other dairy products. 25. Meats and poultry. 26. Soups and gelatin. 27. Fish and shellfish. 28. Nuts and legumes. 29. Leavening agents, batters and doughs. 30. Desserts.

Part III: Diet in disease. 31. Diet in gastric disorders. 32. Diet in gastric disorders (continued). 33. Diet in diseases of the intestines. 34. Diet in diseases of the liver and biliary tract. 35. Diet in cardio- vascular-renal diseases. 36. Diet in diseases of the blood. 37. Diet in fevers and infections. 38. Diet in overweight and underweight. 39. Diet in gout and arthritis. 40. Diet in diabetes mellitus. 41. Diet during pregnancy and lactation. 42. Artificial feeding of infants. 43. Malnutrition. 44. Diets before and after surgical operations.

Part IV: Cooking for the sick and convalescent. Introduction. 45. Beverages. 46. Cereals and gruels. 47. Toasts. 48. Breads. 49. Soups and broths. 50. Meats and poultry. 51. Fish and shellfish. 52. Meat substitutes. 53. Eggs and cheese dishes. 54. Gravies and sauces. 55. Vegetables. 56. Salads and salad dressings. 57. Frozen desserts. 58. Gelatin desserts. 59. Miscellaneous desserts.

Appendix. 1a. Table of approximate relative food values. 1b. Table of values of food materials in common measurements. 1c. Nutritive value in grams per 100 grams of food. 1d. 100 calorie portions of foods. 2. Reference books and magazines (bibliography).

This important early work on scientific nutrition is not vegetarian, even though all three authors are Seventh-day Adventists; the word "vegetarian" does not even appear in the index. It is addressed more to homemakers than to trained nurses; the homemaker "is an all the year round nurse, in the new sense of the word–as an enlisted volunteer in the war against disease" (p. iii).

Also discusses Acid-base balance (with a large table) (p. 34-38). Fats in the diet ("There are numerous vegetable oils obtained from seeds namely, cottonseed oil, cocoanut oil, corn oil, olive oil, and peanut oil. These oils are sometimes hydrogenated,..." p. 72). Proteins (incl. incomplete proteins, p. 73-79). Chinese dietary habits ("The soy bean is grown abundantly and some thirty or more products are manufactured from it." p. 124). Cost of food: Meat and dairy foods (Meat "is one of the most expensive of our foodstuffs" p. 133-35). Public health and the food supply: The federal "Pure Food Law, or the Food and Drugs Act, passed in 1906" designed "to protect its citizens against frauds, adulteration and deterioration." The second federal food law of 1906, made operative under the Bureau of Animal Industry, USDA, provides for the examination of all animals intended for slaughter and an examination by a federal inspector of the carcasses of animals slaughtered (p. 143-49). Milk (Begins:

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"'A quart of milk a day for every child and a pint for every adult' should be the rule..." p. 214-15). Eggs, cheese and other dairy products are viewed as valuable foods (p. 223-25). Meat ("The per capita consumption of meat is very large in this country, a condition which can be traced to the generous supply [of game] which was available during the pioneering days" [and early patterns of meat consumption in England]. "Lamb is the meat of the immature sheep. Mutton is the meat of the mature animal." Pork is relatively cheap but "contains more fat than any other meat." p. 230-37). Diet in gout and arthritis (incl. uric acid and purines. A table shows the 16 foods with the highest content of purines, p. 352-53). Diet in diabetes mellitus ("Joslin is confident that overeating resulting in obesity is the chief predisposing cause of this disease." "13. There are several standard soya bean flours on the market which may be purchased through local dealers. Soya bean flour may be prepared at home by buying soya beans and grinding them in a feed mill, or a small hand mill" p. 356-67). Meatless luncheon dishes (recipes, p. 456-59). Reference books and magazines (p. 528). Address: 1. Food Director, Univ. of Michigan; formerly Dean of School of Home Economics, Battle Creek College; Supervising Dietitian, U.S. Army 1918-1919; 2. Writer and consultant, food and nutrition; editor, food column, *New York Sun;* 3. PhD, Prof. of Nutrition, Battle Creek College; Director of Nutrition Research, Battle Creek Sanitarium.

546. Cooper, Lenna Frances; Barber, Edith M.; Mitchell, Helen S. 1928. Nutrition in health and disease for nurses. [1st ed]. Philadelphia, Pennsylvania: J.B. Lippincott. viii + 574 p. June. Illust. Index. 21 cm. [37 ref]
• ***Summary:*** In June 1928, J.B. Lippincott published two books that were very similar. The first, titled *Nutrition in Health and Disease*, was 28 pages shorter and its target audience was typical homemakers. The contents of the two books appear to be identical, except in this book: (1) Facing the title page is a list of 20 books and their authors in the series "Lippincott's Nursing Manuals." (2) The words "Lippincott's Nursing Manuals" appear across the top of the title page. (3) The Preface is different and half a page longer.

(4) The order of the parts in the Appendix is slightly different: 1a. Table of approximate relative food values. Reference books and magazines (bibliography). 1b. Table of values of food materials in common measurements. 1c. Table: Nutritive value in grams per 100 grams of food. 1d. Table of 100 calorie portions of foods.

(5) Right after the last appendix is a long section (p. 528-54) titled "Suggestions to teachers: To the instructor of dietetics." It begins: "For a number of years the American Dietetic Association has coöperated with the Committee on Education of the National League of Nursing Education on the problems of the course of study in dietetics for nurses' training schools." (6) On page 555 is another, somewhat different page of "Reference books and magazines" (bibliography). The index of each book appears identical.

This is the only edition of this book, although it did go through several printings. *Nutrition in Health and Disease* went through many editions. Address: 1. Food Director, Univ. of Michigan; formerly Dean of School of Home Economics, Battle Creek College; Supervising Dietitian, U.S. Army 1918-1919; 2. Writer and consultant, food and nutrition; editor, food column, *New York Sun;* 3. PhD, Prof. of Nutrition, Battle Creek College; Director of Nutrition Research, Battle Creek Sanitarium.

547. Mitchell, Helen S. 1928. Nutritive value of the garbanza pea. *Western Hospital and Nurses' Review* 11(6):26-27, 52-53. Aug. [9 ref]
• ***Summary:*** The garbanza is also known as the gram or chic pea, and sometimes as the Idaho pea. Artemus, in *The Encyclopedia of Foods and Beverages*, states that it is widely used in Mediterranean countries and was probable the "pulse" of the ancient Hebrews. Today is it a leading article of diet in Spain.

Pages 26-27 show the growth rates of rats fed garbanza pea, soy bean, and casein diets. Address: PhD, Nutrition Lab., Battle Creek Sanitarium [Michigan].

548. Good Housekeeping. 1928. Confidence creates sales: Everywoman's magazine. Every manufacturer's market (Ad). *New York Times.* Sept. 24. p. 10-11.
• ***Summary:*** "Ask any of the more than 1,600,000 progressive *Good Housekeeping* families what monthly page in the magazine serves them as a Buying Directory. They will reply out of their satisfactory experiences: *'Good Housekeeping's Index of Guaranteed Advertisements!"*

"Herewith we present a list of advertisers in October *Good Housekeeping..."*

The category "Food products" includes Grape Nuts, Kellogg's All Bran, La Choy Chinese Food Products, Lea & Perrins' Sauce, etc. Address: New York, Chicago, Boston, Detroit, San Francisco.

549. *Good Health* (*Battle Creek, Michigan*). 1928. Soy bean milk. 63(9):41. Sept.
• ***Summary:*** "An article in an Italian medical journal extols the soy bean from the agricultural standpoint... In some Asiatic countries soy bean milk has from remote times been extensively used in the feeding of children. When properly prepared it keeps better than animal milk."

550. Abbott, George Knapp. 1928. High blood pressure: And degenerative diseases of the heart, blood vessels, and kidneys. Takoma Park, Washington, DC, Peekskill, New York, and South Bend, Indiana: Review and Herald Publishing Assoc. 176 p. Illust. No index. 20 cm. [50+ ref]
• ***Summary:*** This book, by a Seventh-day Adventist physician, is "the outgrowth of 25 years of medical practice,

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chiefly institutional, where high blood pressure and degenerative diseases have been an ever-present problem... The problem of so-called essential hypertension had been a baffling and discouraging one until the researches of Sansum and Nuzum gave the added detail of the acid factor [acid-alkali balance], and we have made very definite and precise the rationing in both protein and alkalinizing dietary factors" and standardized these into "a simplified system understandable and practical for the use of the patient..." (p. 5).

A poem titled "The fence or the ambulance" humorously capsulizes the debate between prevention and treatment of illness (p. 7). A table (p. 26) shows the increase in heart disease death rate in the USA from 1900 to 1925, It was 132 death per 100,000 population in 1900 and 186 in 1925, for a 41% increase. Heart disease is the leading cause of death in the USA.

The chapter titled "Strength and endurance" (p. 38-53) discusses: The research of Russell H. Chittenden of the Sheffield Scientific School at Yale University [Connecticut]. He found that a relative low protein diet helped develop endurance. He was not interested in vegetarianism. "Chittenden's conclusions have never been disproved. No flaw could be found in his experiments." Yet prejudice persists that humans do best on a high-protein diet. Fatigue poisons include uric acid or purine substances. Caffeine and uric acid are nearly alike. Graphs show the effects of caffeine on producing premature muscle fatigue.

The chapter on "High blood pressure and degeneration" (p. 54-66) shows that a low protein vegetarian diet leads to low blood pressure. Three groups of rabbits, placed on high-protein diets, each group on a different type of protein, developed increased blood pressure. These experiments, lasting for nearly 3 years were conducted at the Potter Memorial Clinic of Santa Barbara, California. In the "Soy bean protein group" (p. 57-58) a group of 12 normal rabbits was fed a diet containing 38% protein, chiefly from soy beans. A graph shows that within 4 months (relatively late) elevation of blood pressure occurred, the range for the first year being 78 to 94–the highest 4 diets graphed. But after 18 months (graph, p. 59) the soy beans diet produced the next to lowest blood pressure. Ultimately the liver diet produced the highest blood pressure. "Not one of the twelve rabbits on the soy bean diet presented arteriosclerosis... but three showed spontaneous sclerosis." 89% of rabbits on the liver diet showed a kidney disease similar to Bright's disease found in humans–marked especially by albumin in the urine. 80% of the rabbits on the soy bean diet showed this kidney disease (p. 59-60). The summary (p. 60) states that increased blood pressure appeared latest in those "on a vegetable (soy bean) diet, which kept the urine alkaline." "The meat and grain protein diets contributed to acidosis, that is, increased acids in the blood. This was not true of the vegetable [soy] protein diet. The acidifying diets, meat and cereal, resulted in hardening of the arteries, while the alkalinizing did not."

The chapter titled "The food problem" (p. 67-76) discusses Denmark's food experiment under Dr. Hindhede, who was made "food dictator" during World War I, and the good health that resulted when the entire nation ate a vegetarian diet largely free of dairy products and eggs. They ate all natural "pig food and hen food."

The chapter on "Hardening of the arteries" (p. 83-94) defines the development of arteriosclerosis and atherosclerosis; It was not present in any of the 12 rabbits "on a soy bean diet, a strongly alkalinizing diet." "A high protein diet from liver makes a decidedly acid urine with reduction in alkali reserve (carbon dioxide combining power) of the blood" (p. 86-88).

The chapter titled "The unbalanced ration" (p. 122-29) uses the writings of Dr. McCarrison and Dr. Hindhede to argue that simple, primitive diets are healthier than civilized diets.

The chapter titled "The normal diet" (p. 134-60) suggests three basic principles for a healthy diet: (1) Avoid excess protein foods above the normal body requirements of 40-45 gm/day of protein. (2) Avoid excess of acid-ash foods over alkalinizing foods. (3) Avoid excess of total calories (overeating). Soy beans are listed (p. 138) as a high-protein food with an alkalinizing ash. The section on "Complete and incomplete proteins" (p. 140-41) lists soy beans as a source of complete proteins. Meat, although a complete protein, is considered "an inferior food." The section on "Alkalinizing balance" (p. 143-49) states that acid ash comes from sulphur and phosphorous acids. Alkaline bases are sodium and potassium. The blood and tissue fluids "are normally slightly alkaline. If the blood became even very slightly acid, death would result." A full-page table (p. 144) ranks many foods on a scale ranging from acid forming to base forming, with "Foods nearly neutral" in the middle. "Of the legumes, peas and beans are alkaline, the latter very strongly so, while lentils and peanuts are acid in ash. Almonds are alkaline..." Address: A.B., M.D., Medical Director of the Washington Sanitarium and Hospital, Washington, DC.

551. Kellogg, John Harvey. 1928. Experience proves the advantages of a meatless diet. Battle Creek, Michigan: Good Health Extension Bureau. 8 p. 16 cm.
• ***Summary:*** Contents: Introduction. The Battle Creek Sanitarium has excluded meat for more than fifty years. Science demands disuse of meats. A meatless diet helps surgery. A New York hospital adopts a meatless dietary. Address: M.D., Battle Creek, Michigan.

552. Kellogg, John Harvey. 1928. Filth germs in meat. Battle Creek, Michigan: Good Health Extension Bureau. 8 p.
• ***Summary:*** Contents: Introduction. Cooking does not protect against meat germs. Meat is not essential. Meats encourage intestinal putrefaction. A beefsteak that killed

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guinea pigs. Vegetable proteins (nuts, beans) and milk do not encourage putrefaction. Address: M.D., Battle Creek, Michigan.

553. Kellogg, John Harvey. 1928. Pythagoras on the ethics of diet. Battle Creek, Michigan: Good Health Extension Bureau. 8 p. 16 cm. [1 ref]
• ***Summary:*** "Pythagoras, the founder of Greek philosophy, was born in the early part of the sixth century, B.C. (586), on the Island of Samos, from which he was driven by the tyrant Polycrates. He and his followers formed a colony at Crotona, in southern Italy, which seems to have been a model health city, where the rules of biologic living were established conventions.

"The philosophy of Pythagoras recognized the blood brotherhood of living creatures and prohibited the taking of life, and hence of eating flesh. Pythagoras and his followers, among whom was Milo, the Greek athlete, dressed in white clothing, and maintained the highest standards in manners and morals. Their virtues were, naturally, a living condemnation of the conduct of most of their contemporaries, who ultimately, by persecutions drove Pythagoras into exile, and one night gathered in a mob and fell upon and massacred the remnant of his devoted disciples, who were gathered in the house of Milo.

"The following poetical description of the ethical teaching of this great thinker on the subject of diet, was written by the famous Latin poet Ovid, who lived shortly before the Christian Era, and was translated from his 'Metamorphoses,' by the English poet, Dryden."

There follows five pages of quotation from Ovid's Metamorphoses. Address: Battle Creek, Michigan.

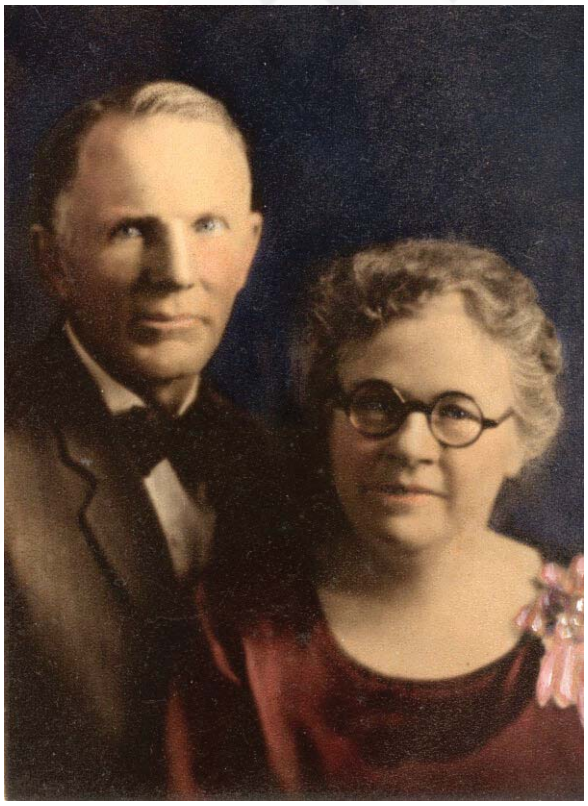
554. Kellogg, John Harvey. 1928. Should an athlete eat meat? Battle Creek, Michigan: Good Health Extension Bureau. 7 p. 16 cm.
Address: M.D., Battle Creek, Michigan.

555. Kellogg, John Harvey. 1928. What scientific men say about meat and meat eating. Battle Creek, Michigan: Good Health Extension Bureau. 8 p. 16 cm. [3 ref]
Address: M.D., Battle Creek, Michigan.

556. Kellogg, John Harvey. 1928. The world's greatest authorities pronounce meat unnecessary. Battle Creek, Michigan: Good Health Extension Bureau. 4 p. 16 cm.
• ***Summary:*** Contents: Introduction (The Inter-Allied Scientific Food Commission). The United States Department of Agriculture declares meat to be non-essential. Man not naturally a flesh eater. Milk and nuts better than meat.
Address: Battle Creek, Michigan.

557. The family of Theodore A. Van Gundy, with his wife and three children, in 1928 (Photograph). 1928.
• ***Summary:*** See next page. This superb 7½ by 9½ inch black-and-white photo was taken in 1928 in San Gabriel, California, by Hartsook. It was given to Soyfoods Center in Feb. 1982 by Charlotte Van Gundy Holmes, one of T.A. Van Gundy's daughters. On the back, in pen, is written: "Picture taken 1928, San Gabriel, California. Theodore A. Van Gundy, age 54, father, center. Lulu G. Van Gundy, age 56, mother, to right of father. Mary Charlotte Van Gundy (later Holmes, 1945), age 23, daughter, lower left. Theodore Romayne Van Gundy, age 27, son, top left. Martha Dorothea Van Gundy (later Jones 1960), age 25, daughter, upper right.

"I have another photograph of the family taken in an old Christian Winery Garden in 1911–but I can't find it. I guess it is packed in some of my things. Thought I gave it to my daughter Sue, but she can't remember seeing it."



Note 1. A small tinted color photo (a portion of the larger photo), showing only Mr. and Mrs. Van Gundy, has the date 1927 written on the back.

Note 2. In the 1928 Los Angeles City Directory, Theo A. Van Gundy is shown as tchr [teacher] City School, residing in San Gabriel.

558. Battle Creek Food Co. 1928? Entrées for the vegetarian dinner. Battle Creek, Michigan. 16 p. Undated. Illust. 17 x 9 cm.
• ***Summary:*** On the cover of this small booklet is a chef, with white chef's hat and moustache, tasting a spoonful of something. On page 1 is a "Personal letter to chefs,"

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encouraging them to serve Battle Creek Food Co. dinner entrees since "The time is no longer when people demand meat three times a day. Once a day is a good average. Research surveys tell us that the consumption of meat in hotels and restaurants has decreased 45% since 1927... You will find that Protose, Nuttose and Savita help make your vegetable dinners as delicious as the old-fashioned meat and vegetable dinners."

The booklet contains many recipes using Protose and Nuttose like meat, and Savita as a savory vegetarian seasoning in soups, sauces, broths, bouillon, and gravies. All 3 products are canned. One 2-page spread titled "Protose and Savita served from coast to coast" shows menus of many hotels and restaurants where these products appear on the menu. The Busy Bee in St. Louis, Missouri, for example, has a full page of the menu devoted to "Battle Creek Specials." Sales helps and table cards are also available from Battle Creek.

"Savita is an extract of a special yeast plant [i.e. yeast extract] that imparts a delicious mushroom flavor to soups, gravies, sauces, vegetables and bouillons, that makes every chef proud of his cooking."

"Protose is purely vegetable, being made of nuts and grains, yet it looks and even tastes like choice meat. Serve with your vegetable dinners, as well as a special on Fridays and during Lent. Protose dishes generally cost around 7c [cents] per serving. The usual charge for a Protose vegetable dinner ranges from 45c to 75c."

"Nuttose is made from choice nuts, and is most enjoyable in croquettes, salads and nut fillet. It has a rich, meaty flavor, yet is made purely from nuts. A serving costs about 7c." Address: Battle Creek, Michigan.

559. *Madison Survey* (*Madison, Tennessee*). 1929. Soy-bean products replace dairy products. 11(20):78-79. May 15.
• ***Summary:*** "For many years we have been warned that the increase of disease among cattle would put an element of danger into dairy products. This set us to studying foods that contain the essential elements of dairy foods with [sic, without] this objectionable feature." Describes the post-graduate work with soybeans done by two of the school's teachers, Miss Frances Dittes (Peabody College, Nashville) and Prof. P.A. Webber (Michigan State Agricultural College, Lansing).

"It is intensely interesting to those who are looking for something to replace dairy products, to see the products of the soy-bean cheese is delicious and capable of many variations in the dietary. One of the latest articles sampled is a loaf of yeast bread in which soy-bean milk was used instead of water. The bread is fine of grain, sweet, light, and with a toothsome crust that will appeal to the taste of the most fastidious."

"The soy-bean with nuts will supply every thing we have been obtaining from milk and flesh foods. And the danger that lurks in the products of diseased animals is entirely eliminated by the use of soy-bean products.

"There is a future for soy-bean products. We expect to see hundreds of our people demonstrating the value of these foods. This is a real missionary work for which Madison is preparing."

560. *Madison Survey* (*Madison, Tennessee*). 1929. Soy-bean recipes. 11(20):79. May 15.
• ***Summary:*** The following recipes were developed by Miss Frances Dittes: Soy-bean milk ("This gives creamy, forty-two and one-half pounds of rather heavy consistency, and resembling cow's milk in appearance").

Soy-bean cheese: "To four quarts of soy-bean milk at 100 deg. F., add ten drops of rennet, dissolved in one-half cup cold water and two ounces of starter. The starter may be whey from a previous making of cheese or some sour soy-bean milk. The rennet needs an acid media in which to do its work. Stir thoroughly and keep the mixture for sixteen to eighteen hours at a temperature of 100 degrees. One gallon of milk will make twenty-four ounces of fine curd, which separates from the whey. This curd should be drawn off, mashed and molded."

Soy-bean omelet (from whole sieved soybeans and eggs).

Soy-bean in tomato sauce: "To one can of soy-beans add 2 cups of tomato juice, 1 small grated onion, a pinch of salt, celery salt, and a piece of butter about the size of a walnut. Bake for one hour."

Cream of soy-bean soup: "Through a sieve rub one can of soy-beans. To this add 3 cups of rich, creamy milk, and a pinch of salt. Serve hot with a few bits of chopped leaves of celery or parsley."

Soy-bean salad.

561. *Madison Survey* (*Madison, Tennessee*). 1929. Soy-bean recipes. 11(25):98-99. June 19.
• ***Summary:*** Describes how to make "soy-bean cheese" (also called "soy cheese," i.e. tofu) at home using lactic acid as a coagulant, plus the following recipes: Savory loaf (with soy-bean cheese). Soy-bean loaf (with soy cheese). Lentil-soy loaf (with soy-bean puree). Vegetable roast (with soy-bean puree). Jellied soy salad (with soy cheese). Tomato soy salad (with "soy curd").

562. *Madison Survey* (*Madison, Tennessee*). 1929. Food work. 11(33):126-27. Aug. 14.
• ***Summary:*** "The raising of foods is an interesting and profitable work for students. The manufacture of health foods and the serving of those foods to the public is a close second in educational value. The Madison Food Factory is putting up crackers of various sorts, nut meats, malt honey, soybeans and steamed wheat in cans, and other attractive products. A variety of bakery goods, specializing in whole wheat breads

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and buns, gives employment to a group of students."

"A group of men and women drive to the city each morning and return each evening. They are the working force of the vegetarian cafeteria, located on Sixth Avenue, just off Church Street, and a short distance from the busiest section of the city. The cafeteria is one of the most attractive projects of the institution. It affords a business training that ought to be the delight of any active student. A group is training there throughput the year under the direction of Kenneth Sheriff.

"The training of cooks and dietitians is given special attention at Madison... The Dietitian's Course is headed by Miss Francis Dittes."

563. Kellogg, John Harvey. 1929. Stefansson's tallow-eating stunt. *Good Health* (*Battle Creek, Michigan*) 64(8):5-6. Aug. [1 ref]
• ***Summary:*** In a recent issue of the *Journal of the American Medical Association* (6 July 1929), Dr. C.W. Lieb describes an experiment in which arctic explorer Stefansson and Andersen ate a daily diet that provided 2,100 calories of fat and 550 calories of protein. Dr. Kellogg says that they were paid to endure this diet by the Meat Board, and that the diet was not a meat diet but a "tallow diet." He says Steffanson's "diet was four-fifths fat and only one-fifth muscle meat."

Note: On the cover of this issue the subtitle is now: "The Battle Creek Journal of Health and Hygiene."

564. *Madison Survey* (*Madison, Tennessee*). 1929. Practical uses for the soybean. 11(36):141-42. Sept. 4.
• ***Summary:*** "From the pamphlet just coming from the press giving soybean recipes, we select this week the following instruction on salads. That readers are interested in soybean products is evident from the letter of inquiry received. Soybean cheese as used by the Madison Sanitarium is a popular dish and the many uses of the soybean curd make it a valuable addition to the dietary."

There follows a section titled "How to make a perfect salad" with 8 recipes for soy cheese [tofu]: Tomato, pineapple, cheese salad (with ½ cup grated soy cheese). Jellied soy salad (with 2 cups grated soy cheese). Waldorf cheese salad (with ½ cup grated soy cheese). Raisin and soy cheese salad (with equal parts grated soy cheese, seeded raisins, and chopped apple). Almond and salad (with "2/3 grated soy curd" and 1/3 ground blanched almonds). Sliced fruit and cheese salad (with orange, pineapple, raisins, and soy cheese). Tomato and soy salad ("Make a soy dressing by softening the soy curd with mayonnaise"). Pineapple and cheese salad (with pineapple, celery, grated soy cheese, and pecans).

565. Wheeler, A.J. 1929. From the agricultural department. *Madison Survey* (*Madison, Tennessee*) 11(36):141. Sept. 4.
• ***Summary:*** Last year members of this department broadcasted two acres of the fertile river bottom land with Mammoth Yellow soybeans, and turned them under soon after frost. "There was a splendid crop of beans and we debated the advisability of using them for hay, but decided to give them to the soil" to improve its fertility. "Next year we plan to sow most of this [bottom land] to Japan clover or soybeans, which are annuals and can be sowed after the flood season."

566. *Madison Survey* (*Madison, Tennessee*). 1929. Soybean products. 11(42):168-69. Oct. 23. [1 ref]
• ***Summary:*** Discusses a report on the calcium content of soybeans and tofu presented by Miss Frances Dittes at the annual meeting of the American Home Economics Association, and quoted in the October issue of the *Journal of Home Economics.* Last year Miss Dittes wrote her thesis on this subject while studying at George Peabody College for Teachers. She made three types of soybean curd using calcium sulfate, lactic acid, and rennet as coagulants, then measured their calcium content. All were low in calcium, although that made with rennet had the highest calcium content. "It is concluded that soybean curd in the dietary should be supplemented by foods rich in calcium."

Dr. Bailey at New Haven, Connecticut, found that soybean curd had no starch and no significant amounts of sugars. "This means that the soybean curd is a food eminently fitted for use by patients suffering from diabetes."

567. Dittes, Frances L. 1929. The calcium content of soybean cheese (Abstract). *J. of Home Economics* 21(10):779. Oct.
• ***Summary:*** "Three types of soybean curd made by using calcium sulfate, lactic acid, and rennet, respectively, as coagulants, were analyzed for calcium by the Shohl modification of the McCrudden method. The three methods of making the curd produced cheeses of good texture, color, and flavor. All were low in calcium, varying from 0.003 to 0.005 per cent calculated as CaO [calcium oxide = lime]. The rennet curd had the highest calcium content. It is concluded that soybean curd in the dietary should be supplemented by foods rich in calcium." Address: George Peabody College for Teachers [Nashville, Tennessee].

568. **Product Name:** La Sierra Soy Cheese (With Pimiento).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1929 November.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Los Angeles City Directories. 1928-29. For both these years Theo. A. Van Gundy is a teacher in City School. Resides in San Gabriel. Riverside City Directories. 1926-1951. No listing for Van Gundy or La Sierra Foods. Yet only in 1951 is La Sierra College listed. Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline

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Ash, Low Starch." The first product on the list is "Soy Cheese." Note: This is the earliest known commercial tofu product to be named "Soy Cheese."

Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46.

Two interviews with and two letters from Charlotte Van Gundy Holmes. 1981. In the fall of 1928 (probably not in 1927 as reported by Jones in 1963), T.A. Van Gundy moved to La Sierra (now a suburb of Riverside) and started La Sierra Industries. He soon developed a line of eleven soyfoods. The first eight of these were probably on the market by late 1929. One of the products was Soy Cheese (canned tofu, with pimiento added to prevent graying after canning). This was the company's second best selling product in the early 1930s.

569. **Product Name:** La Sierra Soy Milk.
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1929 November.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline Ash, Low Starch." Thirteen products are listed, including "Soy Milk."

Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46. L.B. Breedlove. 1936. *Chicago J. of Commerce and La Salle Street Journal.* June 25. p. 14. "Soy bean–The magic plant. Article XI." "La Sierra Industries, Ontario, California: Soy bean milk.

Two interviews with and two letters from Charlotte Van Gundy Holmes. 1981. The product was canned with beany flavor removed by processing with live steam.

570. **Product Name:** La Sierra Soy Beans (Canned) [Unseasoned Green-Seeded Type, or with Tomato Sauce].
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1929 November.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline Ash, Low Starch." Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46. L.B. Breedlove. 1936. *Chicago J. of Commerce and La Salle Street Journal.* June 25. p. 14. "Soy bean–The magic plant. Article XI." "La Sierra Industries, Ontario, California: Canned soy beans.

Two interviews with and two letters from Charlotte Van Gundy Holmes. 1981.

Note: These are the earliest known canned, green-seeded commercial whole soybeans seen.

571. **Product Name:** La Sierra Soy Flour (Raw).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1929 November.
New Product–Documentation: Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline Ash, Low Starch." Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46. "Raw and Processed." Two interviews with and two letters from Charlotte Van Gundy Holmes. 1981.

572. **Product Name:** La Sierra Mamenoka (Roasted Soy Flour).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1929 November.
New Product–Documentation: Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline Ash, Low Starch." Two interviews with and two letters from Charlotte Van Gundy Holmes. 1981. She says this product was introduced in late 1929. The word "Mamenoka" bears a close resemblance to "Mamenoko," the early Japanese word for "roasted soy flour."

573. **Product Name:** La Sierra Soy-Co (Soy Coffee) [Coarse, or Fine Grind].
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1929 November.
New Product–Documentation: Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline Ash, Low Starch." Dorothea Van Gundy. 1936. La Sierra Recipes. p. 41, 46. The company address is now Box 203, Ontario, California. Two interviews with and two letters from Charlotte Van Gundy Holmes. 1981.

574. **Product Name:** La Sierra Sandwich Spread (Called Soy Spread by 1936).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1929 November.
Ingredients: Incl. okara, salt, mace, and other seasonings.
Wt/Vol., Packaging, Price: 8 oz can.
New Product–Documentation: Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline Ash, Low Starch." Ad in Health magazine. 1935. 2(9):31. Sept. "Soy Bean Products, La Sierra Brand: Complete protein, low starch, high alkaline ash." House of Better Living Catalog. 1936. March. p. 9. 8 oz. can for $0.15. Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46. "Soy Spread."

Two interviews with and two letters from Charlotte Van Gundy Holmes. 1981. This was canned okara or soy pulp, with salt, mace and other seasonings; it had a soft

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consistency and was said to taste and smell like "potted chicken."

Note: This is the earliest record seen (June 2013) showing the use of okara as an ingredient in a commercial soy product.

575. **Product Name:** La Sierra Soy B-Nuts or Beanuts (Parched Soy Beans. Dry Roasted Soynuts).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1929 November.
New Product–Documentation: Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46.

Two interviews with and two letters from Charlotte Van Gundy Holmes. 1981.

Note 1. This is the earliest commercial soynut product seen in the Western world. Note 2. This is the earliest English-language document seen (Dec. 2012) that uses the term "Soy B-Nuts" or the term "Beanuts" to refer to soynuts.

576. **Product Name:** La Sierra Soy Gluten (Meat Analog).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1929 November.
New Product–Documentation: Two interviews with and two letters from Charlotte Van Gundy Holmes. 1981. This meat analog was made of Soy Spread mixed with ground gluten, resembling Dr. Kellogg's Protose, but with soy.

Note: This the earliest meatlike product seen, made by a Seventh-day Adventist food company, that contains gluten.

577. **Product Name:** La Sierra Soy Cereal.
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1929 November.
New Product–Documentation: Two interviews with and two letters from Charlotte Van Gundy Holmes. 1981. In 1929 or 1930 he built the mill that produced this ready-to-eat, toasted and shredded, all-soy product. It was the company's best-seller in the early 1930s.

578. Kellogg, John Harvey. 1929. Chinese babies thrive on milk from beans. *Good Health* (*Battle Creek, Michigan*) 64(12):36-37. Dec.
• ***Summary:*** Orphans in China are often "saved from starvation by feeding them milk prepared from almonds, walnuts and other nuts. In North China, the peanut is much used for this purpose," according to a Chinese trained nurse, as is the soy bean. "This bean in its composition resembles a nut more than an ordinary bean. It is richer in protein than any other plant food."

"Dr Tso, a Chinese physician, at the recent International Physiological Conference, held in this country, gave a report of a careful study of the effects of a soy-milk diet in the feeding of infants."

579. *Vegetarian Messenger and Health Review* (*Manchester, England*). 1929. The soya bean. Dec. p. 284. [1 ref]
• ***Summary:*** "Our esteemed contributor, Mr. John Naylor, in a communication appearing on a later page, has done us excellent service in drawing our attention to the potentialities of the soya bean. The vegetarian who bases his practice on the principle of humaneness is aware of his inconsistency when taking milk and milk products. To replace cow's milk by a satisfactory milk made from the soya bean would be to replace a food that is provided at the cost of suffering with one free from that taint. The vegetarian strengthens his claim to be a humanitarian whenever he uses a vegetable substitute for an animal product and many have made the first forward step by using only artificial leather. The soya bean makes it possible to advance still further by giving us not only milk, butter, cheese and meal, but many by-products which will satisfactorily replace by-products of meat. Statisticians have stated that before the close of the present century land will not be available to grow cattle for the meat and milk required, and Dr. Kellogg, of Battle Creek [Michigan], is of opinion that the soya bean will then become one of the great food staples of the world.

"The Vegetarian Society allows members the use of milk, butter and cheese, and for the majority of vegetarians, during the present transitional period, the use of these animal products is both necessary and convenient. Milk and milk products have been aptly called 'protective' foods and it has been demonstrated that they have often made up what was lacking in the dietary of a vegetarian doing hard physical or mental work. The soya bean, however, promises the greatest of possibilities, for by its use the time is brought appreciably nearer when vegetarians will obtain all their food from the vegetable kingdom." Address: The Vegetarian Society, 39 Wilmslow Rd., Rusholme, Manchester, England.

580. **Product Name:** La Sierra Soy Bean Butter (later renamed B-Nut Butter (Soynut Butter)).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1929.
New Product–Documentation: La Sierra Industries. 1931? "La Sierra soy bean products." Arlington, California. 6 panels. This small, undated leaflet (which cites a Jan. 1930 USDA Farmers' Bulletin No. 1617 titled "Soybean utilization," by W.J. Morse) lists "Soy Bean Butter" as one of the company's products and states: "Soy Bean Butter is similar to peanut butter, however it does not contain any nuts. It may be served plain or mixed with water to dilute. A delicious spread is made by mixing equal parts of honey and soy bean butter."

Note: This product is almost surely soynut butter. If so, it is the world's earliest known commercial soynut butter.

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Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline Ash, Low Starch." House of Better Living. 1936. Sept. p. 2. "Fresh Nut Butters. No Salt Added." Retailed for $0.25/lb. Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46. Two interviews with and two letters from Charlotte Van Gundy Holmes. 1981. March-May. Early work with peanut butter: In 1897, at about age 23, T.A. Van Gundy began his first commercial food production, making peanut butter (which, at the time, was a relatively new food) with Dr. Hare in Fresno, California. In the fall of 1928 (probably not in 1927 as reported by Dorothea Van Gundy Jones in 1963), T.A. Van Gundy moved to La Sierra, California (now a suburb of Riverside) and started La Sierra Industries, the business that would make his famous as a soyfoods pioneer. The first eight La Sierra-brand soyfood products were probably on the market by late 1929. These included B-Nuts or Beanuts (oil-roasted soynuts), and B-Nut Butter (soynut butter made from B-Nuts).

581. Cooper, Lenna Frances; Hall, Margaret Allen. 1929. The new cookery. 11th ed., revised. Battle Creek, Michigan: The Modern Medicine Publishing Co. 493 p. Illust. 22 cm.
• ***Summary:*** This Seventh-day Adventist vegetarian cookbook contains a recipe for Soy bean muffins on p. 72-73. It calls for "1 cup soy bean flour." Address: 1. Food Director, Univ. of Michigan; formerly Dean of Home Economics, Battle Creek College; formerly, Head Dietitian, Battle Creek Sanitarium; and later, Supervising Dietitian, United States Army 1918-1919; 2. Consulting dietitian and lecturer on dietetics, Battle Creek Sanitarium and Chautauqua Lecturer.

582. Cooper, Lenna Frances; Barber, Edith M.; Mitchell, Helen S. 1929. Nutrition in health and disease. Philadelphia, Pennsylvania, and London: J.B. Lippincott company. viii + 546 p. Illust.
• ***Summary:*** First published in 1928. Address: 1. Food Director, Univ. of Michigan; formerly Dean of Home Economics, Battle Creek College; formerly, Head Dietitian, Battle Creek Sanitarium; and later, Supervising Dietitian, United States Army 1918-1919.

583. Dittes, Frances L. 1930. Vegetable milk. *Madison Survey* (*Madison, Tennessee*) 12(2):5-6. Jan. 8.
• ***Summary:*** "Milk, for many years known as 'the perfect food,' has now become a point of question, not because in composition it is deficient, but because milk, being easily contaminated, becomes one of the great carriers of disease... Disease is increasing among the animals as well as among humans. Milk obtained from diseased creatures is not always healthful. Since milk is such a good carrier of disease, the public may well be concerned as to the condition of milk offered for its consumption... a number of [soy milk] products are now on the market, such as infant foods, canned milk, condensed milk, powdered milk, flour, and breakfast foods."

"The general method for making vegetable milk followed by the Orientals is to wash and soak the bean. Freshly ground soybean meal may also be used. The length of time of leaving the beans in water is not fixed but depends upon the temperature. When the beans are well softened, they are crushed in a stone mill and the meal washed thoroughly. After crushing, two or three times the volume in water is added to the dense, milky liquid, and the whole is allowed to stand for a while. Finally the mixture is placed in a covered kettle over a slow fire until the mass has simmered well. A filter bag separates the refuse from the white, thick liquid which resembles cow's milk, and which is called 'vegetable milk.'"

"The composition of soybean milk varies somewhat, depending on the process of manufacture. In general, however, it is similar in composition to animal milk.

"The protein of the soybean milk seems to contain all the essential amino acids to make it a complete protein. It is poor in fat soluble and anti-scorbutic vitamins (the juice of soybean sprouts may be used to supplement this deficiency), in sodium chloride and perhaps calcium. Because of its low carbohydrate content, the milk does not possess the sweetness of cow's milk.

"In competition with the bovine milk, soybean milk has in its favor the following facts and dietetic advantages: It may be produced with less contamination, it is free from tuberculosis, it may be produced more cheaply, and its casein breaks down much more readily than the casein of cow's milk.

"Soybean milk is recommended by Y. Noorden in cases of gastric and duodenal ulcer, states of peritoneal irritation, hyper-secretory conditions of the stomach, disturbances of the motility of the stomach, in conditions with edema where food poor in sodium chloride is required, cholecystitis, cirrhosis of the liver, diabetes, and in cases where a very nutritious diet is desired." Address: Madison, Tennessee.

584. Steen, Herman. 1930. Soy bean processing: A discussion of the newest field in specialty milling. *American Miller* 58(2):164-65. Feb. 1.
• ***Summary:*** "Six mills affiliated with the Millers National Federation have added equipment for handling soy beans, extracting oil, and making soy bean meal, within the past year or two,... This development is one of the most important things in the industrial-agricultural world, and is making it possible for a tremendous increase to take place in the acreage of this valuable crop.

The American Milling Co. (Peoria, Illinois) used more than 1,000,000 bushels of soy beans during the past 12 months to make oil and meal. The ground meal was used a major source of protein in dairy feeds.

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A cereal manufacturer at Battle Creek, Michigan, is milling soy beans to make flour, which it uses to make biscuits and bread for those suffering from diabetes. Soy beans contain very little sugar and are very nourishing.

In Chicago and elsewhere, paint companies are using soybean oil in the manufacture of their product. This started when the price of linseed oil rose because of its scarcity, "but now the paint makers find that for certain purposes the replacement of part of the linseed oil by soy bean oil improves the quality of their product."

"In Cincinnati, Ohio, soap makers are using soy bean oil for making certain fine soaps and shampoos. It is more expensive than cocoanut oil and cottonseed oil, but for certain kinds of soap it must be used to attain the desired quality.

In Seattle, Washington, large quantities of soy beans are used [by the I.F. Laucks Co.] to make glue [for plywood]. It is almost a new industry, yet this one company is now using about 600,000 bushels of soy beans a year.

A portrait photo shows Herman Steen. Address: Secretary, Millers National Federation.

585. Woodward & Lothrop. 1930. Display ad: National Health Food Week. *Washington Post.* June 4. p. 7.
• ***Summary:*** "This week visit our Battle Creek Health Food Section–This is National Health Food Week. Join the nation-wide campaign for better health by making a visit this week to our Battle Creek Health Food Section on the Fifth Floor.

We carry a complete line of Battle Creek Health Foods, and our Battle Creek Representative will be glad to tell you about the health foods which will be especially beneficial to your health.

"Savita, a Battle Creek vegetable extract, is served in the Fountain Room–the Down Stairs Store."

Note: This is Woodward & Lothrop's golden anniversary (1830-1930).

586. *Kokomo Tribune* (*Indiana*). 1930. Geo. B. Lane passes away in his sleep: Had come here from Florida to spend summer–Formerly prominent here. July 21. p. 1, 8.
• ***Summary:*** This front page obituary notes that George B. Lane, age 60, died in his sleep early Monday morning [July 21], in Kokomo. His home is in Orlando, Florida, but he had been residing temporarily at 615 North Wabash avenue. Death was due to heart trouble.

"Surviving are the widow, Lillie Charles Lane; one son, Ovid C. Lane, 901 West Monroe street, a member of the news staff of the Tribune; two daughters, Mrs. K.F. Brown, Battle Creek, Michigan, and Mrs. D.A. Bays, Orlando, Florida; four granddaughters, Myra Janice Lane, Jeanette Bays, and Anita and Bonnie Joan Brown; one brother, Ira B. Lane, 814 West Jackson street, and two sisters, Mrs. William C. Adrian, 1101 South Bell street, and Mrs. Amos Brubaker, residing near Burlington" [Indiana].

"Mr. Lane was born near Point Isabel, Grant county [Indiana], May 16, 1870, the second son of James and Rebecca Lane, both dead several years. The parents moved to the city of Tipton and later to the village of Kempton, while he was still a child. When he was eleven years old the family moved to Kokomo, where he continued to reside until 1919, when he moved to Orlando, Fla., going there on account of failing health. He returned for a period practically every year. He came back several weeks ago and was intending to spend the summer here.

"As a young man, Mr. Lane followed the baker's trade. He was employed at that time in the Zwisler restaurant in Buckeye street [in Kokomo]. Thirty-five years ago [i.e., 1895], he went to Battle Creek, Michigan, where he was employed for several months by the Kellogg Company, and where he made the first peanut butter that concern ever marketed. He also created other new foods for them.

"Returning to Kokomo, he started a health food factory in South Webster street, just north of the Palmer School building. This enterprise was highly successful. It was, however, wiped out by fire and, unfortunately, at a time when the insurance had lapsed. After this disaster, he entered the truck gardening business, here and at Denver, Indiana."

"In 1915, Mr. Lane entered the real estate business, a line which he followed the remainder of his life."

"Mr. Lane was a man of intelligence, character and thrift. He was largely self taught, but was well informed on a number of subjects. He was straightforward and square in his dealings, did not hesitate to express his convictions and had the respect of all circles in which he was known. The record he leaves is one by which he will be long and pleasantly remembered.

"Mr. Lane was a member of the Seventh Day Adventist church, and was head deacon in the church of that denomination in the city of Orlando."

Talk with Bonnie Van Kley, Curator of Archives, Howard County Historical Society, Kokomo, Indiana. 2004. Jan. 13. Bonnie found this important article. She adds: George's brother, Ira Lane, helped to build the Seiberling Mansion, which is now the Howard County Historical Museum, located in Kokomo.

587. *Madison Survey* (*Madison, Tennessee*). 1930. Demonstrating health foods. 12(30):119. Aug. 6.
• ***Summary:*** "As an advertising scheme for the health foods of the Madison Food Department and for other lines which are being handled by Mr. Ralph Meade, this gentleman gave a banquet for the men heading the chain stores of the Atlantic and Pacific Grocery Company, of Birmingham, Alabama. The company of some seventy or eighty business men was entertained in the Vegetarian Cafeteria of that city.

"A group of young people from Madison, and another from Southern Junior College, took part in the program of music and song, and assisted in the serving of lunch."

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588. Kellogg, John Harvey. 1930. Soybeans as human food. Paper presented to the American Soybeans Grower's Association, Sept. 11. 20 p.

• ***Summary:*** Dr. Kellogg shows that he has an excellent knowledge of the world literature on soybeans and soyfoods, much of which he summarizes in this speech. "Many years ago (1899), the United States Department of Agriculture, called upon me to undertake the preparation of a vegetable meat. The Assistant Secretary, Dr. Charles Dabney, wrote me, suggesting that the navy bean might be used for the purpose. I found, however, as I expected, that this legume was not suited to the purpose. At that time the soybean was not grown to any extent in this country, I was wholly unacquainted with it, and so naturally sought to find in nuts, especially the peanut, a solution of the problem, and succeeded in producing a vegetable meat, Protose, of which several thousand tons have since been made and consumed. But the introduction of the soybean renders quite unnecessary any other substitute for flesh meats." The author discusses his belief that primitive man subsisted wholly upon plant products (i.e. ate a vegan diet "according to Prof. Elliot of Oxford University, Prof. Ami of Montreal, and other distinguished paleontologists"), and the nutritional value of soybeans and their basic-ash quality. "All meats yield a highly acid ash. The excess of acid in these foods produces a lowering of the alkalinity of the blood and tissue fluids when they are freely used, a condition which is known as acidosis." He also discusses soya sauce (which is now being manufactured in the USA), miso (which like soy sauce has a flavor resembling that of the osmazomes found in meat and meat sauces), roasted soy nuts (resembling roasted peanuts), pressure cooking whole soybeans, adding soy meal (flour) to breads, soy milk (which, in certain parts of China and Japan, "is made in quantities and distributed in bottles like milk in this country"), soy cheese [tofu], and the many health benefits of soy milk described in the medical literature, the many health problems caused by consuming flesh foods.

"Von Noorden, the world famous German physician, has demonstrated that the soy bean is of very great service in changing the intestinal flora." Note 1. This is the earliest document seen (June 2003) concerning soy and changing the intestinal flora. It is also the earliest document seen (June 2003) that uses the phrase "changing the intestinal flora" in connection with soy.

"In spite of the frantic efforts of vested interests to promote the uneconomic live-stock industry, it will no doubt gradually disappear as a true science of agriculture is developed and the country becomes more densely populated. The conversion of vegetable into animal protein by feeding to steers and pigs, is one of the most wasteful of all human activities. Armsby has shown that 100 pounds of digestible vegetable protein are required to produce 3 pounds of meat protein..."

Discusses Stefansson's absurd so-called meat-eating experiment, which was really a publicity stunt. Stefansson took no more than 20% of his calories in the form of lean or muscle meat. The rest of his diet was fat. "Excessive meat consumption is one of the begetting sins of the people of this country. Our per capita meat consumption is 5 ounces per day, just 5 times that of Italy (1.0 oz.) and ten times that of North China (0.5 oz.), while the average native of South China eats no meat at all, and is one of the hardiest and most industrious of workers."

"Thanks to the efforts of our efficient Plant Introduction Bureau, the soybean is beginning to get a start toward recognition and appreciation in this country; but it is evident that a plant possessed of such superlative values and such astonishing versatility and adaptability should receive far more serious attention than has heretofore been given it by the agriculturalists of this country... There can be no doubt that it is destined to play a large part in the feeding of America's millions..."

Note 2. This is the earliest English-language document seen (Dec. 2012) that uses the term "soy nuts" or the term "roasted soy nuts" to refer to soynuts. Address: Battle Creek, Michigan.

589. *Proceedings of the American Soybean Association.* 1930. Program of joint meetings: American Soybean Association and Annual Illinois Soybean Day. Agronomy South Farm, University of Illinois, Urbana-Champaign. Sept. 10, 11, 12, 1930. 3:3-6. Eleventh annual field meeting. Held 10-12 Sept. 1930 in Illinois.

• ***Summary:*** The Wednesday morning program began at 9:00 with music by a male quartet, followed at 9:20 by a welcome from Dean H.W. Mumford. Then came 13 speeches about soybean production and feeding; their titles and authors are listed. At 12:00 there was a "special soybean lunch" served at the University South Farm and prepared by ladies of the First M.E. Church, Urbana. It consisted of "Soybean fed pork, soybean fed beef, soybean bread, soybean muffins, baked soybeans, a soybean health drink, soybean ice cream, and soybean ice."

On Wednesday afternoon, starting at 5:00 p.m. there was an inspection of soybean production machinery at the Farm Mechanics Building, and the special tour of the Urbana Laboratories.

On Thursday evening at 8:00 p.m. Dr. John Harvey Kellogg, of the Battle Creek Sanitarium [Michigan], presented a paper titled "Soybeans as human food," which was printed in the Battle Creek Hospital Journal, *Good Health.*

On pages 5-6 is the text of the "Address of Welcome," by Dean H.W. Mumford, Univ. of Illinois.

Note: This is the earliest English-language document seen (Sept. 2013) that contains the term "soybean ice cream." Address: Illinois.

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590. Dittes, Frances L. 1930. Soybean food preparation for infants. *Madison Survey* (*Madison, Tennessee*) 12(38):151-52. Oct. 1.
• ***Summary:*** A table compares the nutritional composition of soybean milk, cows' milk, and mother's milk. Soybean milk contains the most protein (4.94%) and mother's milk the least (1.5%). Soybean milk is lowest in carbohydrate (0.92%) while mother's milk is highest (7.00%). "In composition the soybean resembles a nut more than an ordinary bean." Soybean milk contains "the six essential amino acids necessary for complete nutrition and normal growth."

Soybean milk works well for treating eczema in infants. "Soy milk is produced at a cost of one-fifth that of cow's milk, besides being free of disease bacteria, such as tuberculosis, typhoid fever, etc. This food product may be found so practical, economical, and adequate, that it will save the lives of many infants..."

Note: This is the earliest English-language document seen (Sept. 2011) with the term "soybean food" (or "soybean foods") in the title. Address: Madison, Tennessee.

591. Kellogg, John Harvey. 1930. Soybeans as human food. I. *Good Health* (*Battle Creek, Michigan*) 65(12):5-7. Dec. Continued Jan. 1931. Paper first read at the meeting of the American Soybean Assoc., held 11 Sept. 1930 at Urbana, Illinois. [1 ref]
• ***Summary:*** Contents: Introduction. An age-long esculent. The soybean is richer in protein than beefsteak. An extraordinarily versatile food. The soybean replaces milk and eggs as well as meat in China.

"Many years ago (1899), the USDA called upon me to undertake the preparation of a vegetable meat. The Assistant Secretary, Dr. Charles Dabney, wrote me, suggesting that the navy bean might be used for the purpose. I found, however, as I expected, that this legume was not suited for this. At that time the soybean was not grown to any extent in this country. I was wholly unacquainted with it, and so naturally sought to find in nuts, especially the peanut, a solution to the problem, and succeeded in producing a vegetable meat, Protose, of which several thousand tons have been since made and consumed.

"But the introduction of the soybean renders quite unnecessary any other substitute for flesh meats. As a matter of fact, the protein rich foods of vegetable origin, such as nuts, which the soybean resembles, as Professor Sherman of Columbia University suggests, are not meat substitutes, but are the original meats for which the flesh of animals became a substitute when the glacial cold of the Ice Age drove our prehistoric forbears into the caves and grottoes of Southern Europe.

"The proteins of the soybean are, according to McCollum, distinctly more valuable from the point of view of nutrition than are those of the other legumes. The work of my own laboratory as well as that of others has shown that this bean is almost unique among seeds in its vitamin content." Address: Battle Creek, Michigan.

592. **Product Name:** Soy Ice Cream (Honey Sweetened) [Strawberry, Chocolate, Vanilla], and Soy Coffee with Soy Cream.
Manufacturer's Name: Scientific Food & Benevolent Association.
Manufacturer's Address: Takoma Park Station, Washington, DC.
Date of Introduction: 1930.
New Product–Documentation: Miami Daily News. 1934. April. "He [Jethro Kloss] exhibited 21 articles made from soy beans" including "ice cream." He invited the public in Miami, Florida, to taste them.

Jethro Kloss. 1935. *Back to Eden.* Page 105 contains a recipe for non-dairy soy ice cream.

Letter from Jethro Kloss, president of this association, to his daughter, Promise. 1936. May 11. The letterhead states that this is "Manufacturers, Jobbers, and Distributors" with "A marvelous line of foods made from the soy bean..." Note: It is not clear when this company was founded, or if it existed in 1930, when Kloss first started making and selling soy ice cream commercially.

Letter from Eden Kloss, son of Jethro Kloss. 1985. Nov. 15. He recalls that in about 1930 he helped his father make soy ice cream (honey sweetened in strawberry, chocolate, and vanilla flavors) and soy coffee with soy cream. They sold it to the public as part of a quick lunch out of a small trailer on Pennsylvania Avenue near the White House.

Note: This is the world's earliest known non-dairy soy ice cream. This is the earliest known commercial soy product made in Washington, DC–in the early years of the Great Depression. It is also the earliest known commercial soy product introduced by a Seventh-day Adventist that contained chocolate.

593. Bragg, Paul Chappius. 1930. Professor Bragg's live food cook book and menus. Hollywood, California: National Diet and Health Association of America; and, Live Food Products. 170 p. No index. 24 cm.
• ***Summary:*** About raw food and vegetarianism. Contents: 1. Why I write this book. 2. Our daily food, is it nourishment or poison? 3. There are no meat recipes in this book. 4. Poisonous white sugar. 5. Dairy products not human food. 6. Coffee and tea are drugs. 7. Don't use condiments. 8. Salt–The enemy of life and health. 9. Pure food. 10. Don't use aluminum cooking ware. 11. Gas, indigestion and stomach trouble. 12. Acknowledgment of recipes and suggestions fork other health food writers. 13. Salads. 14. Fruit salads. 15. Salad dressings. 16. Directions for making nut butter and nut milk. 17. Relishes. 18. Soups (incl. Carque's nut milk soups, made with his nut milk). 19. Cooked vegetables. 20. Meat

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substitutes and main dishes. 21. Desserts. 22. Breads and bread foods. 23. Sauces and gravies. 24. Drinks. 25. Health confections. 26. Health sandwiches... 30. Baby's diet from birth to 18 months. 31. Diet schedule for the growing child.

Chapter 1 (p. 11) states: "The drug doctor has been a failure. After hundreds of years of his reign there is still universal sickness and suffering which, instead of abating, is unmistakably on the increase."

Chapter 12 (p. 26) acknowledges: "A few of the recipes in this book were taken from the works of some of the most prominent men in the field of Natural Living. I have considered, in giving a cook book to my people, that they should have, not only my own favorite recipes, but also the best of other men who have experimented along this line. I have therefore included recipes from the books of: Dr. John T. and Mrs. Vera Richter, the leaders of the Raw Food movement in the West. Dr. Philip M. Lovell, distinguished editor of the most widely read Health column in the world, the Care of The Body section of the *Los Angeles Times.* Dr. Henry Lindlahr, the great pioneer Nature Doctor. And Otto Carque, chemist, research worker and crusader in the fight for natural foods."

Chapter 16, "Directions for making nut butter and nut milk," begins with a long passage from *Natural Foods: The Safe Way to Health,* by Otto Carqué (1925). It contains recipes for: Cocoanut milk. Nut milk (made by mixing 1 level tablespoon nut butter with 1 cup warm water, plus a little honey or sweet fruit juice if desired). Almond milk for infants. Nut cream (made from unroasted nut butter, warm water, and honey). Combination nut butter (peanuts, pignolias, cocoanuts). Apple and almond butter. Nut meal.

Chapter 20, titled "Meat substitutes and main dishes" (p. 111-18), contains largely cooked dishes, and makes widespread use of the "Battle Creek Sanitarium product, Protose, being available at most fancy grocers." Vegex and Savita are also widely used in recipes. Soy sauce is used to season Vegetable chop suey (p. 114). It "may be purchased at a Chinese store or any fancy grocers."

The National Diet and Health Association of America is located at 1109 North Hudson, Hollywood, California.

Note: This is the earliest document seen (March 2007) by or about Paul C. Bragg that mentions soy. No juicer is mentioned in this book. A portrait photo (just after the title page, p. 5) shows handsome "Prof. Paul C. Bragg." Address: Professor, California [Los Angeles].

594. Vacation days at the Battle Creek Sanitarium (Leaflet). 1930? Battle Creek, Michigan. 2 panels each side. Each panel: 23 x 18 cm. Undated

• ***Summary:*** The front panel (green on white) shows "The cool and spacious colonnade." The two inside panels contain 10 photos in and around the San. The headline: "Delightful vacation days at Battle Creek, Michigan. Just a glimpse." The rear panel is titled "Recreation for health." Contents: An ideal vacation spot. Entertainment and sports. Men's outdoor gymnasium. Women's outdoor gymnasium. The grand march. Rest. Food. A delightful program.

Note: Dr. Kellogg wanted people to feel that going to the San would be both enjoyable and very good for their heath–like a visit to Disneyland, rather than to a hospital (ugh). Address: Battle Creek, Michigan.

595. [Battle Creek Sanitarium] (Leaflet). 1930? Battle Creek, Michigan. 4 panels each side. Each panel: 19 x 19 cm. Undated.

• ***Summary:*** The color front panel (untitled) shows an aerial view of the huge and majestic Sanitarium and the surrounding town and landscape. The two inside panels contain 7 black-and-white photos in and around the San. (1) After dinner, Grand Promenade on the roof. (2) Men's setting-up drill in gymnasium. (3) The dietitians (24 women, seated and standing). (4) The main dining room. (5) Indoor sun-baths. (6) Reducing exercises. (7) Some of the nurses (6½ rows of about 22 women in each row, or about 140 women and men).

The headline: "Health by training–A health university." The text begins: "Within the last 50 years more than 300,000 people have found their way to The Battle Creek Sanitarium." The rear panel shows Battle Creek on a map of the Midwest and major connecting highways, airways, and railways. Address: Battle Creek, Michigan.

596. Kellogg, John Harvey. 1931. Soybeans as human food. II. *Good Health* (*Battle Creek, Michigan*) 66(2):20-22. Jan.

• ***Summary:*** Contents: Introduction. How to cook the soybean (in a stone jug in salt water under pressure). The extraordinary supporting qualities of the soybean (nutritional value, gives stamina). The soybean combats acidosis (basic-ash quality). A wonderful vegetable milk from the soybean (relieves food allergy caused by dairy milk). The great value of soy milk as a remedy. The easy digestibility of soy milk ("The author finds that plant milk is digested more easily than cow's milk"). The soybean, the vegetable analogue of meat ("The soybean differs from other legumes and cereals in the fact that it contains practically no starch. Its food values are protein and fat, as is the case with meat").

Note: This is the earliest English-language document seen (Aug. 2013) that contains the word "plant milk" (or "plant milks").

A large photo (p. 21) shows soybean sauce being made commercially in Japan. Address: M.D., Battle Creek, Michigan.

597. Kellogg, John Harvey. 1931. Soybeans as human food. III. *Good Health* (*Battle Creek, Michigan*) 66(2):24-25, 52-53. Feb.

• ***Summary:*** Contents: Introduction. The soybean combats intestinal putrefaction. The economic value of the soy as

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human food. Explorer Stefansson demonstrates the deadly character of an exclusive flesh diet. Effect of the soybean (in preventing rate deterioration).

"Metchnikoff and Tissier of the Pasteur Institute showed how Nature protects us by providing friendly germs to keep guard in the intestines, the lactic-acid-forming bacteria, *bifidus* and *acidophilus.* This discovery enables us to drive out the bad germs from our interiors by drinking acidophilus milk or better by the use of lacto -dextrin, which makes the friendly germs grow luxuriantly and kills off the undesirables, thus 'changing the flora,' and so combating constipation, colitis and all the evils of autointoxication. It thus appears that change of flora is, in fact, a battle between B. acidophilus and 'meat germs' (Herter). Von Noorden, the world-famous German physician, has demonstrated that the soybean is of very great service in changing the intestinal flora, helping materially in driving out the offensive germs which pollute our bodies... Meats, on the other hand, are the chief source of these mischief makers."

Page 25 shows an interesting photo titled "Boiling soybean milk in copper pans for making yuba, which is hanging above the pans in thin sheets folded over sticks."

"Excessive meat consumption is one of the besetting sins of the people of this country. Our per capita meat consumption is five ounces per day, just five times that of Italy (1.0 oz.) and ten times that of North China (0.5 oz.), while the average native of South China eats no meat at all, and is one of the hardiest and most industrious of the world's workers" (p. 25).

"Although we are thousands of years behind Oriental nations in our appreciation of the food merits of this highly endowed legume, there can be no doubt that it is destined to play a large part in the feeding of America's millions in the long and brilliant future which is opening up before this greatest and most highly privileged of all nations that ever lived." Address: M.D., Battle Creek, Michigan.

598. Thompson, William. 1931. The soybean industry of northern Manchuria. *Good Health* (*Battle Creek, Michigan*) 66(2):30-31. Feb.
• ***Summary:*** Contains interesting photos. Page 30 shows a field of soybeans, with a Mongolian boy on a water buffalo in the foreground. Page 31 shows (1) Soybeans in temporary storehouses, shaped liked houses with steep roofs and covered with canvas, awaiting shipment; (2) Soybeans loaded for transport to the Chinese Eastern Railway on two-wheeled wooden carts of the ancient Assyrian pattern. Address: F.R.G.S. [Fellow Royal Geographical Society].

599. Mandel Brothers. 1931. It pays to shop at Mandels: A store of youth. A store of fashion. A store of moderate price (Ad). *Chicago Daily Tribune.* May 23. p. 9.
• ***Summary:*** Most of this full page ad is about fashionable clothing, toiletries, and pearls. A section at the bottom center is titled "Regulate your weight without discomfort! Have you visited our Battle Creek Sanitarium Health Foods department? Let Miss Marion Behrens, Home Economist, give you free advice on all diet problems. Learn how to reduce easily or gain weight quickly. Mandel's Tea Room–Ninth Floor."

Note: This is the most recent document seen (Sept. 2006) that contains the term "Sanitarium Health Foods" (or "Food"). Address: [Chicago].

600. Shryock, Richard Harrison. 1931. Sylvester Graham and the popular health movement, 1830-1870. *Mississippi Valley Historical Review* 18(2):172-83. Sept. [30 footnotes]
• ***Summary:*** Also discusses: Bathing, Mary Grova, Paulina Wright, Dr. William Alcott, Amos Bronson Alcott, Dr. T.H. Trall, hydropathy or "water cure," Battle Creek, Michigan.

The "faddist fringe of the reformers' theories" are "displayed in their views on vegetarianism" (p. 181). "In the long run, however, the popular health movement accomplished good rather than ill" (p. 182).

Note: This is the earliest English-language document seen (Oct. 2004) that contains the term "health movement." Address: Formerly Dep. of History, Duke Univ. [North Carolina].

601. *Madison Survey* (*Madison, Tennessee*). 1931. Soybean bread. 13(41):164. Oct. 21.
• ***Summary:*** "Recently the Madison family have been very much delighted with a new bread containing a good percentage of soybean flour. This bread has advantages over the ordinary bread in many ways. Its high protein content and its alkalizing quality is most valuable. If interested in knowing more about this bread, write P.A. Webber, Nashville Agricultural Normal Institute, Madison, Tennessee."

Note: There is no mention of this being a commercial product.

602. *Madison Survey* (*Madison, Tennessee*). 1931. A valuable but neglected food. 13(41):163. Oct. 21.
• ***Summary:*** "About half of the people of the world obtain their protein from the soybean. The soybean protein is complete and superior in some respects to the protein in milk and flesh foods. The protein of a pound of soybeans is equal in nutritional value to two pounds of beef and costs much less. It contains none of the objectional [sic, objectionable] features found in the protein of meat. The broken-down, worn-out dead matter–the result of metabolism–of flesh foods is injurious to the liver, kidneys, and blood vessels."

"The Madison School family is enjoying the milk made from soybeans. Already the medical profession is realizing the value of this milk for infant feeding. The milk and cheese of the soybean is a wholesome, delicious food."

"It has been discovered that the average per cent of tuberculous milk in the great cities of England is 7.36. There

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are over a million tuberculous milk cows in England and Wales. And there are only four hundred dairies in all England and Wales that produce an A-grade milk."

603. Kellogg, John Harvey. 1931. The soybean vs. beef. *Good Health* (*Battle Creek, Michigan*) 66(10):35-36. Oct. • ***Summary:*** This editorial is a summary, with long quotations, of the following article: Horvath, A.A. 1931. "Soya flour as a national food." *Scientific Monthly* 33:251-60. Sept.

The editorial concludes: "There is abundant reason for believing that the soybean will gradually win its way to popular favor in this country and that as its use increases, the consumption of meat will gradually decrease. For nearly five thousand years it has supplied the protein needs of the people of China so completely that the average Chinaman eats less meat in a year than the average American eats in a week. The soybean is the roast beef, beefsteak, veal, pork and sausage of China and in due time may likewise supplant these unwholesome disease-breeding comestibles in this country." Address: M.D., editor.

604. **Product Name:** Madison Soy Milk (Homogenized Fluid. Renamed Kreme O'Soy Milk by April 1937 and Kreme-O-Soy by 1947) [Plain, or Chocolate].
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1931 October.
Ingredients: Fall, 1948: Soybeans, soy oil, dextrose, calcium phosphate, sodium chloride.
Wt/Vol., Packaging, Price: 15 oz, 19 oz, or 20 oz can.
How Stored: Shelf stable.
Nutrition: Protein 3.5%, fat 3.9%, carbohydrates 4.9%, ash 0.7%, calcium 0.34%, iron 4.4 mg/k.
New Product–Documentation: *Madison Survey* (Madison, Tennessee). 1931. "A valuable but neglected food." Oct. 21. p. 163. "The Madison School family is enjoying the milk made from soybeans."

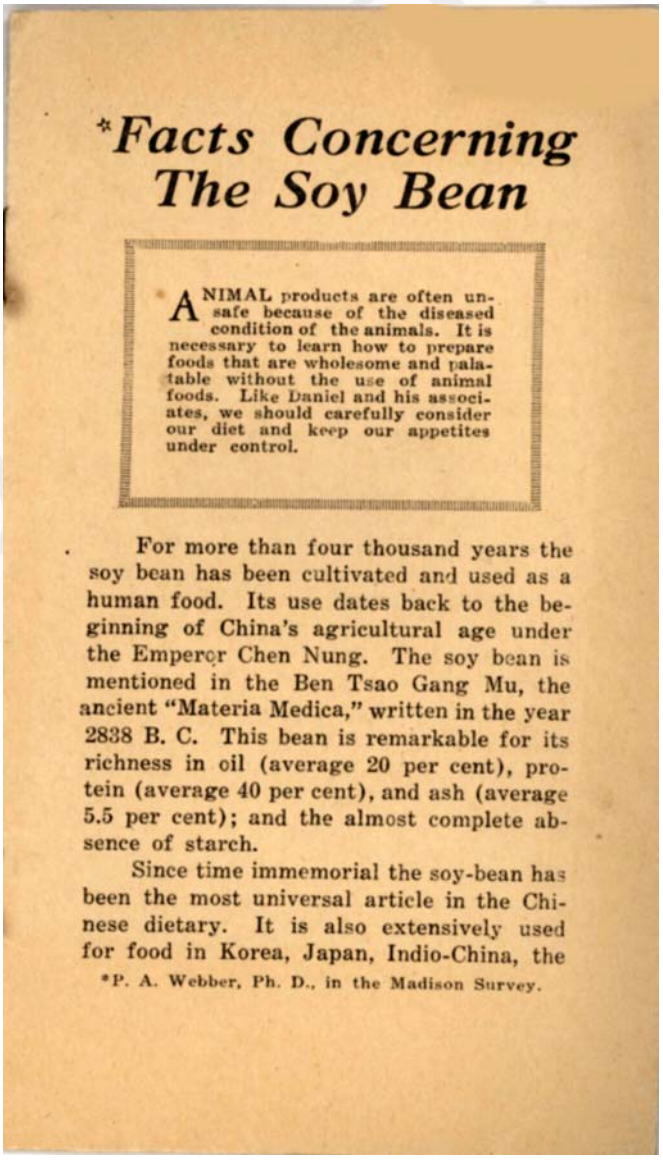
Hansen, J.E. 1932. "A variety of foods from the soybean." *Madison Survey* (Madison, Tennessee). Jan. 27. p. 15. "Were our readers visiting the Madison Food Factory, they would be surprised to learn of the many ways in which the soybean is used. Bread, crackers, milk, and cheese are made from this important bean."

Madison Health Foods. 1934? *Vegetable milk and cheese. How they are served. Manual No. 2.* Madison, Tennessee. 21 p. Undated. Several recipes call for "soy milk" or "soybean milk." On the last page are listed "Products for sale by Madison Health Foods Inc. (Madison, Tennessee)": These include "Soy milk, 14 or 30 oz... Write for information and prices."

Madison Survey (Madison, Tennessee). 1937. "Experimental work with foods." 19(9):35-36. March 3. "Soy milk, fresh every day, is used in quantities by the institution. Soy milk in cans is one the market, its sale increasing continually as people become acquainted with the value of this product."

Note: We cannot be certain that Madison Foods had canned soy milk on the commercial market before March 1937. The earlier products may have been fresh soy milk, made by Madison Foods in quantity, and served in the school's dining room and hospital.

605. Webber, P.A. 1931. Facts concerning the soybean. *Madison Survey* (*Madison, Tennessee*) 13(45):177-78. Nov. 18; 13(46):181-82. Nov. 25.



*Facts Concerning The Soy Bean

ANIMAL products are often unsafe because of the diseased condition of the animals. It is necessary to learn how to prepare foods that are wholesome and palatable without the use of animal foods. Like Daniel and his associates, we should carefully consider our diet and keep our appetites under control.

For more than four thousand years the soy bean has been cultivated and used as a human food. Its use dates back to the beginning of China's agricultural age under the Emperor Chen Nung. The soy bean is mentioned in the Ben Tsao Gang Mu, the ancient "Materia Medica," written in the year 2838 B. C. This bean is remarkable for its richness in oil (average 20 per cent), protein (average 40 per cent), and ash (average 5.5 per cent); and the almost complete absence of starch.

Since time immemorial the soy-bean has been the most universal article in the Chinese dietary. It is also extensively used for food in Korea, Japan, Indio-China, the

*P. A. Webber, Ph. D., in the Madison Survey.

• ***Summary:*** "The soy bean is the only seed, as far as we know, which contains both the water soluble and the fat soluble vitamins."

"In 1917 during the World War, a special committee

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appointed by the Department of Agriculture, while searching for a cheaper source of protein for human consumption, discovered the soy bean. Shortly afterwards, soy bean in the form of flour was manufactured and this has been on the market now for some time. The entire soy bean ground into flour contains double the amount of protein and calories present in beefsteak."

"The soy bean is also very rich in lecithin. It has been clearly shown the soybean oil contains fat soluble vitamins A, D, and E."

A soybean milk can be prepared "in the same way as almond milk... Many tests have been made in the pediatrics departments of various universities in the United States showing that soybean milk can be used as the only source of protein in the nutrition of young infants." Also gives details on tofu. "In the Orient, 'tofu' forms a very popular and almost indispensable dietary article. This 'tofu' can be used in many different dishes, taking the place of meat or eggs. It is delightful as a constituent of roasts, omelets, etc."

"In Russia the soybean is taking prominence in the dietary of the people there. 'Plant soybeans and you plant meat, milk, egg omelets,' is the newspaper cry. A Soy Institute was recently organized in Moscow as well as a special exhibition of soy foods at which one hundred thirty varieties of soy dishes, including cutlets, pastry, salads, candy, and beef were shown. There is every reason to believe that the United States will become the leaders in introducing the soybean in the daily diet of the white race."

"The following are a few of the ways in which it is being prepared and used in the United States at the present time: Soybean flour is being used by large bakeries as a constituent of bread, rolls, pastry for pies, cakes, etc. Baby foods are coming on the market containing certain percentages of soybean milk. Chocolate malted milk containing a good per cent of soybean products is now manufactured and sold by several companies. For some time, manufacturers of diabetic foods have been placing on the market productions made largely from the soybean. The soy sauce, otherwise known as Oriental 'Shoyu' has been popularized by the Chinese chop suey restaurants, and is now being used in many dishes made in the home. The bean curd is being canned and manufactured in various other ways and sold on the market. Powdered soybean milk has become a commercial product."

"For several years the Health Food Department of the Nashville Agricultural Normal Institute has been experimenting with this most interesting legume, and is now offering two basic products which may be used in many nutritious and appetizing dishes: the soy cheese and soybean flour. These two products have been used in scores of recipes tested out at the Madison Rural Sanitarium, the Nashville Vegetarian Cafeteria, and other health food places. Just recently several different recipes for the use of soybean flour bread, rolls, and cakes have been perfected. These with other recipes, will be sent free to those who inquire for them."

"A move to substitute vegetable proteins for animal proteins is a move in the right direction, and there is no plant so promising as the soybean. A soybean research foundation has been suggested. Large space at the coming World's Fair in Chicago [Illinois] will do much to bring this important but neglected food to the attention of the American people."

Note: This article was reprinted as a little 8-page booklet (15 x 9 cm, undated) by T.A. Van Gundy of La Sierra Industries. This shows that Van Gundy was aware of the pioneering work of Madison Foods at an early date. On the last page of Van Gundy's booklet is the following paragraph which does not appear in P.A. Webber's original article: "For some time the founders of La Sierra Industries, Arlington, California, have been experimenting with this most interesting legume and are now prepared to offer a number of products which may be used in many nutritious and appetizing dishes: canned soys, soy soup, soy flour, soy cheese, soyco (a coffee substitute), smoein (vegetable smoked meat), soy breakfast food and soy-loaf." What a shame that this little booklet is not dated! At least we know it was printed after November 1931. Address: PhD, Madison, Tennessee.

606. Kellogg, John Harvey. 1931. The bran bugaboo. *Good Health* (*Battle Creek, Michigan*) 66(11):5-6. Nov.
• ***Summary:*** More than 80 years ago [about 1837], "Sylvester Graham, a highly cultured college professor and lawyer, became convinced that the fine flour bread that was then in general use was unwholesome because it represented only part of the grain, the mineral part, the bran and the germ being lost in the bolting process. He set out on a campaign to convince the public of the superiority of bread made from the whole grain meal. He was so able a lecturer that he soon had a great number of followers, and bread made from wheat meal in a few years became popular in many places, and was known as graham bread. In recent years, this wholesome bread has become so widely used its name is spelled with a small *g* instead of a capital, and probably few people know its origin.

When patent flour made by the rolling process came into fashion, the millers soon discovered that the growing popularity of whole meal bread was not at all in the interest of their business, and so began a campaign of opposition. Very soon articles began to appear in the papers about the injurious effects of bran and of whole meal bread." It was said that bran irritates the stomach and intestines. "Those who listened to this teaching soon found themselves suffering from distinct forms of constipation, which created a demand for mineral waters and laxative pills of many sorts."

"Very nearly thirty years ago [in the early 1900s] I suggested that sterilized bran be put up in packages ready for use. The idea was laughed at as being very absurd. I was often advised that intelligent people would never be induced to use bran, but as I had for years been prescribing it, I had

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frequently found difficulty in obtaining clean bran in fit condition for food." Note: By 1908 Dr. Kellogg's company was selling sterilized wheat bran.

Today, probably "more than ten million people in this country alone are making daily use of bran... Thousands of drug stores have become cafeterias and are selling more foods than drugs.

"While the popularity of bran has thus been increasing from year to year, the opponents of its use have continued their efforts but with little success..." The doctor advises taking psyllium seed with bran to help move it through the intestines. Address: M.D.

607. Dittes, Frances L. 1931. The soybean as human food. *Madison Survey* (*Madison, Tennessee*) 13(48):189-90. Dec. 9; 13(49):193-94. Dec. 16. [3 ref]
• ***Summary:*** This paper was presented by Miss Dittes at the 20th annual meeting of the Tennessee Academy of Science, held 27-28 Nov. 1931 at George Peabody College for Teachers, Nashville, Tennessee. It summarizes scientific research on the subject. "In 1917 during the World War, a special committee appointed by the Department of Agriculture, while searching for a cheaper source of protein for human consumption, discovered the soybean."

"At present there is a great interest in soybean preparations throughout the world. In this country the leading forces are the Bureau of Home Economics, and W.J. Morse, of the United States Department of Agriculture. The famous Austrian, Professor Haberlandt, wrote about fifty years ago that the time would come when soybeans would play an important role in human dietary."

"An important step being studied at the present time is the establishment of a soya foundation in order to promote the creation of a National Soya Food Research Institute." Address: Madison Sanitarium Dietitian and Prof. of Home Economics, Madison College, -.

608. **Product Name:** Zoybeans (Cooked Soybeans), Zoy Soup, Bacon and Zoybeans, Zoy Bouillon.
Manufacturer's Name: Madison Foods?
Manufacturer's Address: Madison, Tennessee?
Date of Introduction: 1931 December.
New Product–Documentation: W.L. Burlison and O.L. Whalin. 1932. *Journal of the American Society of Agronomy* Aug. p. 594-609. "The production and utilization of soybeans and soybean products in the United States." See p. 608. "Zoybeans," "Zoy soup," "Bacon and zoy beans," and "Zoy bouillon" are listed as soybean food products made and sold in the USA.

W.L. Burlison. 1936. *Industrial and Engineering Chemistry* 28(7):772-77. July. "The Soybean: A Plant Immigrant Makes Good." See Table II, p. 775. "Zoybeans (cooked beans). Bacon and Zoybeans. Zoy bouillon." States that these products were on the market during the latter part of 1931. They were probably made by Madison Foods in Madison, Tennessee.

609. Cooper, Lenna Frances; Barber, Edith M.; Mitchell, Helen S. 1931. Nutrition in health and disease. 4th ed. Philadelphia, Pennsylvania: J.B. Lippincott. xii + 548 p. Illust. (102). 21 cm. *
• ***Summary:*** "First published in 1928 under the title: *Nutrition in Health and Disease for Nurses"*. Address: 1. Food Director, Univ. of Michigan; formerly Dean of Home Economics, Battle Creek College; formerly, Head Dietitian, Battle Creek Sanitarium; and later, Supervising Dietitian, United States Army 1918-1919.

610. Kellogg, John Harvey. 1931. The crippled colon: causes, consequences, remedies. Battle Creek, Michigan: The Modern Medicine Publishing Co. x + 385 p. + 32 unnumbered leaves of plates. Illust. (some color). Index. 20 cm. *
• ***Summary:*** This is an extensive revision of *Colon Hygiene* (first published in 1912). Address: M.D., Battle Creek, Michigan.

611. La Sierra Industries. 1931? La Sierra soy bean products (Leaflet). Ontario, California. LSI. 3 panels each side. Each panel: 22 x 9 cm. Undated. [2 ref]
• ***Summary:*** See next page. Gives a 6-7 line description of each of the following products prepared by the company in Arlington: Soy Beans (canned, plain or with tomato sauce), Soy-Co, Soy Flour, Mamenoka [roasted soy flour], Soy Milk, Soy Cheese, Soy Loaf, Soy Bologna, Soy Sandwich Spread, Smoein, Soy Bean Butter [soynut butter], Soy Bean Breakfast Food. One of the panels (front and back) is "Mamenoka Recipes (Processed soy bean flour)."

"Smoein is a smoked vegetable protein made from legumes which have been toasted and smoked in the old fashioned way, giving the flavor of smoked meats. It is an excellent seasoning for soups, gravies, entrees, eggs and any food in which a smoked flavor is desirable.

"Soy Bean Butter is similar to peanut butter, however it does not contain any nuts. It may be served plain or mixed with water to dilute. A delicious spread is made by mixing equal parts of honey and soy bean butter." Note 1. This product is almost surely soynut butter. If so, this is the earliest English-language document seen (Dec. 2012) that uses the term "soy bean butter" to refer to soynut butter.

Note 2. This is the earliest published document seen (Sept. 2000) related to T.A. Van Gundy or his company, La Sierra Foods. Note 3. This is the earliest English-language publication seen (April 2013) that uses the term "Soy Cheese" to refer to tofu. T.A. Van Gundy coined and later frequently used the term "soy cheese" to refer to tofu.

Note 4. This is the earliest English-language document seen (Nov. 2012) that uses the word "Mamenoka" to refer

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fant feeding. The milk and cheese of the soy bean is a wholesome, delicious food. It is not difficult for people to acquire a taste for soy bean products. The soy bean is becoming very popular because of its nutritional value, and also its versatility. Among the many sauces, entrees, and ragouts made from it is the world-famous Soya Sauce.

A number of soy bean products are now on the market and may be purchased at most food stores.

SOY BEANS may be had canned, plain or with tomato sauce, and are delicious served either hot or cold.

SOY-CO is an alkaline breakfast drink which is very beneficial in reducing acidosis as well as keeping up the alkaline reserve in the body. It may be served as a hot drink or as an iced beverage.

SOY FLOUR may be used in bread, muffins, milk and cheese.

MAMENOKA is a processed Soy flour which has the raw bean flavor removed. May be used any way the raw flour is used.

SOY MILK and CHEESE may be purchased all ready prepared in cans. The Milk has a composition similiar to cows milk and is of equal nutritive value. It may be used in any way that cows milk is used. The CHEESE is an excellent calcium food.

Mamenoka Recipes

(Processed Soy Bean Flour)

SOY WAFFLES

4 eggs
2 cups SOY MILK or cows' milk
2 tbsp. butter
1 cup of MAMENOKA
½ cup white flour
¾ cup whole wheat flour (fine)
1 tsp. salt
1 tsp. sugar

Separate eggs. Beat yolks, add milk gradually, then salt and butter. Beat egg white very stiff. Sprinkle sugar in the beaten egg white. Add flour to batter, stir well. Fold whites of egg in carefully.

PIE CRUST

¾ cup MAMENOKA
5 tbsp. cold water
6 tbsp. solid vegetable fat, salt
¾ cup white flour

Sift the flour well together. Cut the fat into it, add water, a little at a time and mix quickly.

SOY GEMS

½ cup entire wheat flour
½ cup MAMENOKA
½ cup white flour
1 cup milk
2 tablespoons fat
1 tablespoon honey
½ teaspoon salt
2 eggs

Mix dry ingredients, mix milk, egg yolks, sugar and fat. Add flour and fold in stiffly beaten egg whites. Bake at once in iron gem pans in a hot oven.

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to roasted soybean flour. It is a variation on or misspelling of the Japanese term *mame no ko* meaning "flour of [soy] bean."

Note 5. This is the earliest English-language document seen (Nov. 2012) that uses the word "toasted" in connection with roasted soy flour. Address: Campus and Maitland, Box 203, Ontario, California.

612. Hansen, J.E. 1932. A variety of foods from the soybean. *Madison Survey* (*Madison, Tennessee*) 14(4):15. Jan. 27. [1 ref]
• ***Summary:*** "Were our readers visiting the Madison Food Factory, they would be surprised to learn of the many ways in which the soybean is used. Bread, crackers, milk, and cheese are made from this important bean. The flour is ground on the hammer mill in the factory... Roasts, bean loaf, and croquettes are made from it. Ice cream made from the soybean is delicious."

Note: This is the earliest document seen (Nov. 2013) that describes the equipment used to make soy flour. It is also the earliest document seen stating that a hammer mill is or can be used to grind soy flour. Address: Madison College, Tennessee.

613. Cowgill, George R.; Anderson, William E. 1932. Laxative effects of wheat bran and "washed bran" in healthy men: A comparative study. *J. of the American Medical Association* 98(22):1866-75. May 28. [7 ref]
• ***Summary:*** The article begins: "The importance of ingestion of a reasonable amount of food 'roughage' for the maintenance of satisfactory intestinal motility is widely appreciated. It is quite generally recognized that wheat bran contains a relatively large amount of indigestible material, notably cellulose."

Dr. J.H. Kellogg of Battle Creek, Michigan (1921) "is one of those who attribute numerous ills to constipation and therefore advocate the ingestion of large amounts of various sources of 'indigestible residue,' including bran, as a corrective and preventive measure."

The laxative value of whole wheat bran was studied in three series of experiments on eleven healthy men subsisting on carefully controlled diets. One type of bran had the phytin removed. "It was concluded that the laxative value of bran is due predominantly to the fiber present, regardless of phytin or other bran constituents... in healthy men a definite relationship exists between the rate of laxation and the amount of fiber ingested per unit of body weight. This points to the existence of a physiologic roughage minimum, which, in terms of fiber, is obtained from an intake of 90 to 100 mg. of fiber per kilogram of body weight daily... A somewhat greater fiber intake may be required to secure the physiologic fiber optimum." Address: Lab. of Physiological Chemistry, Yale Univ., New Haven, Connecticut.

614. *Good Health* (*Battle Creek, Michigan*). 1932. Bran does not cause, but heals gastric ulcer in rats. 67(5):26. May. [1 ref]
• ***Summary:*** Recent scientific research by Hoelzel and Da Costa of the University of Chicago (Illinois), published in *Proceedings of the Society for Experimental Biology and Medicine* shows that "bran, even when taken in liberal quantities as an exclusive diet, in fact, not only does not cause ulcer of the stomach, but when ulcers are present, does not interfere with their healing." The bran is believed to absorb gastric acid.

615. Stegman, Henry M. 1932. Babies thriving on vegetable milk. *Good Health* (*Battle Creek, Michigan*) 67(5):38-39. May. [1 ref]
• ***Summary:*** "Nutritionists place milk first among foods. They urge that every child should have a quart a day and every adult a pint–some say a quart." There follows a detailed summary of: Lane, Dorothy Engelhard. 1931. "The nutrition of twins on a vegetable diet during pregnancy, the nursing period and infancy." *American Journal of Diseases of Children* (Dec. 1931, p. 1384-1400). "At the age of two years and eleven months, they have made sturdy physical and mental progress. Their great endurance and strength call for special comment."

616. *Good Health* (*Battle Creek, Michigan*). 1932. Plant milks. 67(7):20. July.
• ***Summary:*** "A simple plant milk which has borne the test of use in China for several thousand years may be prepared from the soybean by the following simple process." The process is described in two paragraphs.

Another "excellent plant milk may be prepared by grinding blanched almonds in a mortar."

617. Wakeham, Glen; Hansen, Louis O. 1932. The basal metabolic rates of vegetarians. *J. of Biological Chemistry* 97(1):155-62. July. [6 ref]
• ***Summary:*** The average basal metabolic rate of 20 lifetime vegetarians was found to be 11% below Du Bois normals. Average basal metabolic rates dropped after 6 to 8 years in subjects consuming vegetarian diets. "The significance of these results is not at all clear... Perhaps it may be tentatively suggested that the cells of the organism, confronted over a long period of time with a low supply of amino acids, gradually adjust their metabolic processes in such a way as to increase the mechanical efficiency of the body as a heat engine and thus enable the organism to carry on its normal functions with less loss of the total potential energy of the food in the form of heat. It should be stated that the sublingual temperatures of forty-two of the subjects–all of the cases in which this factor was observed–were always between normal limits, 36.7-37.2°." This research was done in cooperation with the Boulder-Colorado Sanitarium-

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Hospital. Note: It was largely conducted at the Stanborough School, run by Seventh-day Adventists in England. It was the first experiment in Great Britain on the basal metabolism of vegetarians. International in scope, it involved vegetarians from 7 different countries. Address: Dep. of Chemistry, Univ. of Colorado, Boulder.

618. *Vegetarian Messenger and Health Review* (*Manchester, England*). 1932. The "Pitman" Health Food Company: Vitaland, Four Oaks, Warwickshire. Aug. p. 223-25.
• ***Summary:*** The company's model factory, Vitaland, is located only a few minutes' walk northeast of Sutton Park, about 10 miles northeast of Birmingham. "Vitaland had its beginning in 1898 in the centre of Birmingham, but in 1908 it was found necessary to take larger premises, to meet the demands of a growing manufacturing business, and a move was made to Aston, a densely populated suburb, 2-3 miles northeast of central Birmingham. In 1930 the final move was made to Four Oaks. Mr. James H. Cook, the principal of the "Pitman" Company, looked upon the building at Aston as a step toward his long-cherished idea of a 'factory in the country' and Vitaland is a 'dream come true.'

There follows a description of the large, spacious, well-lit factory. Photos show: (1) The Order Department with a floor space of 3,200 square feet. (2) Machinery Bay. "The total area of glass covering the six northern lights is 5,850 superficial feet [square feet].

"On the day following his visit to the factory our representative joined the '34th Annual Staff Outing' [apparently starting in 1899] when a party of 70 journeyed by motor coach to Ludlow and Church Stretton and spent a thoroughly enjoyable time."

"Food reformers who are interested not only in the composition of the food they eat, but also in the conditions in which they are manufactured are invited to visit Vitaland."

Note: The statement that "Vitaland had its beginning in 1898" seems slightly misleading. According to "The First Century of Health Foods," by Kathleen Keleny (the daughter of James H. Cook) (1996): "In the summer of 1898 the first Vegetarian hotel in England, called the Pitman Vegetarian Hotel, was opened and I was made manager of that too" (p. 7). The vegetarian meals were an immediate success, hundreds of people were soon enjoying lunch at the hotel daily, and many of the hotel's visitors became vegetarians. "The customers started asking for foods which they could take home with them... I produced simple and appetising foods from nuts, cereals, fruits and vegetables to take the place of meat, lard, butter, cheese and jelly made from animals..." So Mr. Cook, probably with his staff, made these vegetarian foods in the hotel's kitchen. There is no indication that they were labeled or packaged; so they were more like "take out" dishes than commercial products.

In 1902 he started a health food store "and the manufacturing side was increased. "I realised that it was not economical to run a factory in the centre of Birmingham, so I bought a site in Aston where I could build the first factory" [in 1908] (p. 8).

But what products did he sell at his health food store starting in 1902? Many were probably made by the International Health Association at a real health food factory in Redhill, Surrey, starting in 1899. In his very carefully researched and documented book, The Seventh-day Adventists in the British Isles, 1878-1933, Gideon David Hagestotz, PhD, explains: In 1899, near Redhill, Surrey, the International Health Association purchased Harley Mill, which it enlarged and called Salford Mill before starting production of health products. The management imported some of the machinery and purchased the remainder in England. The products resembled the noted Kellogg and Post health foods; in fact the association had procured the 'rights' to make Battle Creek foods in England.

"Early in 1900, just after the factory gave promise of developing into a profitable industry, fire destroyed the plant... With the undamaged machinery as a nucleus for a new start, the Association leased property in Birmingham [far to the northwest, between London and Manchester] the following November [1901] where it functioned as a stock holding company under British law. Unfavorable conditions in the form of high rent and improper location" led to "a financial loss of £1,500 at the end of the first year of operation." Thereafter "each year the plant showed a profit in spite of some competition created by substitutes for the commodities it produced."

In short, the Seventh-day Adventists started the first health food factory in England in 1899. In 1926 the rapidly expanding International Health Association (I.H.A.) was renamed Granose Foods Ltd.

619. *Madison Survey* (*Madison, Tennessee*). 1932. Madison notes [The Food Factory]. 14(35):140. Sept. 14.
• ***Summary:*** "From the Food Factory comes the report that five salesmen have recently entered Chattanooga and surrounding territory with Madison health foods. The factory has been kept unusually busy of late getting out orders for Breakfast Crisps, Three-Minute Wheat, and Vigorost. The last-named item is proving to be very popular. From Michigan a firm writes, 'We have to compete with other companies, but a taste of Vigorost has settled the matter in favor of your foods.' A California patron writes, 'Vigorost is the best food we have eaten along the health food line.' May we hear from others in regard to this new product?"

620. *Madison Survey* (*Madison, Tennessee*). 1932. News notes [Madison soybean foods at American Soybean Association meeting in Washington, DC]. 14(36):144. Sept. 21.
• ***Summary:*** "Word comes from several persons who attended the meeting of the American Soybean Association

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in Washington, D.C., September 2-3, expressing their interest in the Madison display of soybean foods. These foods were sent to Washington for this special occasion at the request of Dr. W.J. Morris, President of the American Soybean Association."

621. **Product Name:** Vigorost (Fibrous-Textured Canned Meatless Steak). Renamed Vigoroast by 1965.
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1932 September.
Ingredients: Wheat gluten, firm tofu and/or okara, whole peanut meal, seasonings.
Wt/Vol., Packaging, Price: 14 and 20 oz cans.
How Stored: Shelf stable.
Nutrition: Protein 19.4%, fat 8.6%, carbohydrates 12.3%, ash 2.1%.
New Product–Documentation: Madison Survey. 1932. Sept. 14. p. 140. Dec. 7. p. 179. For entrees, sandwiches, salads. Madison Health Messenger. V. 49-2. p. 5. Gray. 1936. All About the Soya Bean. p. 123.

Madison Survey. 1937. "The soy bean marches on." April 21. p. 59-60.

Ad (2¼ by 3 inches) in *Nature's Path* (USA). 1941. July. p. 273. "A treat without meat." Vigorost is one of five basic food products made and sold by Madison Foods. Taylor. 1944. The Soy Cook Book. p. 201.

Note from Sam Yoshimura. 1981. March 19. When Sam attended Madison College from 1937-1943 Vigorost was made from wheat gluten, soy cheese [tofu], and seasonings.

Note 1. This is the earliest known commercial soy product that is a meat alternative resembling beef; it uses tofu and/or okara.

Note 2. This the second earliest meatlike product seen, made by a Seventh-day Adventist food company, that contains gluten.

622. **Product Name:** Breakfast Crisps (Ready-to-Eat Soy-Based Breakfast Cereal).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1932 September.
Ingredients: Incl. whole soy flour.
How Stored: Shelf stable.
New Product–Documentation: Madison Survey. 1932. Sept. 14. p. 140.

Madison Survey. 1937. "The soy bean marches on." April 21. p. 59-60.

Madison Health Messenger. 1938. Spring, p. 4. A photo shows a young boy at the breakfast table (dressed in a white shirt and bow tie) eating "Breakfast Crisps." The package is clearly shown.

Note: This is the earliest known commercial soy product that uses whole soy flour as an ingredient.

623. *Los Angeles Times.* 1932. Health aid and diets on program: Food specialist to assist director of 'Times' Home Service at meeting. Oct. 19. p. A6.
• ***Summary:*** Marian Manners, director of the [Los Angeles] Times' Home Service Bureau, announces a program for today at 3 o'clock in the auditorium of the Southwest Building, 130 South Broadway, held especially for those who are interested in "foods from the standpoint of diet and health."

"Hazel Denis, dietitian for La Sierra Industries, manufacturers of the complete line of soy bean products, will prepare soy cream pie and Boston roast, showing two novel and delicious ways of introducing this health food into the diet."

Note 1. This is the earliest published and dated document seen (Oct. 2013) concerning La Sierra Industries, founded by T.A. Van Gundy.

Note 2. This is the earliest document seen (Oct. 2013) that mentions a "soy cream pie." We soon learn that this "soy cream pie" closely resembled a non-dairy cheesecake.

624. Dittes, Frances L. 1932. Soy milk in infant feeding. *Madison Survey* (*Madison, Tennessee*) 14(37):146-47. Sept. 28; 14(38):150-51. Oct. 5. [2 ref]
• ***Summary:*** "It is a fact definitely proved on many occasions, that for the normal baby, good breast milk from a healthy mother supplies the type of food, both as to quantity and quality, best suited to develop the ideal infant."

Two facts about breast milk stand out prominently: "First, breast milk protein, by its lack of buffer and formation of flocculent soft curd, favors both rapid and efficient gastric and intestinal digestion; and secondly, the protein, or element of growth, of breast milk contains the kind and amount of amino-acids best suited to the infant's growth."

"As a substitute for breast milk, when artificial feeding is necessary, cow's milk has long been recognized as the best. There are, however, conditions under which cow's milk may be undesirable, particularly since animals are becoming more and more diseased. Science is showing that a milk made from the soy bean is a splendid substitute for mother's milk. (To be continued)."

Part 2 (Oct. 5, p. 150-51): Two tables compare the composition of cow's milk, soy milk, and mother's milk. Mother's milk has 1.5% protein, soy milk 3.3%, cow's milk 4.94%. "The salts in cow's milk are chiefly phosphates, which absorb or buffer hydrochloric acid." Mother's milk is the lowest in salts (minerals), with soy milk in the middle. "Since soy milk contains less salts than cow's milk, it requires less secretion of gastric hydrochloric. According to Fisher [sic, Fischer 1914], soy milk gives a much finer flocculent curd in the stomach than cow's milk and by its

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lack of buffer action forms both rapid and efficient gastric and intestinal digestion. Its period of stay in the stomach is shorter. Its ingestion results in a shorter period of gastric secretion. The peristaltic motion of the stomach is less after the ingestion of soy milk than in the case of cow's milk. These qualities make the soy milk more desirable as a food for delicate infants than is cow's milk."

"The protein of the soy milk has been shown by authorities to contain five of the essential amino-acids necessary for complete nutrition for infants, cystine being the absent amino acid."

"Soy milk is produced at a cost of one-fifth that of cow's milk, besides being free from disease bacteria such as tuberculosis, typhoid fever, etc. This food product may be found so practical, economical, and adequate that it will save the lives of many infants, particularly in cases where the use of cow's milk is not advisable, and in sections where cow's milk is unsafe for use." Address: Madison College, Tennessee.

625. La Sierra Industries. 1932. Soy bean (Ad). *Los Angeles Times.* Nov. 6. p. J20.
• ***Summary:*** This small, square ad reads: "One of the most perfect foods on the market today. Perfect in protein and practically free from starch, with an Alkaline Reaction.

"Soy bean products are offered in twelve different varieties: Soy-Co Breakfast Beverage [soy coffee], Soy Milk, Cheese [tofu], Butter, Bologna, Loaf, Spread, and Others.

"On sale at health food stores. Manufactured by the La Sierra Industries. 'Packers of superior foods.'" Address: Arlington, California.

626. *Los Angeles Times.* 1932. Annual Food and Household Show will open today. Nov. 14. p. A7.
• ***Summary:*** A photo (one of eleven) shows a booth titled "Soy Bean Products." Inside is a man holding a little girl, and a woman serving a customer. The caption: "Soy beans come into their own in La Sierra Industries booth."

627. *Madison Survey* (*Madison, Tennessee*). 1932. The food factory. 14(45):179-80. Dec. 7.
• ***Summary:*** "For many years, as one of the campus industries at Madison, a health food factory has been operated. It has furnished foods for the college cafeteria, for the sanitarium diet kitchen, and for the Nashville Vegetarian Cafeteria, and has sold much to the outside trade. Recently more than usual interest is being shown in health foods. Quotations from a few letters written by those representing and those using our food in other places will be of interest to many of the Survey readers."

Popular products include Vigorost, Soy Cheese [tofu], Soybean Dixie Fruit Crackers, and Soy Bread.

Dr. E.A. Ruddiman, in charge of Soy Bean Research at the Henry Ford Laboratory in Dearborn, Michigan, wrote that he took home the samples of Vigorost and Soy Cheese and enjoyed them very much; his wife made some croquettes from the Soy Cheese.

Dr. A.A. Horvath of the Bureau of Mines in Pittsburgh, Pennsylvania, ordered 12 small cans of soy cheese. "Dr. Horvath is an expert on the soy bean and our correspondence with him is most interesting.

"Dr. Harvey Holmes of the Severance Chemical Laboratory, Oberlin College [Ohio], writes: 'I am very anxious to try the "tofu" (soy cheese) and learn the various ways of serving it. I would like to obtain a sample of the Soybean Dixie Fruit Crackers.'"

628. *Good Health* (*Battle Creek, Michigan*). 1932. The soybean an excellent source of food lime [calcium]. 67(12):20-21. Dec. [1 ref]
• ***Summary:*** A summary of an article titled "The utilization of calcium in soy bean diets" by Adolph and Chen, published in the *Journal of Nutrition* (July 1932, p. 379-85).

Good Health adds: "Soybeans are now turned into about fifty products in America; while in the Orient two hundred and fifty products are made of them."

629. **Product Name:** Soy Cheese (Tofu).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1932 December.
New Product–Documentation: Madison Survey. 1932. Dec. 7. p. 179-80. 1937. Nov. 10. p. 167. Gray. 1936. All About The Soya Bean. p. 123. "Cheese." Madison Health Messenger. 1939. 10 cents and 25 cents. Taylor. 1944. The Soy Cook Book. p. 201. "Soybean curd with Soy Oil."

630. **Product Name:** Soy Beans with Tomato Sauce (Canned).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1932.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Madison Survey. 1936. July 15. p. 115. Gray. 1936. All About the Soya Bean. p. 123.

Madison Survey. 1937. "The soy bean marches on." April 21. p. 59-60.

Soybean Blue Book. 1963. p. 97. "Soybeans in tomato sauce." Soybean Blue Book. 1965. p. 111. Company is now listed as Nutrition International Corp., Box 415, Madison, Tennessee 37115.

631. **Product Name:** Soy Bread (By 1937 renamed Whole Wheat & Soy Bread).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal

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Institute, Madison, Tennessee.
Date of Introduction: 1932.
Ingredients: Whole wheat, soy flour, salt, water.
How Stored: Shelf stable.
New Product–Documentation: Madison Survey. 1931. Oct. 21. p. 164. Apparently served at the school but not yet commercialized. 1932. Dec. 7. p. 180. Delivered fresh to grocery stores in Nashville by service trucks.

632. **Product Name:** Soy Fruit Crackers (Dixie Fruit Crackers).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1932.
New Product–Documentation: Gray. 1936. All About the Soya Bean. p. 123. "Dixie Fruit Crackers."

633. Anderson, Hans Steele. 1932. Science of food and cookery. 6th ed. Mountain View, California: Pacific Press Publishing Assoc. 298 p. Illust. Index. 23 cm. [7 ref]
• ***Summary:*** This book, by a Seventh-day Adventist, advocates a vegetarian, natural foods diet. "Natural foods, just as they come from the garden, field, and orchard, furnish the elements best suited to the harmonious development and functioning of all the tissues and organs of the body..." (p. 11). It discourages consumption of cane sugar (which is not digested by saliva, p. 14) and encourages consumption of cellulose and bran (p. 15).

Chapter 4, titled "The natural food of man" (p. 37-52) has sections on: True food satisfies hunger. Vegetarian diet and longevity. Vegetable and flesh foods contrasted. Vegetarian diet and endurance. Flesh eating a cause of disease. Ethics of flesh eating. Cruelty of flesh eating.

Recipes include: Gluten bread (p. 112). Diabetic bread (strong in gluten, p. 112). Gluten biscuit (p. 112). Homemade Nuttose (incl. nut butter, flour, tomato pulp, p. 134). Stewed soy beans (p. 156). Rice and soy bean loaf (with soy bean purée, p. 156). Rice and soy bean patties (p. 156). Favorite soy bean coffee (p. 281).

In the chapter on "Diet and disease" is extensive information and tables about acid-forming and base-forming foods (p. 237-39).

A 5th edition (same publisher, number of pages, and size) was published in 1929, and a 7th edition in 1938. Address: Dietitian.

634. Bartlett, Jenny. 1932. Healthful cookery. Warburton, Victoria, Australia: Signs Publishing Co. 95 p. Illust. Index. 21 cm. *
• ***Summary:*** This is a Seventh-day Adventist cookbook. Address: Australia.

635. Boulder-Colorado Sanitarium. 1932. Vegetarian cook book. Boulder, Colorado: The Boulder-Colorado Sanitarium. 52 p. *

636. Kellogg, John Harvey. 1932. How to have good health through biologic living. Battle Creek, Michigan: Modern Medicine Publishing Co. vii + 498 p. See p. 88-89, 209-10. 21 cm.
• ***Summary:*** For Dr. Kellogg, biologic living includes a vegetarian diet (which includes dairy products and eggs). A section titled "The soy bean and the peanut, high quality proteins" (p. 88-89) states: "The soy bean and the peanut are notable exceptions to other legumes. Their proteins are of the same high quality as those of eggs and milk."

The next section, titled "Proteins of animal origin" (p. 89) starts by noting that animal proteins are "of the complete or balanced sort." It concludes: "Lean meat is protein more or les saturated with blood and with a small admixture of fat. Such fat may constitute as much as one-half or more of fat meats. Meat contains uric acid urea, and other waste products. Newburgh has shown that toxic products constitute about one-fourth of lean meat solids."

A section titled "Soy milk" (p. 209-10) notes: "Soy milk is in some respects superior to cow's milk and its use in this country should be encouraged. Three quarts of excellent milk may be made from a pound of soy beans and the food value of the residue [okara] will be greater than that of a pound of beefsteak. A pound of wheat and a pound of soy beans will supply energy sufficient for a laboring man, and at a cost of less then three cents a day. Soy milk protein is of the superior quality necessary to supplement that of cereals and is of the basic or alkaline-ash type, and so corrects the acid-ash effects of cereal proteins.

"Soy milk is of special value in helping to change the intestinal flora. A very superior quality of acidophilus milk may be prepared from it*." (Footnote: *"For information, address Battle Creek Diet Service, Battle Creek, Michigan.").

"To fu [tofu], a curd prepared from soy milk, in China and Japan serves as the basis for a great number of meat-like and most delicious dishes."

Note 1. This is the earliest document seen (Sept. 2012) that mentions an "acidophilus milk" made from soy milk or that discusses Dr. Kellogg's work with it (one of two documents).

Note 2. This is the earliest English-language document seen (June 2002) that uses the term "animal origin" in connection with vegetarianism. Address: Battle Creek, Michigan.

637. *Good Health* (*Battle Creek, Michigan*). 1933. The soybean cures rickets. 68(2):16. Feb.
• ***Summary:*** This editorial states: "Various observers report the successful use of soybean milk in the treatment of rickets. Bischoff, an eminent German authority, calls attention to the fact that the soybean is rich in phosphorus, the lack of which

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is a frequent cause of rickets.

"Many physicians are recommending the giving of cod-liver oil to all infants as a precaution against the development of rickets. Soybean milk may be found in many, perhaps in most, cases, equally as protective as cod-liver oil and because of its agreeable flavor and high nutritive value, may be found preferable to fish-liver oil."

Note: As of 1999 nutritionists believe that rickets, a deficiency disease characterized by soft and deformed bones, is usually caused by failure to assimilate and use calcium and phosphorus normally due to inadequate sunlight or vitamin D.

638. Hansen, Louis A. 1933. The soy bean as human food. *Life and Health* 48(2):21-23, 27. Feb. Also in J. of the Jamaica Agric. Soc., March 1933, p. 147-50.
• ***Summary:*** This is a good introduction to the soybean, based largely on information provided by Dr. A.A. Horvath (until recently of the health section, U.S. Bureau of Mines) and William J. Morse (senior agronomist at the USDA Bureau of Plant Industry). Discusses: History of the soy bean in Asia (especially China), nutritional benefits, soy bean flour, soy bean milk, and soy sauce.

Photos show: (1) Two men standing in a field of tall soybeans. (2) A person grinding soybeans with a stone mill to make soy bean milk in China. (3) A "Chinese courtyard with pots of fermented soybeans and brine from which the well-known soy sauce is made." (4) Steamed soy beans about to be made into miso in Japan.

Note: In 1968 Hansen wrote a book titled *From So Small a Dream*, about Madison College (Madison, Tennessee), which pioneered soyfoods in the United States.

639. Kellogg, John Harvey. 1933. The soybean rich in vitamin B. *Good Health* (*Battle Creek, Michigan*) 68(2):26. Feb.
• ***Summary:*** This editorial is a summary of the following article: Wan, Shing. 1932. "Comparison of soybeans and milk in contents of vitamins B-1 and B-2." *Chinese J. of Physiology* 6(1):35-40. Feb. 15. Kellogg states: "One of the most important vitamins is vitamin B, which controls growth, feeds the nerves and acts as a stimulant to all vital processes... The soybean contains three times as much [vitamin B] as an equal weight of dry milk powder..."

640. *Madison Survey* (*Madison, Tennessee*). 1933. Soy bean recipes. 15(9):34. March 8.
• ***Summary:*** Gives two recipes: Soy corn pones, and Soy muffins. Each calls for the use of "soy meal" (soy flour).

641. *Madison Survey* (*Madison, Tennessee*). 1933. Soybean on exhibition at World's Fair. 15(10):39-40. March 22.
• ***Summary:*** "According to Sherman R. Duffy, the soybean will be the only vegetable crop having an exhibit all to itself at the Century of Progress Exposition, and will occupy 6,000 square feet of space in the Agricultural Building."

The soybean is known to urban dwellers only as the "material from which chop suey sauce is made... In the soybean exhibit will be soybean flour, diabetic foods, infant foods, macaroni, breakfast foods, and a vegetable milk which is being used in a variety ways in the manufacture of foods and confections."

642. Kellogg, John Harvey. 1933. Nutrient value of the soybean. *Good Health* (*Battle Creek, Michigan*) 68(3):25. March. [1 ref]
• ***Summary:*** *Nutrition Abstracts* reported that two Russian investigators who studied soy milk "found that its protein is equally as digestible as the protein of cow's milk and that it contains more tryptophan and so is able to balance up a larger amount of incomplete cereal proteins. Soy milk was found to digest more easily than egg or muscle protein (lean meat). Its lack of vitamin D is easily made good by the use of spinach and other greenstuffs which are the natural sources of this vitamin."

643. Battle Creek Sanitarium. 1933. Menu. Breakfast, Tuesday, April 18 1933. Battle Creek, Michigan. 1 p.
• ***Summary:*** At the bottom of each typed menu is a space for the dietitian's name. "Good morning!" is printed near the top of the menu, which is in the form of a table with 8 columns. Col. 1 are the menu items divided into main types: Fruits, cereals, entrees, breads, beverages. Cols. 2-8 give, for each menu item, the weight, the calories from protein, fat, and carbohydrates, and the total calories. Cols. 7-8 give the reaction of the food (acid or basic).

Only vegetarian foods are offered. These include soy milk, soy acidophilus [cultured soy milk], cereal coffee, whole wheat toast melba, cooked whole wheat cereal, bran flakes cereal.

644. Kellogg, J.H. 1933. The mischievous colon bacillus: From the editor's pen. *Good Health* (*Battle Creek, Michigan*) 68(4):16. April.
• ***Summary:*** "The bacillus coli, or colon bacillus, is always found in the colon and is frequently found in the upper parts of the intestinal tract..." "When the diet contains a large amount of protein, that is, when meat and eggs are eaten freely, the colon bacilli, along with various other harmful organisms, increase in numbers and virulence.

"There is but one remedy for this grave condition, that is, change of the protective flora by implanting the protective germ B. acidophilus which by nature is endowed with the power to suppress the harmful bacteria which invade the intestine. This is now easily accomplished by means of the newly discovered preparation, soy acidophilus milk. This is a culture of the bacillus acidophilus in soybean milk. It is found that the acidophilus grows with much greater

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vigor in soybean milk than in cow's milk; consequently soy acidophilus milk contains the protective germ in much greater numbers than does ordinary acidophilus milk [made from cow's milk]. Not only this, but the individual organisms are larger and much more vigorous. Laboratory researches have shown that soy milk is a better medium for growing the acidophilus than is cow's milk. When first placed in cow's milk, the B. acidophilus grows very slowly." But when this bacillus, "newly isolated from the intestine, is placed in soy milk, it springs immediately into vigorous growth. The long series of transfers required when cow's milk is employed is not necessary. It has been further observed that when old and attenuated cow's milk cultures of the B. acidophilus are added to soy milk, they are at once revived and rejuvenated. In other words, the soy milk seems to be a much better medium for the growth of B. acidophilus than is cow's milk."

"Another advantage of soy milk as a medium for cultivating B. acidophilus is the fact that it is free from the unwholesome contaminations to which milk is suspiciously subject, especially the very considerable admixture of barnyard filth which is always found in cow's milk."

Note: This is the earliest document seen (Sept. 2012) which contains the term "soy acidophilus milk."

645. *Washington Post.* 1933. Milk from soy beans is new economy food. Inventor [Jethro Kloss] claims product is more nutritious than dairy article. May 21. p. 24. Sunday.
• ***Summary:*** Jethro Kloss makes soy bean milk at home for his family. His own daughter, Mrs. Harry C. Engelhard, was raised on nut milk before he perfected the soy bean milk. Her daughter, Joyce Joan Engelhard, was raised exclusively on the soy bean milk. In Mr. Kloss' method, the strong flavor is removed. The beans are soaked overnight, then ground, to give a product costing about 2 cents for 3 quarts. Mr. Kloss, who lives at 109 Varnum St. Northwest, says that buttermilk and cheese may also be made from soy bean milk.

Two small portrait photos show: (1) Mrs. Harry C. Engelhard (left), wearing a white hat and dress. Jethro Kloss' youngest daughter, she was born Naomi Kloss, but later changed her first name to Joan. (2) Jethro Kloss (right), wearing a dress suit with a white bow tie. An original of this photo (shown here) was sent to Soyfoods Center in 1985 by Doris Kloss Gardiner of Loma Linda, California.

Note 1. This is the earliest document seen (Oct. 2004) concerning Jethro Kloss and his work with soyfoods.

Note 2. This is the earliest article on soy seen (Aug. 2002) in the *Washington Post.*

646. Kellogg, John Harvey. 1933. The precious peanut. *Good Health* (*Battle Creek, Michigan*) 68(5):20-21. May.
• ***Summary:*** "The humble goober, or monkey nut, as it is known in Africa, from the fact that the monkey seems to have been the first to discover its value, has never been taken seriously by civilized people, or, at least, not until recent

times. We are just beginning to appreciate the value of this wonderful legume."

The peanut contains 24% protein of high quality. "Forty years ago the peanut had no standing whatever as a food source; in fact, received very little consideration, and was one of the least valued foodstuffs.

"In looking for practical food substances which might take the place of meats in the bill of fare, something more than forty years ago, the writer began a series of experiments which resulted in the production of a paste which, on account of its richness in fat, was called 'peanut butter.' The purpose of treating the nut, first by exposure to heat sufficiently to cook its raw starch, and then by passing through rolls, was to increase its digestibility." Address: M.D.

647. Kellogg, J.H. 1933. Lime and longevity: From the editor's pen. *Good Health* (*Battle Creek, Michigan*) 68(6):16-17. June. [1 ref]
• ***Summary:*** Dr. H.C. Sherman of Columbia University, in rat feeding experiments, has shown that the addition of milk and lime or calcium to their diet increased longevity by 10%. "For those who cannot take cow's milk, and there are many such, soybean milk is a very satisfactory substitute. It is, indeed, more than a substitute, for in some respects it is superior to cow's milk.

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"Best of all is the soy acidophilus milk, a culture of the *bacillus acidophilus*, the protective germ which Nature plants in the intestine of every young mammal to protect it against the invasion of harmful bacteria. Unfortunately, many adults have lost this bodyguard which Mother Nature kindly provides. In such cases, a new implantation of the protective flora is necessary. This can best be done by the use of the soy acidophilus milk. One or two pints of this milk, used in connection with lactose, will quickly change the flora even in cases where the protective organism has wholly disappeared. The protective flora keeps the intestinal tract in an acid state, the normal condition which encourages the absorption of lime" [calcium].

648. *California Health News* (*Hollywood, California*). 1933. La Sierra Foods (Ad). July. p. 11. *
• ***Summary:*** An ad for La Sierra soy products.

649. Dittes, Frances L. 1933. The soy bean as human food. *J. of the Tennessee Academy of Sciences* 8(3):323-28. July. [12 ref]
• ***Summary:*** "Read before the Tennessee Academy of Science at the Nashville meeting, November 27, 1931." Food products from soybeans and their value as food. Concludes: "Thus, there are significant reasons for expecting that the soy bean will become one of our most stable and prominent sources of fat and protein. There are reasons to expect also that the United States will become the leader in introducing the soy bean in the daily diet of the white race."

Tables: (1) Composition of soy bean seed compared with that of other legumes. (2) Comparisons of soy milk with other milks. (3) Composition of soy bean milk compared with cow's milk compiled from various sources. Address: Nashville Agricultural and Normal Inst., Madison.

650. Wartenweiler, Marion J. 1933. The bean in ancient and modern times. *Good Health* (*Battle Creek, Michigan*) 68(7):20-21, 26. July.
• ***Summary:*** Beans were not widely consumed in Egypt. Herodotus wrote that the priests regarded beans as unclean. Pythagoras, "although a vegetarian, forbade his disciples to eat beans. Borrowing the superstition from the Egyptians, he believed that they stupefied [dulled] the mind."

Today there is a noticeable increase in the use of soybean flour in the United States and in Europe. "It has a strong and characteristic, although quite delicious flavor. Moreover, only recently Henry Ford has announced that the paint on his next model Ford will be compounded with oil developed from the soybeans raised on the Ford farms."

651. Webber, P.A. 1933. Soy bean finally recognized. *Banner* (*Nashville, Tennessee*). Aug. 4. Summarized in Madison Survey. Aug. 16. p. 119. *
Address: Nashville, Tennessee.

652. Anderson, Hans S. 1933. Anæmia–No longer a death sentence: A dietitian of long experience tells how the anæmic can dodge the undertaker. *Signs of the Times* (*Pacific Press, Mountain View, CA; Seventh-day Adventist*) 60(48):12-13. Dec. 5.
• ***Summary:*** "It used to be that when the doctor told a patient that he was the victim of pernicious anæmia, such a diagnosis was a death sentence, for until recent years the medical profession was baffled in the treatment of this malady."

"In the feeding of cases of pernicious anæmia, a change of the intestinal flora is of prime importance. Dr. J.H. Kellogg, who has advocated the therapeutic value of lactose and lactodextrin in the treatment of intestinal putrefaction now holds that soybean milk is coming to be recognized as a very helpful adjunct in clearing up the intestinal tract so far as harmful bacteria are concerned. He says:

"'We find soy acidophilus milk a wonderful help in changing the flora. By the aid of this wonderful culture of the protective germs, I do not hesitate to challenge any case that needs changing the flora. I am thoroughly convinced that in many of these bad cases the acidophilus [in the digestive tract] has been lost entirely, and in these cases feeding with lactodextrin, although highly beneficial, will not restore the normal condition because it will not bring back the protective flora. But this the soy acidophilus milk will do and do quickly.'

"If men and women would learn to preserve their health as earnestly as they seek for gold and other treasure this world holds dear, how changed would be the 'vital statistics' and the 'obituary' columns in the daily press!" Address: Author.

653. Hilkrest. 1933. Low price health products (Ad). *Signs of the Times* (*Pacific Press, Mountain View, CA; Seventh-day Adventist*) 60(48):15. Dec. 5.
• ***Summary:*** "Prepaid prices east of the Mississippi River. For west of the Mississippi add 6 cents per pound.

"Psyllium, best, white, absolutely clean–5 lbs. $1.30.

"Colon food (lactose and dextrin)–5 lbs. $2.90."

"Soy bean foods–oil, flour, sauce, meat substitutes, etc. Send for free list."

Note 1. In a search of the Seventh-day Adventist electronic archives (www.adventistarchives.org), this is the earliest document seen (Dec. 2013) showing that Hilkrest–or any other Adventist-run small business in the United States–is selling "Soy bean foods." Note 2. By 1936 this small Adventist company (at the same address) would be named "Hilkrest Health Products." Address: 120 Carrol. Ave., Takoma Park, DC.

654. *Madison Survey* (*Madison, Tennessee*). 1933. Soy bean recipes. 15(46):184. Dec. 20.

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• ***Summary:*** Gives two recipes: Soy beans southern style (with "2 cups cooked soy beans"). Soy bean salad (with "1½ cups cooked soy beans").

"Soy beans furnish a protein equal in quality to that found in meat, milk, and eggs, and are also an important source of vitamin B. The large amount of fat, although lacking in much fat-soluble vitamin, is an economical source of energy. Soy beans are also rich in calcium and iron and give an alkaline reaction in the body."

655. *Medical Evangelist.* 1933. The origin of the light on health reform among Seventh-day Adventists. 20:2. Dec. 28. *

• ***Summary:*** A history of early Adventist health reform work, starting with Ellen White's vision on 5 June 1863 at Otsego, Michigan.

656. *Unknown newspaper* (*Miami, Florida*). 1933. Scientist extracts milk from soy bean. Unknown.

• ***Summary:*** A facsimile copy of this article appears on page 341 of the revised 1981 edition of Back to Eden. A large photo shows "Dr. [sic, he was not an M.D.] Jethro Kloss" with glasses in what appears to be a tuxedo and white bow tie. The subtitle states: "Dr. Jethro Kloss of Washington, D.C., says product tests 3.15 per cent butter fat and can e obtained much more cheaply than from cow; soy bean products to be exhibited." The article continues: "Milk from contented soy beans. This may sound like a joke or prophetic, but it's a fact, according to Dr. Jethro Kloss of Washington, D.C., who has devoted 18 years to the study of the soy bean, and from it has derived so many products that an enumeration of them sounds like a dairy menu.

"'Milk so pure that it can hardly be detected by the taste alone can be taken from the soy bean,' Dr. Kloss said. 'From this milk more than 20 products already have been made, and have stood the test of careful analysis.

"'Soy bean milk tests 3.15 per cent butter fat against 4.50 butter fat for the best of cow's milk. It will sour just as the cow's milk, and after this it may be made into cheese, buttermilk or anything else for which cow's milk is used. And it may be produced for about 2 cents per quart.'

"Dr. Kloss said that he first became interested in the soy bean when he noted its fattening effect on cattle. He began an intensive study of the bean, and after many years of research, perfected processes by which the milk could be extracted. From this the by-products developed.

"' The milk can hardly be detected by taste alone. Most people expect it to be slightly bitter, but it isn't,' Dr. Kloss said. 'My own 4-year-old granddaughter has never tasted cow's milk, and she has been pronounced an almost perfect specimen of childhood.'

"Dr. Kloss will exhibit the products of the soy bean in Bayfront park tomorrow evening after the band concert."

Note: Kloss' 4-year-old granddaughter referred to here is Doris Kloss Gardiner, who was born on 28 Feb. 1933 in Miami, Florida. Thus the article must have been published after that date, probably sometime during 1933. Bayfront park (which still exists in 1990 and has a large amphitheater) is in northern Miami, Florida, on the waterfront on Biscayne Blvd.

657. Horvath, A.A. 1933. Some recent views about soya flour. Newark, Delaware. 10 p. Undated pamphlet. 23 cm. [31 ref]

• ***Summary:*** The author quotes recent authorities in a discussion including the objectives of "processing" soybeans for the manufacture of edible flour, the quantity of lecithin, vitamin A and D and protein in the flour, its basic ash quality, alkaline influence and importance of these in the human diet.

"The technical difficulties have now been successfully overcome and processed soya flour milled from whole soybeans [full-fat soy flour] is gaining in popularity, while all attempts of marketing soya meal (with most of the oil removed or only a minor part of it) for human consumption have already failed or are doomed to fail since meal flour turns rancid on keeping and does not possess the pleasant taste of refined soya flour." The reasons for this are lack of proper cleaning, and crushing which "brings the various cell juices in contact with the oil, spreads the latter over the entire surface of the particles and exposes it to oxidation. A properly 'processed' whole soya flour on the other hand is free of these defects and possesses a pleasant nutty taste."

Note: This is the earliest English-language document seen (Nov. 2013) that contains the term "whole soya flour." Horvath used this term in most of his early writings.

"The first objective of 'processing' is to kill the enzymes of the soybean, such as lipase, the oxidases and peroxidases, which are capable of liberating free fatty acids from soybean oil, of converting them into toxic oxyacids, and of destroying vitamins A and E."

"The second objective of 'processing' the soybeans for the manufacture of edible flour is to remove the objectionable beany taste. One of these substances has been isolated by Schmalfuss and Treu (1927) and its formula showed to be Methyl-*n*-nonyl-ketone, which seems to be located in the outer layer of the bean cotyledons. The process of 'refining' should therefore be performed on the whole soybean." This ketone can be removed by distillation.

Dr. Horvath cites the research findings of Dr. Ragnar Berg of the Dresden City Hospital, Germany, which showed that a large excess of inorganic bases in the organism consuming a food, as well as in the food itself, is a necessary precondition for optimal utilization of protein. "The conclusion to be drawn from these findings is that the alkalinity of the soybean ash (it has the astoundingly high value of 26) is a highly important factor for causing a saving in protein, and this is probably the main part of the explanation why Rose and MacLeod (1925) recorded

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that a human organism is able to store three times as much nitrogen from a soybean food as from meat, while the high quality of the soya protein also contributed its share to this phenomenon."

"In a recent personal letter to the writer Dr. John Harvey Kellogg of the Battle Creek Sanitarium [in Battle Creek, Michigan] brings out the following interesting experience: 'We are making increasing use of the soy acidophilus with splendid results. I am sure it is very much superior to ordinary acidophilus milk as a means of changing the flora. It seems to stimulate greatly the growth of the acidophilus, whereas cow's milk is such an unfavorable medium that prolonged training is necessary to bring the organism up to a degree of activity sufficient to produce a good quality of buttermilk. The soy milk requires no such training. A slow growing dying milk culture when placed in soy milk springs into rejuvenescence at once, producing a good quality of buttermilk in less than 24 hours. It seems evident that a medium which exercises such a stimulating effect upon the growth of acidophilus in vitro ought to be equally superior in the intestines. *We find it of special value in old cases of toxemia in which the conditions are so unfavorable that the acidophilus has entirely disappeared. In such cases the soy acidophilus will reimplant the normal acidophilus flora within a week or two after other measures employed for months or even years have utterly failed.*"

Note 1. This is the earliest document seen (Oct. 1999) that uses the term "soy acidophilus" or that discusses Dr. Kellogg's work with it (one of two documents).

Note 2. This is the earliest English-language document seen (July 2003) that contains the word "peroxidases."

Note 3. Although this booklet is undated, we can estimate the date as 1933 since: (a) The two most recent articles in the bibliography were published in 1933, both in January. (b) One article cited in the bibliography, said to be published in 1932, is list as "(in press)." Address: P.O. Box 385, Newark, Delaware.

658. Kellogg, John Harvey. 1933. The new method in diabetes. Fourth revised ed. Battle Creek, Michigan: Modern Medicine Publishing Co. 300 p. See p. 90-91, 177-80, 295. Illust. 21 cm.

• ***Summary:*** A section titled "Insulin–Its discovery and use" (p. 90-91) states: "Every diabetic suffers from intestinal toxemia and needs to have his intestinal flora changed... Gluten preparations and soy bean products should take the place of meat and eggs, and milk prepared from the soy bean may be advantageously used in place of ordinary milk. Soy milk is almost wholly free from carbohydrates... The soy bean encourages remarkably the growth of the protective acidophilus flora. Soy acidophilus milk is especially useful in cases in which the protective flora has been entirely lost. By its continued use, the flora may be restored and maintained.*" (Footnote: *"Information concerning soy acidophilus milk may be obtained by addressing the Battle Creek Food Company, Battle Creek, Michigan.")

In a chapter titled "Directions for Making Soy Acidophilus Milk at Home" (p. 177-80), Dr. Kellogg begins by noting that he discovered the "remarkably stimulating effect of soy bean milk on the growth of B. acidophilus, the germ which forms the protective flora in the human intestine..."

Page 295 gives a recipe for making soy bean milk at home. The first step is to grind the beans to a fine flour and sift.

Gluten-related recipes (all calling for gluten flour) include: Gluten bread (p. 273). Gluten bran bread (p. 273). Gluten bran puffs (p. 273). Gluten griddle cakes (p. 274). Gluten wafers (p. 274). "Southern" gluten biscuits (p. 274). Soy bean biscuits (with soy bean meal, gluten flour, and starch-free bran, p. 275). Oatmeal and gluten gems (p. 275). Sandwiches (all on gluten bread, p. 268-71). Gluten bran bread sandwich (on gluten bran bread, p. 270). Cream of gluten cereal (p. 272). Address: Battle Creek, Michigan.

659. Madison Food Co. 1933? Madison soy cheese. Madison, Tennessee. 6 p. Undated.

• ***Summary:*** Contains a brief introduction to tofu with 8 American-style tofu recipes. "The principal protein of the Soybean is much like the protein casein of milk, and when the bean is properly treated a milk quite comparable in appearance, taste, and food value can be manufactured from it. From this milk, when allowed to become acid, or when a slight amount of a precipitating agent is added, a cheese can be prepared in consistency much like cottage cheese. This vegetable cheese (tofu) has been one of the principal articles of diet in the Orient for many centuries.

"In order that the people of America may have this most important food as an article of diet, a method of manufacturing and preserving has been perfected at the Madison Food Factory.

"For several years it has been used as a daily article of diet in the Madison Rural Sanitarium, Nashville Vegetarian Cafeteria, and many other Good Health places. It has proven its value as a diabetic food, and as a splendid meat substitute."

Tofu recipes include: Soy cheese salad. Stuffed egg with soy cheese. Tomato soy sandwich. Soy sandwich filling. Soy croquettes. Soy cheese loaf. Soybean omelet. Soybean cutlets.

On the back panel is a list of "Health foods manufactured and distributed by Madison (Sanitarium) Food Company, Madison, Tennessee: Nut Meat, Vigorost, Peanut Butter, Fruit Sticks, Sterilized Bran, Psyllium Seed, Cereal Drink, Soy Flour, Soybeans (Dry), Malta (Malt Syrup), Soy Fruit Crackers, Soybeans (Canned with Tomato Sauce), Madison 3 Minute Breakfast Wheat, Sanitarium Baked Beans, Steamed Whole Wheat, Malted Breakfast Crisps,

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Whole Wheat Fruit Crackers, Sweetened Whole Wheat Crackers, Soybeans (Canned Plain), Soy Cheese (Bean Curd), Madison Fruit Candy, Regulose (composed of Lactose and Dextrine). Write for descriptive literature."

Note 1. The company is now named "Madison Food Company."

Note 2. Many of Madison's publications about its foods are undated; this makes it very difficult to determine when a specific food was first made and sold commercially. Address: Tennessee.

660. St. Helena Sanitarium Food Co. 1933? St. Helena Sanitarium Foods: What they are and how to use them. Sanitarium, Napa Co., California. 14 p. Undated. 16 cm.

• ***Summary:*** Contents: Foreword. Brief description of each food product: Fruit nuts. Granola. Caramel cereal coffee. Peanut butter. Nut-Cereo. Nut loaf. Malted nut meal. Granose Flakes. Granose biscuit. Crackers (incl. Graham Crackers, Graham Sticks). Zwieback. Gluten. Olive oil. Grape juice. Sanitarium flour. Cooking oil (cottonseed). Choice food recipes (34 vegetarian recipes). Mail orders. Price list.

The descriptions of several of these products are especially interesting: "Fruit nuts: A scientific combination of grains, fruit, and nuts thoroughly baked by a slow process to dextrinize all the starch, then ground to a coarse meal. It is slightly sweetened by the malting of the grain but contains no artificial sugar. The most perfect breakfast food.

"Granola: Similar in appearance to Fruit Nuts but without the sweet." Therefore, Fruit Nuts was like today's sweetened Granola, whereas this Granola was unsweetened.

"Peanut butter: We [Seventh-day Adventists] were the originators of Peanut Butter."

On the last page is a directory of "Restaurants and Sanitariums on the Pacific Coast where these foods are used. Vegetarian restaurants: 435 Geary Street, San Francisco. Fifth and A Streets, San Diego. 259 South Hill Street, Los Angeles. 319-321 West Eighth, Los Angeles.

"Sanitariums: St. Helena Sanitarium, Sanitarium, Napa Co., California. Glendale Sanitarium, Glendale, California. Loma Linda Sanitarium, Loma Linda, California. Portland Sanitarium, Mt. Tabor Sta., Portland, Oregon. Paradise Valley Sanitarium, National City, California. Walla Walla Sanitarium, College Place, Washington."

On the rear cover is an ad for the St. Helena Sanitarium, with a photo of the 5-story building.

On the inside front cover: "Something to drink? Caramel cereal coffee. Something to eat? Fruit nuts. Nothing better. Nothing just as good." Address: Sanitarium [St. Helena], Napa County, California.

661. *News and Observer* (*Raleigh, North Carolina*). 1934. Food products from soy beans: Chemist from Washington makes interesting demonstration in Belhaven [North Carolina]. Jan. 21. Sunday morning.

• ***Summary:*** Belhaven, January 20, 1934. Dr. Jethro Kloss, expert food chemist from Washington, DC, gave a demonstration of food products that can be made from soy beans to a packed and enthusiastic crowd in Belhaven's City Hall Tuesday. He came to Belhaven at the invitation of F.P. Latham, Beufort County's master farmer.

"In 1932, Mr. Latham went to Washington, D.C. to a National Soy Bean Convention and witnessed Dr. Kloss making milk, cheese, buns, cakes, pies, vegetable roasts, butter, salad dressings and even a very healthyful medicinal liniment from soy beans. Mr. Latham's community is a great soy bean country and he immediately had a vision of Dr. Kloss visiting his community and showing it his experiments with soy beans. After 2 years, that vision at last has materialized and the people in Hyde County and Belhaven communities not only saw and tasted delicious foods made from the soy bean, but Dr. Kloss showed them how the

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products can be made in any home kitchen at a nominal cost."

"Dr. Kloss's little granddaughter came to Belhaven with him. She is 4 years old and 100% perfect. She never has drunk any other milk than soy bean milk.

"Dr. Kloss says there is no limit to the delicious foods that can be made from the soy bean. He is now working on a book of recipes made from soy bean products. He uses the Mammoth Yellow soy bean for most of his products. He became interested in the soy bean food products in searching for a food for diabetics."

662. Sutherland, Joe E. 1934. A cooperative college. *Madison Survey* (*Madison, Tennessee*) 16(8):29-31. March 14.

• ***Summary:*** This article, reprinted from *The Pacific Cooperator* (Los Angeles, California) is an introduction to all aspects of Madison College, located 10 miles from the city of Nashville. On the school property are 900 acres of productive land on the banks of the Cumberland River. "All students work a part of each day in some one of the enterprises of the school. In the Agricultural Department they learn to raise crops in the most scientific manner. In the Dairy Department there is a beautiful herd of registered Jersey cows in the natural surroundings of blue grass pastures for which middle Tennessee is noted. There the boys learn dairying and are being paid for it. This dairy furnishes milk, butter, cream and cheese for school and sanitarium.

"The Garden Department employs many students... and produces vegetables for the school and sanitarium." The Horticultural Department grows and harvests fruits. The Canning Department sees that nothing of value goes to waste. "A Food Factory gives work to a large group of students and furnishes a substantial cash income to the institution through the products placed on the market."

Madison is self-supporting. "The students have built the buildings and roads, and cleared the land; and at the present time several new modern college buildings are being erected.

Photos show: Students at work in the food factory, with two long tables covered with cans, and a large pressure cooker / autoclave [probably used to sterilize the contents of canned foods]. The Food Factory's commercial products–8 in cans and 11 in boxes.

663. **Product Name:** Soy Beans Baked. Renamed Wonder Soy Beans by 1936.
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1934 March.
Wt/Vol., Packaging, Price: 11 oz tin can.
New Product–Documentation: Battle Creek Food Co. 1934. Price list. March 1. "Soy Beans Baked, 11-oz. tin, $0.18."

S.S. Pierce Co. 1935. Spring and summer mail order catalog (Boston). p. 72.

L.B. Breedlove. 1936. *Chicago J. of Commerce and La Salle Street Journal.* June 25. p. 14. "Soy bean–The magic plant. Article XI." "Battle Creek Food Factory, Battle Creek, Michigan: Baked soy beans (canned)."

Photo of commercial soy products in William Morse's office. 1936. Price List. 1940. Soy Beans, cooked. 10 oz. can.

664. **Product Name:** Soy Gluten Bread (For the Diabetic–Canned).
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1934 March.
Wt/Vol., Packaging, Price: Tin can.
How Stored: Shelf stable.
New Product–Documentation: Battle Creek Food Co. 1934. Price list. March 1. "Soy Gluten Bread, $0.35."

S.S. Pierce Co. 1935. Spring and summer mail order catalog (Boston). p. 72.

L.B. Breedlove. 1936. *Chicago J. of Commerce and La Salle Street Journal.* June 25. p. 14. "Soy bean–The magic plant. Article XI." "Battle Creek Food Factory, Battle Creek, Michigan: Soy gluten bread (in cans)."

Photo of commercial soy products in William Morse's office at the USDA shows a canned "Soy Gluten Bread (For the Diabetic)." 1936. Battle Creek Food Co. Price List. 1940. "In tin."

665. **Product Name:** Soy Bean Biscuit (For Diabetics).
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1934 March.
New Product–Documentation: Battle Creek Food Co. 1934. Price list. March 1. "Soy Bean Biscuit, pkg. $0.60."

S.S. Pierce Co. 1935. Spring and summer mail order catalog (Boston). p. 72.

A.A. Horvath. 1935. *Food Industries.* Jan. p. 15. "Acceptance of soya flour depends on correct processing." A photo shows this product. The front panel text reads: "A low carbohydrate bread. Practically free from starch."

L.B. Breedlove. 1936. *Chicago J. of Commerce and La Salle Street Journal.* June 25. p. 14. "Soy bean–The magic plant. Article XI." "Battle Creek Food Factory, Battle Creek, Michigan: Soy biscuits."

666. Battle Creek Food Co. 1934. How to eat: To build and maintain good health. Battle Creek, Michigan. 64 p. Undated. Illust. Index. 21 cm.

• ***Summary:*** The cover of this undated, saddle-stitched (stapled) book has red and black letters on an orange background. We can estimate the publication date from the latest date of the many references (March 1934, p. 8). The Introduction begins: "This book has been prepared by the Dietetic Department of the Battle Creek Food

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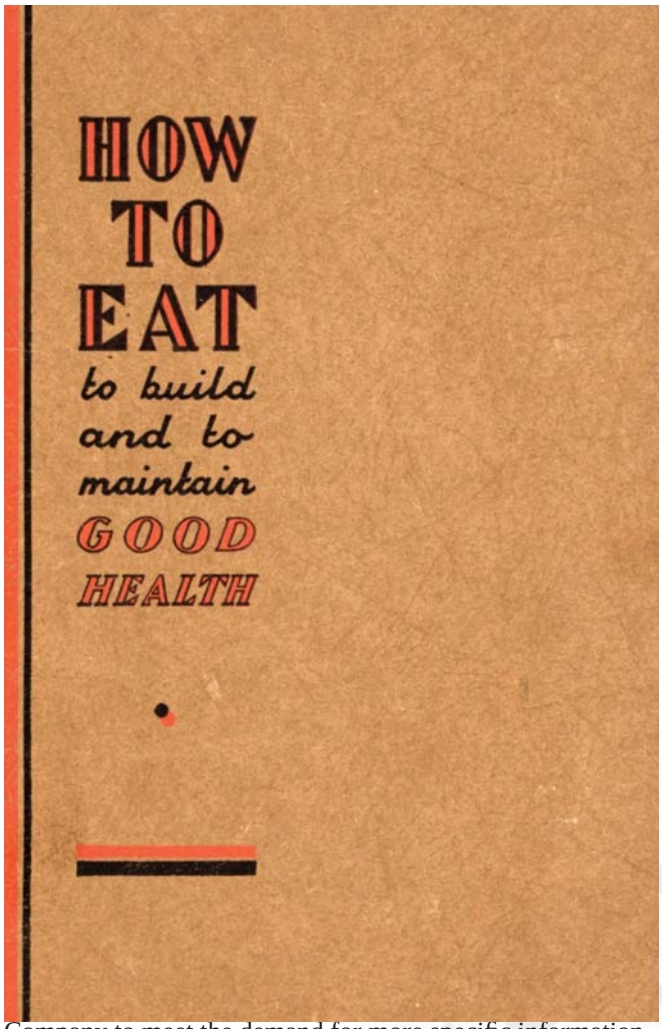

Company to meet the demand for more specific information concerning the adaptation of our Food to Special Diets." "We acknowledge... the friendly cooperation of food specialists and laboratory technicians of the Battle Creek College whose scientific research has been a constant guide in all our dietetic undertakings."

The book is divided into two equal parts: (1) Dietetic information (such as Diet in Constipation, Diet in Diabetes, Diet in Hyperacidity of stomach, Diet in high blood pressure, etc.). (2) Product descriptions (with a separate photo of each). Chapter 2, "Diet in Constipation" (for example) has the following contents: What is constipation? (two types: common/atonic, and spastic). What harm does constipation do? Have you constipation? What to do for common constipation: Don't take laxatives, increase the fiber content of the diet with fruits, vegetables, whole grains, bran products, psyllium, etc. Drink plenty of water, etc. What bran will do to restore satisfactory elimination. Relative amounts of bulk suppliers. The value of lubrication. To overcome putrefaction (Soy Acidophilus Milk). Does your diet contain sufficient vitamin B? Battle Creek foods for common constipation (incl. Psylla, Agar, Krusty Bran, Fig Bran, Bran Biscuit, Paralax with Agar, Paramels). Bibliography. Books to help you (two by Dr. John Harvey Kellogg).

A long list of Battle Creek basic (alkalinizing foods) (p. 25) includes: Soy Beans Baked, Soy Bean Biscuit, Soy Bean Flour, Soy Gluten Bread. A description of "The vegetable meats" notes that "Protose is a dark colored vegetable meat and Nuttose a light colored vegetable meat, both supply just as much protein as meat..."

Part 2, product descriptions, includes: Soy Bean Flour (14 oz or 5 lb tin with screw top), Soy Gluten Biscuit (in carton), Soy Gluten Bread (12 oz tin), Battle Creek Soy Beans (Baked, with tomato sauce, 11 oz can).

Many photos show each of the products and the huge Battle Creek Sanitarium. Address: Battle Creek, Michigan.

667. *Good Health* (*Battle Creek, Michigan*). 1934. Have you lost your protective germs? 69(3):20-21. March.
• ***Summary:*** "Many adults are suffering seriously because they have lost their protective germs and so are defenseless against the germs of putrefaction and infection which are being constantly introduced in the air and in certain foods, such as fresh meat, fish, oysters, etc., which are fairly alive with harmful germs. In such cases, as in the case of the infant, a *new implantation of the protective germs is necessary.* The remedy employed for the infant is of course not available for the adults. A thoroughly efficient means of recovering lost acidophilus is available through the fortunate discovery of soy acidophilus milk, a highly active culture of the acidophilus, by the use of which it is possible to restore the friendly germs in any case in which it is possible to restore the friendly germs in any case in which they have been lost or have become so nearly extinct that they no longer serve as efficient means against invading bacteria."

"The new culture is prepared from milk made from the soybean, a product little known in this country, but which has been in use in China for many thousands of years, and in South China completely takes the place of cow's milk, which the average Chinaman has never tasted.

"When placed in soybean milk, the acidophilus germ grows with great vigor and develops rapidly, and in a few hours produces a highly palatable, slightly acid product closely resembling buttermilk both in appearance and taste. Its food value is greater than that of buttermilk and it has the advantage that the acid-forming germs, which contain many millions in every teaspoon, are able to live and thrive in the intestine, while the germs of ordinary buttermilk die almost immediately after being swallowed into the stomach."

668. The wonder of the 20th century. Come and hear Dr. Kloss astonishing and interesting free lectures (Poster). 1934. Dr. Jethro Kloss, 500-44th St., N.W., Miami, Florida. 1 p.
• ***Summary:*** "Dr. Jethro Kloss of Washington, D.C. food chemist and scientist..." Dr. Kloss will show how to make soy bean milk and soy bean bread at the Miami School of

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Applied Arts, 406 N.E. 2 Avenue. These 2 exceptional food demonstrations have never yet been given to the public. "Dr. Kloss is one of the best informed chemists on the soybeans, which is fast coming to the front in food lines.

"Dr. Kloss makes more than 20 palatable edible table foods from the soybeans, they are very inexpensive and can be made in any home by a simple, practical method of which Dr. Kloss is the originator...

"Dr. Kloss' demonstration is truly amazing when one knows and considers that the soybean is a perfect food, and contains a high quality protein. Soybeans and their products perfectly take the place of meat, milk, and eggs. Soybean roast is better than the best beefsteak... Soybeans furnish the most economical supply of protein to be found, also contains all the other necessary elements of nutrition.

"Dr. Kloss' classes in the preparation of these foods will begin, Thursday afternoon, March 28 at 2:30 p.m." Address: Miami, Florida. Phone: Edgewater 1128-J.

669. *Miami Daily News*. 1934. Food products of soy bean urged for daily table use: Milk, cheese, roasts, bread and other preparations made from herb claimed to have high nutritive values. April 8. Sport section. p. 5. Sunday. Facsimile printed in Back to Eden by Jethro Kloss, 1982 ed.
• ***Summary:*** Two photos by Rinc above the article show: (1) A small insert portrait of Dr. Jethro Kloss. (2) His daughter, Mrs. Harry C. Engelhardt, standing next to her daughter, Joyce, age 5. The caption states that "Dr. Jethro Kloss is devoting his life to the dissemination of knowledge pertaining to soy bean milk." Both his daughter and granddaughter were raised on this milk."

"Dr. Kloss prides himself on having once been a 'farmer.' He is credited with having spent a fortune in philanthropic work, the greater part having gone toward introducing a bean which he feels is destined to eventually revolutionize the economic structure of this country and become of incalculable value in time of war.

"Approximately 6,000 persons recently heard Dr. Kloss in Bayfront park explain how he apparently performs miracles when he transmutes beans into 24 or more different foods which in addition to being delectable also retain various life-giving elements usually attributed to cow's milk...

"He exhibited 21 articles made from soy beans and invited the public to taste them. These were soy bean milk, bread, pie, cakes, buns, cookies, roast, buttermilk, coffee, cottage cheese, cream cheese, yellow cheese, soy bean sauce, pancakes, broth, butter, 'mashed potatoes,' mayonnaise, soy bean roast not like that from meat, ice cream, sprouted beans. None of these contained white flour nor cane sugar, making such foods especially valuable for diabetics. Soy bean foods are also recommended for arthritis.

"He advocates the teaching of edible food preparation from soy beans as part of school curriculum and drew a parallel tending to show how the government spends millions to spread hog and other stock-feeding knowledge while almost ignoring the phases which would create well-fed humans.

"Dr. Kloss pointed out that he was merely in this country revealing something which for centuries had been common knowledge throughout the Orient... He quoted Dr. S. [sic, A.] Horvath of the Rockefeller institute as one of the world's leading authorities who said: 'The Chinese nation exists today because of the use of the soy bean as a food.'"

A sidebar at the lower left of the article shows another portrait photo of Dr. Kloss and announces: "By the request of thousands who heard Dr. Kloss speak in Bayfront Park, he has consented to give further instructions in the preparation of the wonderful Soy Bean Products.

"He will give two food demonstrations in the Miami School of Applied Arts, 406 N.E. 2nd Ave., Monday afternoon at 2:30 and Monday evening at 8, April 9.

"Dr. Kloss makes more delicious table foods from soy bean than any one else known. The soy bean is a complete food, and is highly alkaline. Following is a partial list of the foods he makes:

"Soy bean milk, soy bean buttermilk, cottage cheese, ice cream, bread, buns, pies, cake, cookies, roast, coffee, pancakes, butter [probably soynut butter], mayonnaise, broth. These foods do not contain any cane sugar or other harmful ingredients. They are most economical, simple to prepare, and very healthful and inexpensive. The use of the articles would mean a great saving of money, and preserving of health. They must be seen and tasted to be appreciated."

Note 1. This is the earliest document seen (March 2000) that mentions soy mayonnaise.

Note 2. This is the earliest document seen (Oct. 2013) that mentions a "cream cheese" or "yellow cheese" made from soy beans (one of two documents).

Note 3. This is the earliest document seen (March 2007) that mentions Jethro Kloss' work with soy bean ice cream.

Note 4. As of Nov. 1990 the *Miami Daily News* no longer exists. Its name was changed to the *Miami News*, it was owned by Cox, and it went out of business in about 1988. Back issues would probably be available at the Univ. of Miami.

Note 5. This is the second earliest document seen (March 2007) that uses the word "miracles" (or "miracle" or "miraculous") in connection with soy beans.

Note 6. This is the earliest document seen (Oct. 2013) that mentions a non-dairy cottage cheese–made from soy beans. Address: Florida.

670. Come and see: The wonders of the 20th century (Poster). 1934. Dr. Jethro Kloss, 500-44th St., N.W., Miami, Florida. 1 p.
• ***Summary:*** By special request Dr. [Jethro] Kloss is giving two more free lectures and food demonstrations at the Miami

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School of Applied Arts, 406 N.E. 2d Avenue, Monday, April 9, in the afternoon and evening. Following is a list of food Dr. Kloss prepares from the soybean. They do not contain any cane sugar, white flour, or other harmful ingredients: Soy bean milk, bread, buns, pies, cakes, roast, buttermilk, ice cream, jelly, sauce, cream cheese, cottage cheese, yellow cheese, coffee, pancakes, broth, mashed potatoes, mayonnaise, butter.

"Learn to make this alkaline milk from soybeans, it taste's [sic] better than other milks, and has a better analysis than cow's milk, or goat's milk. Dr. Kloss will show a table of comparative analysis prepared for him by Dr. LeClerc, Senior Chemist of the Government. This milk can be made in any home, and costs less than 2 cents per quart... Dr. Kloss' ice cream made from the soybean milk is as delicious as any on the market, and very inexpensive and healthy. Learn to make these products in your own kitchens."

Note: This is the earliest document seen (Oct. 2013) that mentions a "cream cheese" made from soybeans (one of two documents). This cream cheese was developed by Jethro Kloss. Address: 500 44th St., N.W., Miami, Florida. Phone: Edgewater 1128-J.

671. Loma Linda Food Co. 1934. The way to health. Loma Linda Foods. Carefully consider your diet (Ad). *Health* (*Mountain View, California*) 1(1):33. April.
• ***Summary:*** Ad for Breakfast Cup [non-soy coffee substitute], Fruit Cereal, Flaxseed Wafers, Soy Wafers, Lima Bean Wafers, Fruit Crackers, Proteena, Nuteena, Smotone, and Smoteen (These four do not contain meat, but can be used like meat), Soy Beans with Proteena and Tomato Sauce. These foods can be used to "build a nonstimulating diet."

Note: This is the earliest document seen (Oct. 2004) concerning the work of Loma Linda Food Co. with soyfood products. Address: Loma Linda, California.

672. **Product Name:** Loma Linda Breakfast Cup (Coffee Substitute).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1934 April.
New Product–Documentation: Ad in Health (Mountain View, CA). 1934. April. 1(1):33. "The Way to Health. Loma Linda Foods. Carefully Consider Your Diet." A photo shows a can of "Breakfast Cup." The front panel of the label states: "Contains no coffee." Also in June 1934. p. 33. "Health Diet for Hot Weather."

Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 52. "Loma Linda Foods: Breakfast Cup. $0.25." Note: This product is not listed under "Soy Products."

The Loma Linda line: 35 selected recipes (booklet). 1944? Page 14. "Breakfast Cup: A delightful drink for all the family–children included. The base is soy beans which are skillfully blended with grain, and figs. Has a distinctive flavor. Is made and served like coffee. It is a 'different,' unique alkaline beverage."

Soybean Blue Book. 1949. p. 98. Address is Loma Linda Food Co., Arlington, California. Also listed in 1970 Blue Book.

673. **Product Name:** Loma Linda Smoteen, and Smotone.
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1934 April.
New Product–Documentation: Ad in Health (Mountain View, California). 1934. April. 1(1):33. "The Way to Health. Loma Linda Foods. Carefully Consider Your Diet." The text reads: "Build a nonstimulating diet... Proteena and Nuteena, Smotone and Smoteen–to be used like meat."

674. **Product Name:** Loma Linda Soy Wafers (Also called Soy Bean Wafers). Renamed Soy Weet Wafers by 1940.
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1934 April.
Ingredients: Incl. soy flour, wheat flour, all-vegetable shortening.
New Product–Documentation: Ad in Health (Mountain View, California). 1934. April. p. 33. "The Way to Health. Loma Linda Foods. Carefully Consider Your Diet." Loma Linda crackers contain no soda, no baking powder, and no lard.

House of Better Living Catalog. 1936. March. p. 8. Retail for $0.35/lb bulk. House of Better Living Catalog. 1938. March. p. 13. 10 oz pkg. for $0.20.

Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 52. "Loma Linda Foods–Soy Products: Soy Weet Wafers. $0.20."

The Loma Linda line: 35 selected recipes (booklet). 1944? Page 15. Soy-Weet Wafers. "Made from specially prepared soy flour combined with wheat. Only all-vegetable shortening is used. Fine to serve with salads. Crisp, alkaline, unique." Arlington, Riverside, California.

675. **Product Name:** Loma Linda Soy Beans with Proteena and Tomato Sauce.
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1934 April.
New Product–Documentation: Ad in Health magazine. 1934. April. 1(1):33. "The Way to Health. Loma Linda Foods. Carefully Consider Your Diet." "Soy Beans with Proteena and Tomato Sauce.

House of Better Living Catalog. 1936. March. p. 10. "Loma Linda Soy Beans, with Proteena, No. 1 can $0.15." Wholesale price list. Soybean Blue Book. 1949. p. 99. Address is Arlington, California. "Pack dry soybeans in

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tomato sauce." Note: A product named "Proteena" was introduced by 1934 and still existed in 1963.

676. Pierce (S.S.) Co. 1934. Spring and summer mail order catalog. *The Epicure* (*Boston and Brookline, Massachusetts*) 48(1):1-72. May. Illust. Index. 28 cm.
• ***Summary:*** This company, which delivers fine specialty foods throughout New England, was established in 1831 and incorporated in 1894. Soy related items: Chinese foods–Ingredients for making Chop Suey: La Choy Soy Sauce (6½ oz bottle, $0.23, p. 40). Flour and meal–Dietetic flour: Cellu Soy Bean Flour (5 lb tins, $1.00, p. 43). Sauces–Worcestershire sauce: Lea & Perrins (large, $0.57; small, $0.29, p. 50). Note: Under "Sauces," no soy sauces are listed. But there is Harvey Sauce from Crosse & Blackwell, and H.P. Sauce.

Vegetables–Dried vegetables, Beans: Soy ($0.12/lb, p. 53).

Battle Creek Foods Department [Michigan] (full page, with photo and illustrations, p. 72)–Crackers: Soy Bean Biscuits ($0.60/package). Soy Gluten Bread ($0.35/tin). Flour: Soy Flour ($0.35/14 oz tin). Vegetables: Soy Beans, Baked ($0.18/11 oz tin).

Battle Creek Foods also offers: Psyllium seed. Bran-Gluten Flakes. Zo (a cereal rich in food iron and vitamin B). Kaffir tea (made from a shrub native to South Africa). Malted Nuts ("a vegetable substitute for milk, containing malt sugar"). Minute Brew (cereal beverage with coffee-like flavor). Bran biscuit. Gluten bread. Gluten biscuits. Rice biscuits. Nut butters: Almond butter and peanut butter. Savita (yeast extract, bouillon cubes, sal-Savita salt). Vegetable meats: Nuttolene, Nuttose, Protose, Saucettes. Vegetable gelatin (agar, flaked).

Note: Inserted in this catalog is an undated leaflet titled: "You are invited to attend a special demonstration of Battle Creek Special Purpose Foods, conducted by Miss Minnie Duffy, Oct. 12 to Oct. 17 at Park Grocery Co., 18-20 North Diamond, Mansfield, Ohio." Small photos show: (1) Battle Creek Sanitarium. (2) Miami Battle Creek Sanitarium [Florida]. (3) Battle Creek Food Co. Address: Importers and Grocers, Boston and Brookline, Massachusetts.

677. La Sierra Industries. 1934. La Sierra soy bean products: Perfect protein, high alkaline ash, low starch (Ad). *Health* (*Mountain View, California*) 1(3):30. June.
• ***Summary:*** "Add variety and new flavors to your menu with the following foods–soy cheese [tofu], soy milk, soy butter [like a soynut butter, non-hydrogenated], sandwich spread, canned soy beans, soy breakfast food, soy flour (raw), Mamenoka, Smoein, Soy-Co (beverage), soy oil, soy noodles, soy loaf.

"Low in price. Ask your health food store or grocer, or write to La Sierra Industries."

Note 1. This is the earliest document seen (June 2001) that advertises or markets tofu.

Note 2. This is the earliest dated publication seen (Sept. 2000) concerning La Sierra Foods and soy.

Note 3. This is the earliest English-language document seen (Dec. 2012) that uses the term "soy butter" to refer to soynut butter. Address: Arlington, California.

678. **Product Name:** La Sierra Soy Breakfast Food (Ready to Serve Cereal).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1934 June.
New Product–Documentation: Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline Ash, Low Starch." House of Better Living Catalog. 1936. March. p. 6. "Soy Bean Breakfast Food." 6 oz. package for $0.15, 12 oz. for $0.25, and bulk, $0.30/lb. Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46.

679. **Product Name:** La Sierra Soy Oil.
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1934 June.
New Product–Documentation: Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline Ash, Low Starch." House of Better Living Catalog. 1936. March. p. 9. No. 2 can sells for $0.40. House of Butter Living. 1936. Sept. p. 3.

680. **Product Name:** La Sierra Soy Noodles.
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1934 June.
New Product–Documentation: Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline Ash, Low Starch."

681. **Product Name:** La Sierra Soy Loaf (Meat Substitute).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Arlington, California.
Date of Introduction: 1934 June.
Wt/Vol., Packaging, Price: 8 oz can.
New Product–Documentation: Ad in Health magazine. 1934. 1(3):30. June. "La Sierra Soybean Products: Perfect Protein, High Alkaline Ash, Low Starch." House of Better Living Catalog. 1936. March. p. 9. 8 oz. can for $0.15 retail. Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46.

682. Loma Linda Food Company. 1934. Loma Linda Foods: Health diet for hot weather (Ad). *Health* (*Mountain View, California*) 1(3):33. June.
• ***Summary:*** Ad for Breakfast Cup [non-soy coffee substitute], Loma Linda Wafers (no soda, no baking powder,

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no lard), Proteena, Nuteena, Smotone, Smoteen (these 4 canned products to be used like meat), Syl-Dex (a ten-minute breakfast food).

Note: It is not clear, which, if any, of these foods contain soya. Address: Loma Linda Food Co., Loma Linda, California.

683. Van Gundy, Dorothea. 1934. Soy beans: The new thing in foods. *Health* (*Mountain View, California*) 1(3):13, 30. June. [3 ref]

• ***Summary:*** Just below the subtitle is written: "Soy beans are going to revolutionize humanity"–Dr. A.A. Horvath. This article discusses: Nutritional value of soybeans, soybeans as a source of "complete protein" (which, when taken alone, will furnish all the essential elements for proper nutrition in sufficient quantities so there will be no impairment in growth or maintenance), soybeans for those who are seeking wholesome vegetable proteins to substitute for animal proteins, soy-bean flour (all cereals yield an acid ash, but soy flour is high in alkaline ash), whole soy beans (baked or pressure cooked), soy milk, and soy cheese or soy curd ("The Oriental people call it *tofu,* and make great use of it in their diets").

Soy beans "may be brought into the diet in almost any of the courses from soup to nuts, even entering the dessert course, for pumpkin pie made from soy milk with a crust made from soy flour is most delicious. Soy cookies are very nutritious as well as tasty.

"This unique food of the Orient is fast becoming Westernized, for all who study foods and nutrition are recognizing the value of the soy bean. Its high percentage of complete protein, its low starch content, its high alkaline ash, its valuable mineral and vitamin content, and its great versatility predestine this food to become an important and valuable addition to the American bill of fare." Address: Dietitian, California.

684. *Arkansas Gazette* (*Little Rock*). 1934. Soybean experts in national meet: Delegates from every producing area in U.S. at opening session. Value as food shown. Convention will adjourn to Stuttgart today and will conclude Saturday at Marianna. Aug. 23. p. 1, cols. 3-5.

• ***Summary:*** "Representatives from every section of the soybean producing area of the United States attended the opening session of the 1934 meeting of the American Soybean Association at the Hotel Marion last night."

"Special interest in the soybean as human food is being shown at this time because of the shortage of grain crops, Dr. P.A. Webber of the Nashville Agricultural Normal Institute at Madison, Tennessee, secretary-treasurer of the association, said before last night's meeting.

"He had several samples of products from the soybean, such as meat substitutes, crackers and flour. Dr. Webber said the production of soybeans is his hobby. He spent several years in Japan doing educational work and at this time studied the production of soybeans."

"Walter Godchaux of New Orleans, La. [Louisiana], vice president of Godchaux Sugars Inc., said he has been using soybeans on his sugar plantations for the past 10 years for a cover crop and for fertilization purposes. Mr. Godchaux has approximately 15,000 acres planted in sugar. Last year, he said he purchased approximately 3,000 bushels of soybeans."

"Chikayoshi Nagakura of Tokio, Japan, representative of the South Manchuria Railway Co. in New York city, attended last night's meeting to obtain information on the production of the American soybean. He said that practically the entire tonnage of his railway in Manchuria consisted of soybeans."

"Lunch will be served at Stuttgart. Speakers there will include: Jacob Hartz of Stuttgart and Dr. J.E. LeClerc Sr., chemist of the Bureau of Soils and Chemistry of the Department of Agriculture, Washington, D.C."

Photos show: Walter Godchaux and Chikayoshi Nakagura.

685. *Arkansas Democrat* (*Little Rock*). 1934. Soybean uses practically unlimited: Bright future for growers predicted by Association heads. Aug. 24. p. 22, col. 2.

• ***Summary:*** "Stuttgart, Aug. 24.–(Special.)–Closing what one member said 'has been one of our most interesting and instructive meetings,' the American Soybean Association completed its research work in the grand Prairie area this morning with the inspection of two more farms and headed toward Marianna, where it will adjourn tonight after a program at the cotton branch experiment station.

"Members of the association, gathered from many states, were enthusiastic over prospects for further growth of 'the young giant, the soybean,' whose recognition by Americans as one of the most valuable food products in the world, they say, is on its way.

"They listened eagerly yesterday to the prediction by Dr. J.E. LeClerc, chemist of the United States Department of Agriculture, that soya flour some day may be used universally in bread as a valuable adjunct to wheat."

"Other possible soybean uses, said Dr. P.A. Webber of Nashville, Tennessee, secretary-treasurer of the association, are practically unlimited in number."

Jacob Hartz of Stuttgart said in an address that Grand Prairie now grows 35,000 of the 90,000 acres of soybeans grown in Arkansas.

686. Kellogg, John Harvey. 1934. Method of making acidophilus milk [from soybean milk]. *U.S. Patent* 1,982,994. Dec. 4. 2 p. Application filed 14 June 1933. [1 ref]

• ***Summary:*** An "acidophilus milk" or "buttermilk" type product was prepared by inoculating sterilized soybean milk with *Bacillus acidophilus* and culturing the milk at

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about 100ºF. About 2% lactose may be added to the milk. The "culture count in soy acidophilus milk far exceeds the count in cow acidophilus milk. Old cultures are rejuvenated immediately. The organism is thicker and grouped in longer strings. Persons who are sensitized against cow's milk may employ soy acidophilus milk without experiencing allergic symptoms. In cases of acute colitis, especially in children, when cow's milk must be avoided, soy acidophilus milk is of special service. Likewise in cases of extreme toxemia, when all animal proteins are harmful to the patient, soy acidophilus milk may be used as a source of protein." Address: Battle Creek, Michigan.

687. *Good Health* (*Battle Creek, Michigan*). 1934. The quintuplets. 69(12):19. Dec.
• ***Summary:*** Dr. A.R. Dafoe is generously caring for these five infant girls in one of Canada's frontier provinces. When the babies were recently attacked by bowel troubles, they were quickly fed "a potent culture of B. Acidophilus, the protective germ that Nature supplies to every nursing infant mammal..."

688. **Product Name:** Soya Bean Flour.
Manufacturer's Name: Great Valley Mills.
Manufacturer's Address: Paoli, Pennsylvania.
Date of Introduction: 1934 December.
New Product–Documentation: A.A. Horvath. 1935. *Food Industries.* Jan. p. 15. "Acceptance of soya flour depends on correct processing." A photo shows this product.

USDA Bureau of Plant Industry. Div. of Forage Crops and Diseases. 1942, July. "Firms manufacturing or handling soybean food products." Great Valley Mills in Paoli, Pennsylvania.

Note: This is the earliest known commercial soy product made in Pennsylvania.

689. **Product Name:** Loma Linda Soy Mince Sandwich Spread.
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1934.
New Product–Documentation: House of Better Living Catalog. 1936. March. p. 9. 8 oz. for $0.15. House of Better Living. 1936. Sept. p. 4. "Loma Linda soy mince spread." Ad in California Health News. 1937. Feb. 19. p. 9. "It's delightful." Ad in Health (Mountain View, CA). 1937. April. 4(4):25. "Seven Items of a Quality Line." Ad in Health News (Hollywood, California). 1940. July 26. p. 8-9. "Plan another picnic." Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 52. "Loma Linda Foods: Soy Mince Sandwich Spread. $0.16.

The Loma Linda line: 35 selected recipes (booklet). 1944? Page 5. "Soy Mince Sandwich Spread. Specially ground soy beans with nuts, olives, tomatoes, and choice vegetable flavoring. May be used plain, with mayonnaise, or with eggs." Plus 9 recipes. Wholesale price list. 1945. *Soybean Digest Blue Book.* 1970. p. 114. Interview with Charlotte Van Gundy Holmes. 1981. Recalls that this product appeared in 1933-34.

690. **Product Name:** Loma Linda Soy Milk (Canned).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1934.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Some Products of LLF. 1934. Handwritten manuscript. "Soy milk experiments by Harry Meger." House of Better Living. 1936. Sept. p. 4. "Soy Milk with a pleasing taste, and full of nutrition, SOY MILK is one of several Loma Linda soy products." Price list. 1938. Sold in plain and chocolate flavors.

Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 52. "Loma Linda Foods: Soy Milk. $0.10, $0.15, $0.25." Loma Linda. 1945. Wholesale price list; Today's Food. 1966. Spring. States that Loma Linda first began making soy milk in about 1930.

Thomas' Wholesale Grocery... Register. 1955. July. p. 1474. Soy products. California, Arlington: Loma Linda Foods Co. (Soy milk).

Interview with Charlotte Holmes. 1981; Shurtleff & Aoyagi. 1984. Soymilk Industry and Market. p. 26.

691. **Product Name:** Loma Linda VegeCheese (Or Vege-Cheese; Canned Tofu with Pimiento).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1934.
Ingredients: In 1971: Soybeans, soy oil, peanuts, pimiento, salt.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Interview with Charlotte Van Gundy Holmes. 1981. Recalls that this tofu product appeared in 1933-34. Wholesale price list. 1944. Loma Linda was still making tofu in 1961.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 160. Lists the ingredients in "VegeCheese (Loma Linda)."

692. **Product Name:** Loma Linda Soy Bean Bread.
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1934.
New Product–Documentation: Some Products of LLF. 1934. Handwritten.

693. **Product Name:** Nuteena (Nut-Based Meat Substitute).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.

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Date of Introduction: 1934.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in *Health* (Mountain View, California). 1934. April. p. 33. "The Way to Health. Loma Linda Foods. Carefully Consider Your Diet." A can of Nuteena is shown. "Does not contain meat."

"Ad in *California Health News*. 1937. July 23. p. 9.

Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 52. "Loma Linda Foods: Vegetarian Meats–Nuteena $0.15. $0.25."

Loma Linda Food Co. 1969. "Wholesale Price List." Nuteena is now sold in 14 oz, 20 oz, and 30 oz cans.

694. **Product Name:** Proteena (Meat Substitute).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1934.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in *Health* (Mountain View, California). 1934. April. p. 33. "The Way to Health. Loma Linda Foods. Carefully Consider Your Diet." A can of Proteena is shown. "Does not contain meat."

Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 52. "Loma Linda Foods: Vegetarian Meats–Proteena (Plain). $0.15. $0.25."

Loma Linda Food Co. 1969. "Wholesale Price List." Proteena is now sold in 14 oz, 20 oz, and 30 oz cans.

695. Battle Creek Food Co. 1934. Healthful living. Battle Creek, Michigan. 64 p.
• ***Summary:*** The top one-third of the front cover contains a photo of the Battle Creek Sanitarium, with the tall twin towers. The bottom third is a table of contents.

The section titled "Nut butters" (p. 13) contains a description of the company's products with a photo of a jar of peanut butter; in the middle of the label is written "The Original." "Peanut butter–We were the originators of peanut butter, which we first made for the Battle Creek Sanitarium in 1892. We at first roasted the nuts, but found that roasting destroyed some of the fine qualities and rendered the product hard to digest. After much experimenting, we discovered a new process whereby a far more delicious and entirely wholesome product could be made without roasting. The roasted nut butter is difficult for some people to digest.

"Our peanut butter is prepared from choicest nuts. A most excellent fattening food. Capital for use in sandwiches and salads.

"Almond butter–Prepared by our own process from the finest quality of sweet almonds. Thoroughly cooked and emulsified, it dissolves readily in water, and until opened will keep indefinitely in any climate.

"Almond butter may be prepared for table use by mixing with an equal amount of water and adding salt. This makes delightful sandwiches. Mixed with equal parts of lemon juice and salt to taste, you have a sour salad dressing. Makes delicious nut cream and nut milk."

The price list (p. 64) gives the prices for 132 foods–including various sizes. Among these are Agar (flaked), Almond butter (8 oz jar, $1.35), Bran biscuit, Bran–cooked, Bromose–Nut, Dietetic bran (starchless), Gluten bread in tin, Gluten biscuit–40%, Gluten flour (5 lb sack), Granola, Meltose, Kaffir tea, Malted nuts, Meltose sugar (malt sugar), Nuttolene, Nuttose, olive oil, Peanut butter (8 oz jar, $0.40), Protose vegetable meat, Savita, Soy beans baked (11 oz tin, $0.18), Soy bean biscuit (package, $0.60), Soy flour (14 oz tin, $0.35; 5 lb tin, $1.25), Soy gluten bread ($0.35), Vegetable gelatin, Whole wheat flour (100%, 5 lbs, $0.55), Whole wheat wafers, Yogurt tablets, Zwieback. Address: Battle Creek, Michigan.

696. Battle Creek Food Co. 1934? Battle Creek special purpose foods. Battle Creek. Michigan. 2 panels each side. One panel 9 x 10.5 cm. The other: 9 x 16.5 cm. Undated.
• ***Summary:*** See next page. Front panels: (1) "You are invited to attend a special demonstration of Battle Creek Special Purpose Foods, conducted by Miss Minnie Duffy, Oct. 12 to Oct. 17 at Park Grocery Co., 18-20 North Diamond, Mansfield, Ohio." (2) Small photos show: (a) Battle Creek Sanitarium. (b) Miami Battle Creek Sanitarium [Florida].

Inside panel: "The story of Battle Creek special purpose foods: Half a century ago, a doctor [John H. Kellogg] became interested in the treatment of disease by foods. He first experimented upon himself and then animals and only after that were the foods given to his patients. His discoveries were so astounding that his books on diet soon became best sellers, often running into hundreds of thousands.

"He organized the Battle Creek Sanitarium where he put into practice his knowledge of diet to cure disease. He has been eminently successful as director of The Battle Creek Sanitarium ever since its founding. He lately opened another sanitarium which is proving very successful (The Miami-Battle Creek).

"The foods he invented were so successful that they became the foundation of the Battle Creek Food industries. Scores of imitators have appeared but The Battle Creek Food Company still holds its place as the pioneer in the discovery and invention of foods for health.

"Every product of The Battle Creek Food Company has been made first for use in the Battle Creek Sanitarium. Each one is validated by clinical test before being offered to the public.

"Battle Creek Special Purpose Foods because of their superiority and scientific background have become known all over the civilized world.

"Whether you wish to gain or lose weight, combat faulty elimination, follow a low starch diet, or just to round out your regular diet you will find among these foods just what

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You Are Invited to Attend a Special Demonstration of

BATTLE CREEK SPECIAL PURPOSE FOODS

Conducted by

Miss Minnie Duffy Oct. 12 to Oct. 17

at

PARK GROCERY CO.

18-20 North Diamond Mansfield, Ohio

THE BATTLE CREEK SANITARIUM

MIAMI BATTLE CREEK SANITARIUM

The Story of Battle Creek Special Purpose Foods

HALF a century ago, a doctor became interested in the treatment of disease by foods. He first experimented upon himself and then animals and only after that were the foods given to his patients. His discoveries were so astounding that his books on diet soon became best sellers, often running into hundreds of thousands.

He organized the Battle Creek Sanitarium where he put into practice his knowledge of diet to cure disease. He has been eminently successful as director of The Battle Creek Sanitarium ever since its founding. He lately opened another sanitarium which is proving very successful (The Miami-Battle Creek).

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Battle Creek Special Purpose Foods because of their superiority and scientific background have become known all over the civilized world.

Whether you wish to gain or lose weight, combat faulty elimination, follow a low starch diet, or just to round out your regular diet you will find among these foods just what you need.

Ask for a copy of "How to Eat to Build and Maintain Health," the 64-page Battle Creek Diet System book.

30972

PRINTED IN U.S.A.

THERE ARE BATTLE CREEK SPECIAL PURPOSE FOODS FOR EVERY DIETETIC NEED

THE BATTLE CREEK FOOD CO.

for the REDUCING DIET

- Gluten Bread in tin
- Soy Products
- Canned Fruits (Unsweetened)
- Gluten Flour
- Savita
- Bran Biscuit

for the LAXATIVE DIET

- Lacto-Dextrin
- LD-LAX or Kaba
- Paramels
- Paralax with Agar
- Bran Biscuit
- Fig-Bran

for the WEIGHT GAINING DIET

- Malted Nuts
- Lacto-Dextrin
- Food Ferrin
- "ZO"
- Meltose
- Ripe Olives

for the LOW STARCH DIET

- Gluten Flour
- Savita
- Soy Bean Biscuit
- Gluten Bread in tin
- Canned Fruits (Unsweetened)
- Food Ferrin (Unsweetened)

The Battle Creek Food Co. BATTLE CREEK MICHIGAN

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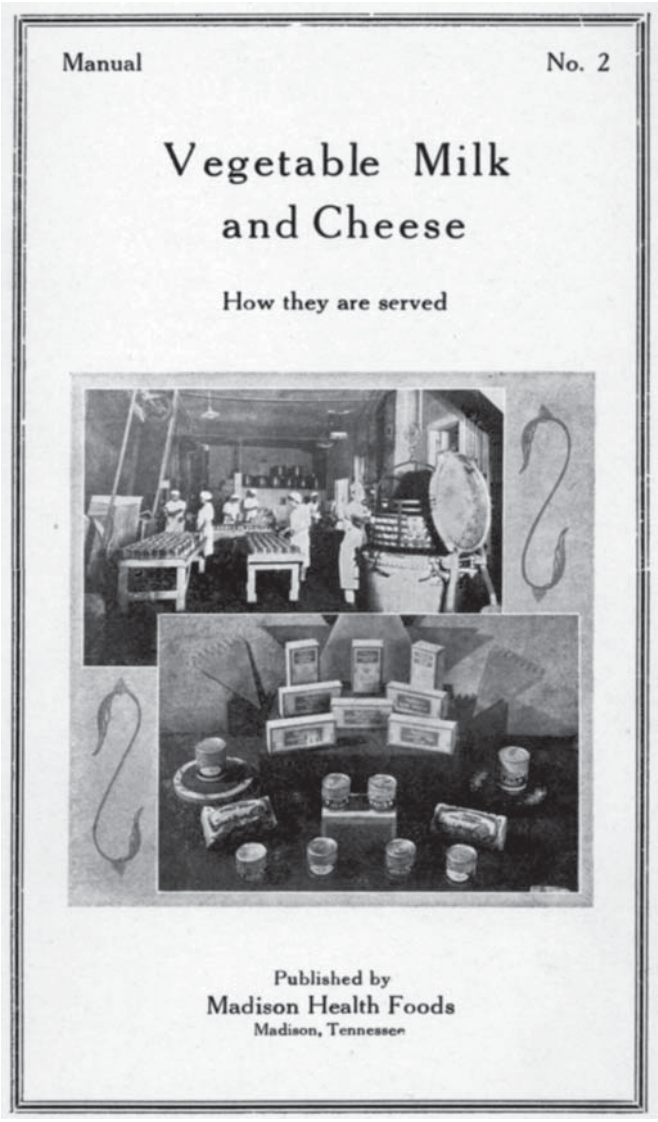
you need.

"Ask for a copy of 'How to Eat to Build and Maintain Health,' the 64-page Battle Creek Diet System book."

Rear panels: (1) "There are Battle Creek special purpose foods for every dietetic need." A small photo shows the Battle Creek Food Co. (2) For the reducing diet: Gluten bread in tin. Soy products. Canned fruits (unsweetened). Gluten flour. Savita. Bran biscuit. For the laxative diet: Lacto-Dextrin. LD-Lax or Kaba, Paramels, Paralax with Agar, Bran Biscuit, Fig-Bran. For the weight gaining diet: Malted nuts. Lacto dextrin. Food ferrin. "Zo." Meltose. Ripe olives. For the low starch diet: Gluten flour. Savita. Soy bean biscuit. Gluten bread in tin. Canned fruits (unsweetened). Food ferrin (unsweetened). Address: Battle Creek. Michigan.

697. Madison Health Foods. 1934? Vegetable milk and cheese. How they are served. Manual No. 2. Madison, Tennessee. 21 p. Undated. 22 cm.



• ***Summary:*** Contents: Introduction. Composition of the soybean. Soybean–A food for infants. Salads: How to make a perfect salad (20 recipes, including 11 with soy cheese [tofu] and 7 with grated soy cheese): Tomato, pineapple, cheese salad (with grated soy cheese). Jellied soy salad (with grated soy cheese). Waldorf cheese salad (with grated soy cheese). Raisin and soy cheese salad (with grated soy cheese). Almond and soy salad (with grated soy cheese). Sliced fruit and cheese salad (with soy cheese). Soy peach salad (with grated soy cheese). Tomato and soy salad (with soy cheese). Baked apple with soy sauce (with grated soy cheese). Pineapple and cheese salad (with grated soy cheese). Apple, carrot and soy salad (with grated soy cheese). Soybean salad (with whole soybeans). Soybean sprout salad (with soybeans sprouted until the sprouts are about 2 inches long). Cold sliced curd (with thin-sliced soy cheese). Potato soy salad (with grated soy cheese). Stuffed egg with soy cheese. Vegetable soy salad (with grated soy cheese). Cheese, cantaloupe, and tomato salad (with grated soy cheese). Mock chicken salad (with grated soy cheese). Pea soy salad (with grated soy cheese).

Sandwiches (9 recipes, incl. 5 with soy cheese and 4 with grated soy cheese; one recipe uses Vegex). Cooked vegetable dishes with soy cheese (40 recipes, all use soy cheese except 2 which use soybean puree). Other soy dishes (3 recipes). Desserts (1 recipe for Soy cream custard, with soy milk). Diabetic foods (4 recipes, each using soy meal [flour]). Soups (5 recipes, using soybeans, grated soy cheese, and soy milk or soybean milk). Breakfast dishes (4 recipes, using canned soybeans, soy meal, or grated soy cheese).

Note 1. This is the earliest English-language document seen (April 2013) that uses the term "grated soy cheese" to refer to grated tofu.

On the last page (inside rear cover) are listed "Products for sale by Madison Health Foods Inc. (Madison, Tennessee): Soy cheese, 14 or 30 oz. Soy beans, 14 or 30 oz. Soy milk, 14 or 30 oz. Soy meal, 5 or 10 lb. Also many other health products. Write for information and prices."

Two photos on the cover show: (1) Students at work inside the Madison food factory, with two long tables and a retort cooker. (2) Various food products made by the company.

Note 2. Although this booklet is undated, the two photos on the cover appear in the *Madison Survey* issue of 14 March 1934 (p. 31). Address: Madison, Tennessee.

697a. **Product Name:** Soy Milk Ice Cream [Vanilla, Avocado-Orange, Almond, Carrot Juice]..
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Ontario, California.
Date of Introduction: 1934..
Ingredients: Based on soymilk.
New Product–Documentation: In about 1931-32 Adventist T.A. Van Gundy, who ran a soy dairy in Ontario, California,

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just east of Los Angeles, began to use the soymilk produced in his commercial plant to make soymilk ice cream for his family; it was served in their home. In about 1933-34 Mrs. Van Gundy and her son displayed and sold this non-dairy frozen dessert at a big household fair and food show in Los Angeles. They served four flavors: vanilla, avocado, carrot juice, and carob (Charlotte Van Gundy 1983, personal communication). Mr. Van Gundy hoped to commercialize his soymilk ice creams, but his untimely death in 1935 (from overwork) prevented this. In 1936 Dorothea Van Gundy, T.A.'s daughter, was the first to use the term "Soy Ice Cream." She published the first recipes for homemade soymilk ice cream in La Sierra Recipes; flavors included vanilla, avocado-orange, and almond, plus strawberry and raspberry sherbets. The first two recipes called for equal parts "soy milk" and "soy cream." Soy cream was made by homogenizing 1 part soymilk with 1 part soy oil, then flavoring the mixture with vanilla, sugar, and a pinch of salt.

698. *Argus* (*The*) (*Melbourne, Victoria, Australia*). 1935. Adventists in camp: Rise early, dine cheaply. Jan. 18. p. 11.
• ***Summary:*** "Seventh Day Adventists in camp at West Preston are early astir. The rising bell is run at 6 a.m."

"Meals are cheap. Foods are obtainable at 1*d.* and 2*d.* a portion and a good dinner may be purchased for 9*d.* There is no meat and no tea in the diet. A typical menu is as follows– Savoury soup, macaroni, and nut meat, potato pie roast and mashed potatoes, cabbage, parsnips, and parsley sauce, beetroot, soja beans, steamed bread pudding, and creamed rice."

699. Horvath, A.A. 1935. Acceptance of soya flour depends on correct processing. *Food Industries* 7(1):15-16. Jan.
• ***Summary:*** The first objective of processing soybeans is to inactivate the enzymes, such as lipases, oxidases, and peroxidases, which may destroy vitamins A and D, and also liberate free fatty acids from the oil and oxidize them to nonaldehyde and dihydroxyacetone. Rapid inactivation at an appropriate temperature is recommended.

The second objective of processing soybeans in making edible soy flour is removal of the objectionable beany taste. One substance thought to cause this taste was isolated in 1927 and its formula established as a methyl-*n*-nonyl ketone, which seems to be located in the outer layers of the soybean's cotyledons.

A photo on the first page shows six commercial products containing soy flour (left to right): (1) Soy Biscuit [The Battle Creek Food Co.] "A low carbohydrate bread. Practically free from starch." (2) Mrs. Hauser's "Soy" Macaroni (each of her products in a cellophane bag). (3) Great Valley Mills Soya Bean Flour (in a box), Paoli, Pennsylvania. (4) Mrs. Hauser's "Soy" Egg Noodles. (5) Mrs. Hauser's "Soy" Foratina. (6) U.D. Vita-full. In a sealed can. "A delicious food beverage for everyone, everyday." Address: Agric. Exp. Station, Newark, Delaware.

700. Stegman, Henry M. 1935. Benefits from acidophilus milk. *Good Health* (*Battle Creek, Michigan*) 70(1):22. Jan. [1 ref]
• ***Summary:*** A recent 18-month study on 126 subjects, conducted at Cornell University [New York], showed clear benefits from the consumption of acidophilus culture. The number of acidophilus bacteria in the feces rose dramatically. "The number of streptococci and of sporulating bacteria and other putrefactive and disease-producing germs in the intestines was greatly decreased." Of the 66 constipated persons in the study, about two-thirds (44) were benefited by the acidophilus therapy and a majority of the others reported themselves much improved in physical condition.

A recent discovery has shown that soybean milk is an improved culture medium for the acidophilus. "This soy acidophilus milk has been prepared and used at the Battle Creek Sanitarium and the Miami-Battle Creek institution, and elsewhere for nearly two years [i.e. since early 1933], and has shown itself to be greatly superior to other cultures.

"This culture also has the advantage that it is more easily digestible than cow's milk and can be taken freely by persons who are unable to use cow's milk on account of sensitivity, or allergy."

701. *Good Health* (*Battle Creek, Michigan*). 1935. The quintuplets are thriving on a biologic diet. 70(3):83. March.
• ***Summary:*** "Dr. Dafoe, the highly intelligent physician who has charge of the famous Canadian quintuplets, is, fortunately for the babies and for science, a wide-awake medical man and is giving them the benefit of every resource of modern medical science which will promote their survival. The fact that they are alive today is probably due to Dr. Dafoe's sagacious recognition of the fact that because the babies were bottle-fed instead of being breast-fed, as babies normally are, they were not being properly inoculated with the protective bacteria with which babies are naturally inoculated in the act of nursing.

"This was doubtless the cause of the attack of bowel trouble which occurred last summer in one of the babies, and which if it had not been checked, would probably have involved them all, and very likely sent them to the cemetery; but Dr. Dafoe recognized the situation and at once secured [from Dr. Kellogg] for the little ones a supply of protective acidophilus germs produced by artificial culture.

"Very soon after the babies began taking the cultures (soy acidophilus milk), the bowel trouble disappeared and they have since continued to thrive.

"The mortality of bottle-fed babies is ten times that of breast-fed, and the chief cause of death is bowel troubles, the result of the growth in the intestine of disease-producing germs which are normally driven out by the protective germs provided by the mother. Many thousands of babies die every

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year because their nurses or physicians lack the knowledge or the sagacity of Dr. Dafoe, whose name will be known to all future generations of mankind as the physician of the first quintuplets who survived for more than a few hours."

Note: This is the earliest document seen (Sept. 2012) concerning the Dionne quintuplets and soy. They were born on 28 May 1934. Dr. Roy A. Dafoe was the attending physician.

702. Dittes, Frances Linda. 1935. Food for life: The art and science of preparing food. Madison, Tennessee: Associated Lecturers, Inc. xii + 332 p. Spring. Recipe index. 23 cm.
• ***Summary:*** This early Seventh-day Adventist vegetarian cookbook contains more soyfoods recipes that any published up to this time. The author, a soyfoods pioneer born in 1891, first attended Madison College in 1910 and joined the faculty in 1912. She did her graduate work in nutrition, specializing in soyfoods nutrition, at George Peabody College for Teachers (in Nashville, Tennessee), from which she received her MA degree in 1929. This book was printed by the "Rural School Press" (Madison College's school press) and published in the spring of 1935.

Contents: Part I: Food and nutrition. Milk. The acid-base balance. Fruit acids. Balancing the food. Measuring food values. Menu planning. The art and science of food preparation (preceded by this quotation: "Food will be the medicine of the future"–Harvey W. Wiley). Food combinations. Condiments. Suggestions for flavoring. Garnishings. Measurements. Part II: Recipes (listed by recipe type such as breads {some recipes call for Crisco shortening}, soups, salads, desserts, etc.). One chapter titled "Dishes to take the place of flesh foods" (p. 149-65) contains many interesting recipes such as: Preparation of gluten. Gluten pot pie. Gluten loaf. Glutose (with 5 cups ground cooked gluten, plus potatoes, eggs, and cream). Cold sliced Nut Meat or Vigorost (Nut Meat is sold in 2-lb cans, Vigorost in 14 oz cans). Peanut roast. Chow mein (with soy cheese or Nut Meat). Boiled peanuts. Soy-related recipes are given below. Another chapter is "Nutritive value of the soy bean. Soy bean dishes" (p. 166-86).

Appendixes: A. Classification of carbohydrates. B. Canning. C. Sample menus. D. 100 calorie portions of foods. E. Approximate servings and values of a few common foodstuffs. F. Protein, calcium, phosphorus, and iron in 100 calories of food material. G. Ash constituents of foods in percentage of edible portion.

The author uses the term "soy cheese" to refer to tofu. Soy-related recipes include: Soy bread (20% soy flour and 80% white wheat flour; p. 96). Soy gems (18-20 muffins using soy flour; p. 108). Tomato-soy sandwich (with grated soy cheese; p. 114). Soy noodle soup (with grated soy cheese browned in butter; p. 122). Jellied soy salad (with grated soy cheese; p. 138). Potato soy salad (with grated soy cheese; p. 138). Tomato and soy salad (with soy cheese). Waldorf soy cheese salad (with grated soy cheese; p. 139). Lentil-soy loaf (with soy bean puree; p. 157). Savory soy loaf (with soy cheese). Soy souffle (with grated soy cheese browned in butter; p. 159). To fu chi (deep-fried soy cheese stuffed with rice and seasoned with soy sauce). Soy gravy (with 3 parts soy flour and 2 parts white wheat flour).

The chapter titled "Nutritive Value of the Soy Bean" (p. 167-86) discusses the general nutritional composition, then gives details on protein, fats (including lecithin), minerals (including tofu made with magnesium chloride or calcium sulphate). Recipes are given for: Cooked soy beans. Soy milk (after soaking 1 lb of Mammoth variety soy beans overnight in water, "Wash several times in hot water to remove undesirable taste."). Soy milk no. 2. Soy acidophilus milk. Soy bean cheese [tofu, curded with calcium sulphate]. Soy bean cake [okara] loaf. Browned soy cheese. Green soy beans. Escalloped green soy beans. Dried soy beans. Baked soy beans. Soy beans southern style. Roasted soy beans. Soy beans in tomato sauce. Chop suey (with soy cheese). Sauce (with soy sauce). Soy bean omelet. Lentil soy bean loaf (with soy bean puree). Soy bean loaf. Soy bean pie (with soy bean pulp). Soy bean meat.

Note 1. This is the 2nd earliest English-language document seen (June 2013) that calls for okara as an ingredient in a recipe.

Note 2. This is the earliest English-language document seen (June 2013) that uses the term "Soy bean cake" to refer to okara.

* = made with soy bean flour. Soy bean muffins*. Soy muffins*. Soy biscuits*. Soy bread*. Soy nut bread*.

Escalloped onions with soy cheese. Baked rice with soy cheese. Escalloped potatoes with soy cheese. Spaghetti and soy cheese. Stuffed pepper with soy cheese. + = with soy cheese. Left-over croquettes+. Soy croquettes+. Soy cheese with rice. Stuffed baked potato with soy cheese. Soy fritters+. Soy cutlets+. Savory soy loaf+. Spanish chop suey+. Soy souffle (with grated soy cheese browned in butter). Cream of soy soup. Soy noodle soup+. Soy soup+. # = made with soy milk. Soy cream of tomato soup#. Soy cream of pea soup#. Soy cream custard#. Jellied soy salad+. Waldorf cheese salad+. Potato soy salad+. Stuffed egg with soy cheese. Soy bean salad. Soy bean sprout salad. Soy Vegex sandwich+. Tomato-soy sandwich+. Egg and soy sandwich+. Soy and cucumber sandwich+. Celery and soy sandwich+. Banana soy sandwich+. Scrambled egg and soy cheese sandwich. Diabetic crackers (with soy meal). Diabetic pie crust (with soy meal). Diabetic soy bean mush*.

Vegetables: Soy cheese sauce (with grated soy cheese and soy sauce, p. 195). Steamed cucumbers with soy cheese (grated, p. 201). Escalloped onion with soy cheese (p. 204). Spinach with soy cheese sauce (and Vegex, p. 207).

Desserts (p. 215-36), Cakes (p. 237-53), Pies (p. 255-60), Cookies (p. 261-68), and Ice creams and sherbets (p. 269-74). Some of these sweet recipes use agar-agar, gelatin,

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Malta (malt syrup), Health Koko, and Crisco. Some desserts call for 1-2 cups sugar per 4 servings and 1 pound of sugar is used in an icing for pound cake (p. 242). No soy is used in any sweet recipes. Note: It is surprising that Ms. Dittes and Madison had not discovered the use of tofu or soy milk in ice creams, other desserts, or dressings. Nor is peanut butter mentioned.

The chapter titled "Milk" (p. 17-21) states: "Since milk is an important food constituent, especially for children, those responsible for planning dietaries should see that each child has one quart of clean milk or its equivalent each day; adults, about one pint... *Grade A* is a raw milk from cows free from disease, having a bacteria count of not more than 100,000 per cubic centimeter at the time of delivery. *Grade B* must be pasteurized and the bacteria count must not exceed 1,000,000 per cubic centimeter. It must also come from cows free from disease." All other milk is Grade C.

The chapter titled "The acid base balance" (p. 23-24) states: "Most foods when burned in the body leave an ash in addition to the carbonic acid which is thrown off by the lungs. This ash may be either alkaline, neutral, or acid in reaction. The principal base-forming (alkaline) elements are calcium, potassium, magnesium, and sodium, while the chief acid-forming elements in foods are sulfur, phosphorus, and chlorine... A neutral or slightly alkaline condition will produce a feeling of buoyancy, health, vigor, and clear mental activity... In general, all fruits and vegetables (with a few exceptions) are potent in producing alkaline ash. Meat, eggs, breads, and cereals are acid-formers."

The chapter titled "Condiments" (p. 51-52) states: "Spices, such as mustard, ginger, pepper, horseradish, curry, and cloves, are among the most irritating of the seasonings used. It would be better if these exciting substances were not added to the food... Vinegar contains acetic acid which is burned in the body with difficulty. Citric acid as found in the lemon juice is more easily oxidized in the tissues. Lemon juice, therefore, makes a good substitute for vinegar, both as to ease of oxidation and flavor." Address: Director, Food and Nutrition, Nashville Agricultural Normal Inst., Madison Rural Sanitarium and Hospital, Madison, Tennessee.

703. Curran, Howard A. 1935. Obituaries: Van Gundy, Theodore A. *Pacific Union Recorder* (*Angwin, California*). June 26. p. 6. [1 ref]

• ***Summary:*** "Van Gundy was born in Osa Flaco, San Luis Obispo Co., California, July 8, 1874. He attended Healdsburg College and later took the nurses' course. In 1898 he married Lulu Pond. To them three children were born, Theodore Romaine, Dorothea, and Charlotte. Brother Van Gundy passed away June 1, 1935. The devoted wife, three children, and other relatives and a wide circle of friends did not sorrow as those who have no hope, knowing that this dear brother was fully ready to go. The funeral services were conducted by Elder C.M. Sorenson, assisted by Elder Seat, Brother Gober and the writer."

Note: Letter (fax) from Betty Minton of La Sierra University Church. 2000. Nov. 15. Elder C.M. Sorensen was the president of La Sierra College and pastor of the church in 1935. Elder E. Toral Seat was an evangelist and was not assigned to a specific church. Her records show that Theodore Van Gundy [probably Theodore Romaine, the son of T.A. Van Gundy] transferred his membership to La Sierra University Church in 1949 from the Arlington church in Southern California; he died in 1950.

704. Lager, Mildred. 1935. Food facts. Los Angeles, California: House of Better Living. 228 + 10 p. No index. 23 cm. [34 ref]

• ***Summary:*** Contents: 1. Purpose of food. 2. Classes of food. 3. Natural foods are best. 4. Acid-alkaline balance. 5. Minerals. 6. Vitamins. 7. Proteins. 8. Carbohydrates. 9. Fats. 10. Fruits. 11. Vegetables. 12. Beverages. 13. Better cooking. 14. Food combinations. 15. The mental side of health. 16. What is the "House of Better Living."

Pages 67-68 contain a very positive section on soy beans and foods made from them, including whole soybeans, "curd cheese, resembling cottage cheese [tofu], and soy bean milk... Other soy food products are soy butter [no description is given; this is probably soynut butter from T.A. Van Gundy's La Sierra Foods, but it could be margarine made from soy oil], soy loaf (combined with gluten), soy sandwich spread, soy bologna, soy oil, soy sauce, soy ready-to-serve breakfast foods, coffee substitute, as well as soy flour. Soy flour is yellow and fluffy, and can be used in all baking... Soy macaroni, noodles, spaghetti, bread, and pancake flour are also on the market. Soy beans are also sugar coated for candy and toasted as peanuts. They are a wonderful food for animals and have been used in that way in this country for years. Today the governments of Europe and America are devoting a great deal of attention to the soy bean as human food and the next few years will see an increased consumption, as well as many new soy products."

Page 75 contains a nutritional analysis of soy beans.

In the chapter on Acid-alkaline balance (p. 22-25), foods with the most acid ash are egg yolk and oysters, followed by eggs, most fish and meats. Foods with the most alkaline ash are lima beans, string beans, dried beans, spinach, raisins, figs, dates, and dried milk, followed by soy beans, soy bean tea, and most vegetables. The author believes that one should keep an alkaline balance in the body. Sleep is a great alkalinizer.

The subsection titled "Lima beans: states: "Dr. Sansum of Santa Barbara was instrumental in having lima bean flour made, and Bill Baker of Ojai, California pioneered this field, developing the original lima bean bread and lima bean pancake flour."

This is not a vegetarian book. Meat and dairy products are discussed at length, and their consumption is not

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discouraged. However this is the earliest book seen that uses the term "natural foods" prominently–in this case as a chapter title.

Also discusses (see index for page numbers): Acidophilus milk, alfalfa (alfalfa tea has alkaline ash, p. 35), almonds, almond oil, aluminum, avocado, bran, carob beans, chufas, cottonseed, cottonseed oil, garbanzas, kephir, lentils, lima beans, linseed, margarine / oleomargarine, olive oil, olives, palm oil, palm kernel oil, peanuts, peanut oil, rape seed oil, sago, sesame oil.

Note 1. This is the earliest document seen (Sept. 2009) concerning Mildred Lager and soy.

Note 2. This is the 2nd earliest document seen (July 2005) that mentions a food or drink product ("alfalfa tea") made from alfalfa. This is also the earliest English-language document seen (July 2005) that contains the term "alfalfa tea." It was used for its alkaline ash. Address: House of Better Living, 1207 West 6th St., Los Angeles, California. Phone: Mutual 2085.

705. *Advent Review and Sabbath Herald.* 1935. Obituaries: Van Gundy. July 25. p. 22. [1 ref]
• ***Summary:*** "Theodore A. Van Gundy was born at Osa Flaco, California, July 8, 1874; and died June 1, 1935. He, with his wife, the former Lulu Pond, taught in our schools for a number of years. The two were greatly interested in our health work. Brother Van Gundy took the nurses' course at Dr. George A. Hare's sanitarium in Fresno. He leaves to mourn his devoted companion and three children."

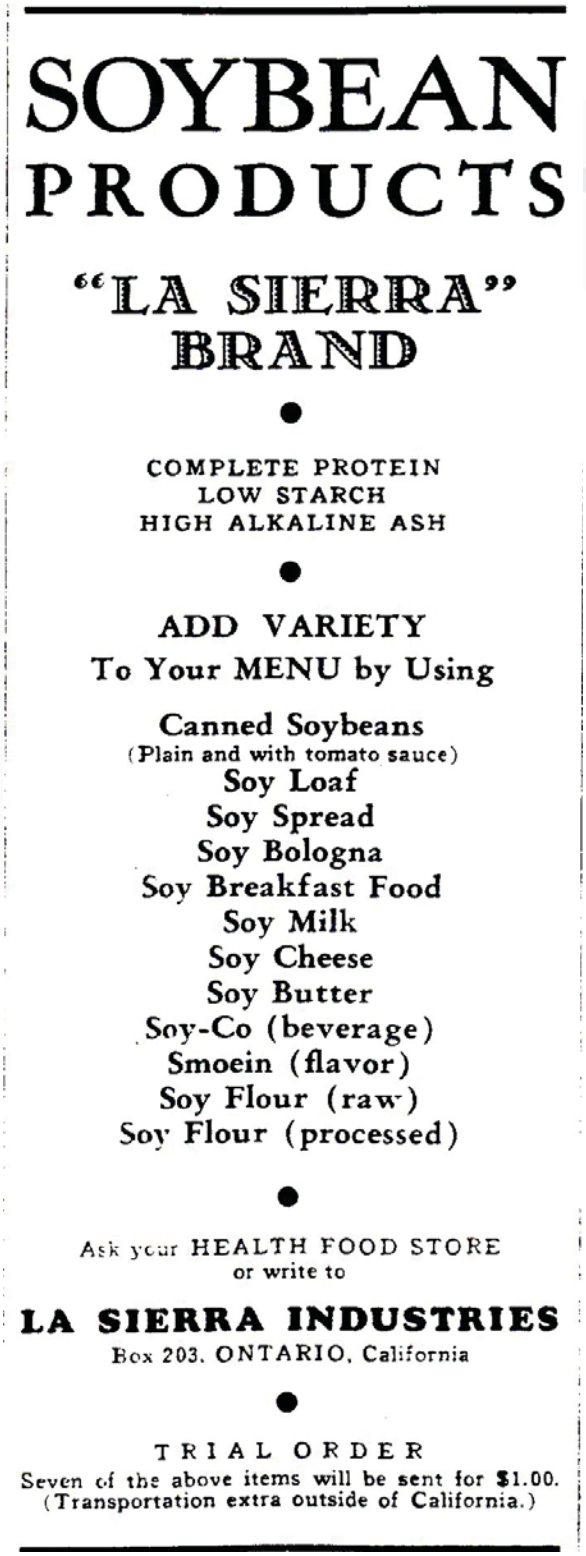
706. *Good Health* (*Battle Creek, Michigan*). 1935. Nature's method of combatting putrefaction in the colon. 70(9):245. Aug.
• ***Summary:*** Includes a discussion of *Soy Acidophilus Milk.*

707. Kellogg, John Harvey. 1935. Re: Growing soy beans. Making condensed soy bean milk and soy acidophilus milk. Letter to Mr. William J. Morse, Bureau of Plant Industry, USDA, Washington, DC, Sept. 16. 1 p. Typed, without signature (carbon copy).
• ***Summary:*** "Thank you for your letter of September 5. I am expecting to have 75 or 80 bushels of soy bean seed of the 78-day variety. I shall be glad to know if there will be any demand for this seed and at what price.

"You may be interested to know that our company is making a condensed soy bean milk which may be used either as it comes from the can or with the addition of one or two equal volumes of water according to the degree of richness desired. If you care to have me do so, I will be glad to have sent you a sample for your criticism and also a sample of our soy acidophilus which we are using extensively and with great profit."

Source: Bentley Historical Library, University of Michigan, Ann Arbor. J.H. Kellogg Collection, Box 2, Correspondence.

708. La Sierra Industries. 1935. Soy bean products, "La Sierra Brand": Complete protein, low starch, high alkaline ash (Ad). *Health* (*Mountain View, California*) 2(9):31. Sept.



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• ***Summary:*** Ad for canned soybeans (plain with tomato sauce), soy loaf, soy spread, soy bologna, soy breakfast food, soy milk, soy cheese [tofu], soy butter [like a soynut butter, non-hydrogenated], Soy-Co (beverage), Smoein (flavor), soy flour (raw), soy flour (processed).

Note: Neither Mamenoka, noodles, nor oil are mentioned. Address: Box 203, Arlington, California.

709. **Product Name:** La Sierra Canned Soybeans (Plain with Tomato Sauce).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Campus and Maitland, Box 203, Ontario, California.
Date of Introduction: 1935 September.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in Health magazine. 1935. 2(9):31. Sept. "Soy Bean Products, La Sierra Brand: Complete Protein, Low Starch, High Alkaline Ash." House of Better Living Catalog. 1936. March. p. 10. "Plain or with tomato sauce." No. 1 can for $0.13 or 2 cans for $0.25. Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46.

710. **Product Name:** La Sierra Soy Bologna (Called Soy Vegetable Bologna by 1936).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Campus and Maitland, Box 203, Ontario, California.
Date of Introduction: 1935 September.
Wt/Vol., Packaging, Price: 8 oz can.
New Product–Documentation: Ad in Health magazine. 1935. 2(9):31. Sept. "Soy Bean Products, La Sierra Brand: Complete Protein, Low Starch, High Alkaline Ash." House of Better Living Catalog. 1936. March. p. 9. 8 oz. can for $0.15. Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46. L.B. Breedlove. 1936. *Chicago J. of Commerce and La Salle Street Journal.* June 25. p. 14. "Soy bean–The magic plant. Article XI." "La Sierra Industries, Ontario, California: Meat substitutes."

711. **Product Name:** La Sierra Soy Flour (Processed. Not Raw).
Manufacturer's Name: La Sierra Industries.
Manufacturer's Address: Campus and Maitland, Box 203, Ontario, California.
Date of Introduction: 1935 September.
New Product–Documentation: Ad in Health magazine. 1935. 2(9):31. Sept. "Soy Bean Products, La Sierra Brand: Complete Protein, Low Starch, High Alkaline Ash." Ad in Dorothea Van Gundy. 1936. La Sierra Recipes. p. 46.

712. Webber, Perry A. 1935. Soybeans: The wonder food. *Health* (*Mountain View, California*) 2(9):16-17, 31. Sept. [3 ref]
• ***Summary:*** This article begins: "The soybean is a plant of early cultivation in China, and for more than four thousand years has been used largely by the Chinese and other Oriental nations as human food. It is first mentioned in the "Ben Tsao Gang Mu" [Bencao Gangmu], an ancient Chinese materia medica, written in the year 2838 B.C.

"The Occident has been under the false impression that the Oriental lives almost wholly on rice. Rice is used extensively, but if we are to correct our traditional view of the rice diet, we can amend our statement by saying that it is the soybean which is probably the most universal article in the Oriental dietary. Especially is this true of the more than six hundred million dwelling in eastern Asia. During the centuries the use of the soybean has spread from its original home in Shantung and Manchuria throughout China, Korea, Japan, the Philippines, the Dutch East Indies [Indonesia], and to a limited extent to India itself.

"The Chinese make practically no use of dairy products, and the majority of the people consume a very meager amount of meat; yet, in spite of this, they have lived for centuries on what appears to be a remarkably well-balanced diet by the use of the soybean." Address: PhD, Chief of Chemistry Dept., Nashville Agricultural Inst. [Madison College, Madison], Tennessee.

713. Stegman, Henry M. 1935. Wide usefulness of the soy bean. *Good Health* (*Battle Creek, Michigan*) 70(10):315. Oct. [1 ref]
• ***Summary:*** "The advantages of the soy bean are so manifold and manifest that its cultivation is sure to spread. In the United States the demand for it grows steadily... After twenty years of experimentation it has been acclimatized in England. Henry Ford now grows it there on his two thousand acre farm in Essex, as well as in Michigan." Many food and industrial uses of the soy bean are given.

714. Kellogg, John Harvey. 1935. Re: Growing and canning shell soy beans. Making condensed soy milk and soy acidophilus milk. Letter to Mr. William J. Morse, Bureau of Plant Industry, USDA, Washington, DC, Dec. 9. 3 p. Typed, without signature (carbon copy).
• ***Summary:*** "We have been doing some experimenting this year with growing and canning shell soy beans. I am having a couple of cans sent you so you can see what our product is like. We think it is very fine. The few thousand cans we put up went off like hot cakes.

"We are thinking of doing rather extensive planting this year. We shall not have any seed to sell but may need to buy some more seed.

"Here are some points on which I should like information: 1. Do you know of anyone in this country who is putting up shell soy beans? 2. Are shell soy beans canned in Japan and China, and if so can they be purchased there and brought to this country?..."

"I should also be glad to know if you have other

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varieties of shell beans of good quality with a growing period of about the same length.

"I am also having sent to you samples of our condensed soy milk. Diluted with two or three times its volume of water, it is, I think you will agree, a very palatable product. We supply this to people who are interested in soy acidophilus milk and willing to take the trouble to make it at home. We supply them with the culture. They simply put the condensed milk into a clean fruit jar, add hot water, let it cool to body temperature and then add the culture and wrap it up in a blanket and set it on the kitchen table and the next day the buttermilk is ready.

"Soy milk produces a much more vigorous growth of the bacillus acidophilus than does cow's milk. The organism is more than twice as large and it grows twice as fast and does not require the long training, 25 to 30 transfers, required when cow's milk is used for the culture medium. In other words, the bacillus acidophilus seems to like vegetable products for a culture medium better than animal.

"I shall be glad to know how you like the milk. If you would like to try making it at home, I will have some more cans and cultures sent to you. The process is so simple any housewife can do it. Slight contamination occurs, of course, but by using a large inoculum this does not matter for the first culture; but a fresh pure culture has to be used every time. If an attempt is made to make a culture from a home made culture it will be likely to fail because of the contamination likely to occur.

"Thanking you in advance for any information you may be able to give me, I remain, dear Sir, Very sincerely yours,

"P.S. Soy acidophilus milk has become so popular at my institution here that dairy milk rarely appears on the table. Everybody likes the soy milk better, and of course when people have been properly informed they want the soy acidophilus milk to change their flora and to get rid of intestinal putrefaction and to encourage bowel action. The effect of the soy acidophilus milk in this particular is very remarkable. In cases of very chronic constipation I have observed complete recovery with two or three normal bowel actions daily.

"The Canadian quintuplets are taking soy acidophilus milk at every feeding and have been doing so since last September when they had an attack of bowel trouble which disappeared as soon as they began taking the soy acidophilus milk which I sent them and have supplied to them ever since.

"I am accumulating evidence to the effect that the soy bean encourages the growth of the protective organisms in the human intestine to a very pronounced degree and by producing acids not only prevents putrefaction but encourages bowel action.

"I think every effort possible ought to be made to spread information among the people respecting the value of the soy bean, which I am sure is some time destined to become one of the most important staple foods in this country as well as in China and Japan.

"Here is another question: One of the difficulties in the way of the soy shell bean business is the expense of picking from the vines and shelling the pods. Do you know of any machinery that is used for either of these purposes?"

Note 1. This is the earliest English-language document seen (June 2009) that uses the term "shell soy beans" to refer to shelled green vegetable soybeans.

Note 2. This is the earliest document seen (June 2009) that mentions machinery or equipment for picking / harvesting or shelling green soybeans in the pods. However it only asks a question about this machinery.

Source: Bentley Historical Library, University of Michigan, Ann Arbor. J.H. Kellogg Collection, Box 2, Correspondence.

715. **Product Name:** Granose Rissol-nut: Savoury Nut Mix.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1935.
Ingredients: Cashew nuts, wholewheat flake, wheatmeal flour, rusk, onion, soya nuts, salt, herbs, spices.
How Stored: Shelf stable.
New Product–Documentation: *The British Vegetarian.* 1960. Sept/Oct. p. 249. Granose produces Rissol-Nut in packets, and this can be quickly made up into savouries, roasts, and pasties.

Manufacturer's catalog. 1980. April. "A ground mixture which with the addition of water is ready for making into all types of rissoles, grills, roasts, and pasties."

Note: Pasty (plural = pasties) is a British term (pronounced like the word *nasty*) that refers to a small meat pie or turnover. The term, first used in the 14th century, is derived from the word *paste* meaning dough.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1935. But a note says "Not Applicable." This product does not contain any soy products and is still on the market. The ingredients are now peanuts, rusk, Wholewheat (wheat, sugar, salt, malt), wheat flour, salt, onions, herbs, spices. Label sent by Granose. 1990. July 11. Red, yellow, black, and white box. Soynuts are no longer an ingredient.

Note: This is the earliest known commercial soy product made by Granose Foods Ltd., which is presently (Dec. 2013) owned by the Haldane Foods Group Ltd.

716. Bragg, Paul C. 1935. Paul C. Bragg's personal health food cook book and menus. Burbank, California: Published by the author. Printed by Aetna Printing Co., Los Angeles. 201 p. No index. 24 cm.
• ***Summary:*** The Introduction to Chapter 22, titled "Meat substitutes or main dishes" states (p. 112): "Variety is the spice of life... Many people can live a vigorous, active,

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healthful life on a strictly vegetable diet, particularly those who are not engaged in a hard mental occupation. Even then, vegetable proteins, such as soy beans and nuts, can be substituted for meat. To take the place of meat there are the vegetables rich in protein–peas, soy beans, lima beans, kidney beans, Mexican beans, and lentils, and there are on the market many meat substitutes made of nuts and grains. The Battle Creek Sanitarium [Michigan] product, 'Protose,' is available at most fancy grocers and health-food stores. 'Savita' is a seasoning which gives a delicious meat-like flavor to all vegetable cooking. 'Vegex' is a product similar to 'Savita,'...

"The vegetable diet is a very alkaline diet, and should be used three or four times a week by everyone. Vegetable foods are porous, furnish bulkage to the intestines, and enrich the body with valuable organic minerals that are very necessary to maintaining perfect health.

"Soy beans are a marvelous source of vegetable protein, and should be fed to the family several times a week, and they furnish a rich source of energy-building food. They can be soaked over night, and then baked in tomato sauce, with a small amount of onion and chopped mushrooms. The soy bean is a food that the American public has not yet cultivated." Surprisingly, neither this chapter nor this books contains any soy bean recipes! However Vegetable shop suey (p. 116) is served with Savita Gravy or Soy sauce.

Bragg urges his readers to eat "real, natural, live food" (including whole wheat bread–the staff of life) to eat simply with a small number of foods at each meal, only when hungry. Do not worry about combining foods. Avoid white sugar, coffee and tea, salt, seasonings and spices, aluminum cooking ware, alcohol, preservatives, dyes, and white flour. He believes that eating meat (rare and unfried), fish, and eggs are important for building perfect health. Note 1. The 1930 edition of this book contained no recipes using meat or dairy products.

Chapter 11 acknowledges the use of recipes and suggestions from several health food writers and men in the field of Natural Living: (1) Dr. John T. and Mrs. Vera Richter, the leaders of the Raw Food movement in the West. (2) Dr. Philip M. Lovell, distinguished editor of the most widely read health column in the world, the Care of the Body section of the Los Angeles Times [Sunday Magazine. Note 2. The section contained many fascinating ads]. (3) Dr. Henry Lindlahr, the great pioneer Nature Doctor. (4) Otto Carque, chemist, research worker and crusader in the fight for natural foods. (5) Fannie Merritt Farmer's *The Boston Cooking School Cook Book.*

The last three pages each contain a full-page ad for mail-order products available from Bragg at Box 428, Burbank, California: (1) Bragg Dextronized [sic, Dextrinized] (Toasted) Meal with Wheat Germ will keep your energy high and your weight right. 60 cents for a 2 lb. box. (2) "Drink health." An illustration shows a hand-turned Live Food Juicer. Also mentions a large new book titled *Health Cocktails,* by Paul C. Bragg, "nationally famous Health Lecturer." The book "is full of live juice treats." Send $5.95 for both, postpaid to Live Food Products Co., Box 428, Burbank, California. (3) O.K. Lax is a marvelous laxative for relief of constipation and cleansing agent for internal sanitation. 50 cents for one package. Address: P.O. Box 428, Burbank, California.

717. Cooper, Lenna Frances; Hall, Margaret Allen. 1935. The new cookery. 12th ed. Battle Creek, Michigan: The Modern Medicine Publishing Co. 493 p. Illust. Index. 22 cm.
• ***Summary:*** A vegetarian cookbook. Soy-related recipes include: Soy bean muffins (p. 72, with 1 cup soy bean flour).

Gluten- and bran-related recipes include: Scotch bran brose (p. 50, with 1 cup Sterilized bran. Note: *Webster's Dictionary* defines brose {a term first used in 1515} as "a chiefly Scottish dish made with a boiling liquid and meal"). Gluten mush (p. 51, with 20% gluten meal). Granola fruit mush (p. 52). Bran and Zo mush (p. 52, with 1 cup each Sterilized Bran and Zo–a body-building, ready cooked cereal breakfast food). Branola (p. 52, with 1 cup Branola). Gluten bread (p. 65). Bran griddle cakes (p. 74). Gluten griddle cakes (p. 75). Gluten puffs (p. 87, with 40% gluten flour). Gluten bran puffs (p. 87-88; If used by diabetic patients, Diabetic Bran should be used).

Note: *Webster's Dictionary* defines Chautauqua (pronounced shuh-TAW-kwuh; a word first used in this way in 1873, after a lake in western New York) as: "an institution that flourished in the late 19th and early 20th centuries providing popular education combined with entertainment in the form of lectures, concerts, and plays often presented outdoors or in a tent." Address: 1. Food Director, Univ. of Michigan; formerly Dean of Home Economics, Battle Creek College; formerly, Head Dietitian, Battle Creek Sanitarium. Supervising Dietitian, United States Army (1918-1919); 2. Consulting Dietitian and Lecturer on Dietetics, Battle Creek Sanitarium and Chautauqua Lecturer.

718. Dittes, Frances L. 1935. The biological availability of cystine found in soybean cheese. *George Peabody College for Teachers, Abstract of Contribution to Education* No. 165. 36 p. Summary of PhD thesis, Dep. of Home Economics. [38 ref]
• ***Summary:*** Contents: 1. Introduction: Brief historical sketch of previous research on the soybean, the problem. 2. Experimental: General method, basal diet, materials used. 3. Discussion. 4. Summary and conclusions.

Contains many tables, most related to the growth of rats. Figures show (1) Average weight gain curves of rats receiving diets containing 18, 12 and 9 per cent soybean curd as the sole source of protein plus different amounts of cystine. (2) Average weight gain curves of rats receiving diets containing 18 per cent casein; 9, 12, 18, 24, and 30 per

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cent soybean curd as the sole source of protein. Address: Ph.D., Madison, Tennessee.

719. Kloss, Jethro. 1935. Back to Eden. Takoma Park, DC: Published by the author. 189 p. Mimeographed. 28 cm. Staple-bound (not saddle stitched).

• ***Summary:*** This treasury of herbal lore and vegan cookbook (it uses no dairy products or eggs, replacing them with soy products) is one of the most creative and original sources of early soyfoods recipes, and one of the two earliest Seventh-day Adventist cookbook to contain many soyfood recipes (see also Frances L. Dittes' *Food for Life* published in the spring of 1935). The predecessor to the popular published edition of Back to Eden, it has a dark imitation leather cover and contains many Biblical passages. This book has no title page, copyright page, publication date, or table of contents. The first page (verso) states: "Send orders for 'Back to Eden' to the author, Jethro Kloss, Takoma Park, Washington, D.C., U.S.A., when you cannot secure it from dealers in your locality. Special Notice: This book is now being revised. Some things may be eliminated, and many new things added. I have a regular experimenting outfit, and I am experimenting all of the time. No doubt there will be many new recipes made from soy beans in the Revised book... This Revised edition will be printed in Regular Book Form. Just as this book is being closed up, another most excellent article has been perfected, a Soybean, Whole Wheat Noodle. Send all orders for this product to The Royal Cookie Co., Takoma Park, Washington, D.C... This book is now being copyrighted. All rights reserved."

Underneath the copyright notice, Doris Gardiner has written "Copyright Jethro Kloss 1935." She does not recall where she got that information. No publisher is listed. Note: Takoma Park is now in Maryland, 6 miles north of Washington, DC.

This book is largely about herbs and natural healing. It contains many Biblical quotes.

Soy-related recipes include: Unleavened bread (with soy bean meal, p. 94). Gems (with soy bean flour). Soy bean bread (5:1 whole wheat flour to boiled soy bean meal, p. 97). Soy bean buns or cinnamon rolls (with soybean meal and soybean milk, p. 98). Soy bean cheese (fermented, with raw peanut butter, soy bean milk, and tomato puree, p. 104). Nut cheese No. 1 and 2 (made with raw peanut butter, water, and salt, p. 105. Can be made from different nuts; tastes like cream cheese made from whole milk). Ice cream (made with soy bean milk, dextro sugar, corn starch, and crushed fruits to taste, p. 105). Malted nut cream. Nut milk (with raw peanut butter and Soothe-a-lac {made with cocoa fat}). Soy bean milk (p. 106). Buttermilk (made from soy bean milk, p. 106). Malted nuts (with raw peanut meal), non-dairy butters (with ground peanuts and cocoa fat, p. 107). Nut sauce (made from Vegetarian meat). Peanut butter No. 4. Nayonnaise (with peanut butter and vegetable oil, p. 108). Canned soy beans (using soybeans sprouted about half an inch, p. 111). Soy beans and rice (using sprouted soy beans, p. 112).

How to sprout soy beans, lentils, and grains (p. 112). "Cover 1 pint of soy beans with water and let stand over night. Pour off water. Keep them moist. Rewash daily and keep moist for approximately three days until well sprouted. Allow to stand until sprouts are about ½ inch long. Lentils do not take as long as soy beans.

"Sprouting of any bean or pea turns the protein into peptogen to a very great extent and the starch into dextrose or maltose and the sprouts are very high in vitamines,..."

Original meat #1 and #2 (using gluten and peanuts, p. 112). Granola #3 (with only whole wheat flour and soy bean flour, p. 116). Soybean coffee (p. 118). Note that Kloss has no recipes using whole dry soybeans in an unprocessed or unsprouted form.

"Loma Linda Food Company, Loma Linda, California, Manufacturer of Health Foods," has an ad on p. 189. They list their products, but no soy products are mentioned. Nature's Original Food Co. in Muirkirk, Maryland, is listed on pages 196 and 198. They make or sell strictly vegetarian pure health foods, incl. "Fine grade soy bean flour."

One interesting section is titled "Aluminum utensils for cooking purposes" (p. 80-84); Kloss strongly advises against their use, presenting much convincing but anecdotal evidence describing health problems that both he and other people have had after using aluminum cooking utensils. For example, Kloss bought a tea kettle which was constantly standing on the stove with some water in it. He would drink 2-3 cups of this water each morning, then some more about an hour before dinner. He developed terrible bowel trouble. He tried all kinds of remedies but nothing worked. The conditions grew steadily worse until finally he said to his wife, "Unless something helps me, I will surely die." One day he described his condition to a man, and the man said that the symptoms were similar to those that aluminum poison would cause. He began to research the subject by reading various books and found that "every one who had any practical experience in it condemned aluminum cooking utensils." Yet Kloss does not say that when he stopped using aluminum utensils his health problems disappeared. Kloss then includes a 3-page statement by Dr. Chas. T. Betts of Toledo, Ohio, on the dangers of using aluminum cooking utensils. Dr. Betts became very ill soon after his family began using aluminum cooking utensils. He too investigated the subject in depth and regained his health within 8 weeks after he stopped using aluminum cooking utensils. He has enjoyed good health for the past 17 years. While studying the subject in Washington, DC. he found that the U.S. government had made a thorough investigation of the matter from 1920 to 1925. The Federal Trade Commission Docket 540 contained more than 4,000 pages of closely typewritten testimony from 158 witnesses during the 5 years, after which an official report was made by Edward M. Averill. "Many

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of the witnesses above mentioned were professors, deans, biologists, and toxicologists from many colleges, some of which are the highest schools of learning in America." Averill's report noted. "The evidence in this record does not prove that they are harmless... It does prove that there are substantial grounds upon which to predicate an honest opinion that they are harmful."

Doris Gardiner notes (Oct. 1990) that "in the revised 1939 edition of Back to Eden, Jethro Kloss eliminated many Biblical texts. He didn't want to turn off anyone that was not religious. He wanted to help everyone." Kloss moved to Brooke, Virginia, in 1920. From there, in the early 1930s (by Sept. 1932), he and his family moved to Takoma Park. Address: Takoma Park, DC.

720. Battle Creek Food Co. 1935? Appetizing health food recipes and menus. Battle Creek, Michigan. 25 p. Undated. Illust. 15 x 17 cm.

• ***Summary:*** On the cover of this booklet is a 3-panel illustration of a family seated at the table enjoying a meal; the daughter is in the left panel, the wife and husband (with suit and necktie) in the center, and the young son (also in suit and tie) in the right panel. The booklet promotes and shows how to use the vegetarian food products made by Battle Creek Food Co.

Contents: The story of Battle Creek Health Foods (and its free diet service). Where these recipes are triple tested (the company's modern test kitchen). Dinner menus and recipes (p. 4-7). Luncheon and tea menus and recipes (p. 8-11). Breakfast menus and recipes (p. 12-15). Reducing menus and recipes (p. 16-17). Wholesome diabetic foods (p. 18). Brawn-building menus and recipes (p. 19). A brief description of Battle Creek Health Foods (p. 20-21). Health candies (p. 22).

On almost every page of recipes is an illustration of one of the company's products in its container/package, and in a prepared dish, followed by a description of each product on p. 20-21. The only two soy-related products are "Soy Biscuits–Best bread for diabetics. Contains less than 2% starch but is rich in protein and strength-building elements. (Also furnished in the form of a meal)."

Other products are: Agar (made from Japanese seaweed). Almond butter. Bran biscuits. Cooked bran (from wheat). Bran gluten flakes (crispy toasted breakfast cereal). Branola (hot cereal). Fig and nut bromose (with malt honey). Brose (hot cereal with dates, figs or raisins, and cream). Sanitarium canned fruits and vegetables. Chocolate nut bar. Cooked whole wheat. Fig bran. Fig bran flakes. Food ferrin (supplies dietary iron from green vegetables). Fruit crackers. Gluten bread (Low in starch, shipped in air-tight cans, ready to eat. A healthful reducing food). Gluten biscuit (40%, containing less than half the starch of ordinary bread; fine for diabetic patients). Gluten flour. Graham crackers. Health chocolates. Health koko. Kaffir tea (caffeine free). Lacto dextrin. Laxa (a biscuit with bran and agar). Malted nuts (increases the flow of milk in nursing mothers). Marmalades. Meltose (a malt sugar made from grains). Minute brew (A caffeine-free cereal beverage). No-fat (for use in place of butter). Nuttolene ("A nut meat product having the consistency of cream cheese. Makes healthful croquettes, cutlets, and stews"). Oatmeal wafers. Paralax with agar. Paramels. Peanut butter (made from steamed rather than roasted peanuts to make it easier to digest). Preserved figs. Protose ("The vegetable meat–makes savory sandwiches, salads, meat pies, and roasts. Rich in iron, lime and protein for body-building"). Psylla. Ripe olives. Savita ("A vegetable [yeast] extract with a rich, meaty flavor, excellent for soups and gravies, Rich in vitamins, and wonderful for blood-building"). Sal-Savita (A vegetable seasoning with a meat-like flavor). Savita-yeast (new yeast with a rich meaty flavor). Starchless bran. Toasted rice flakes. Tomato soup. Vegetable gelatin. Vegetable soup. Vitamet (A savory vegetable meat that is rich in Vitamin B and food iron). Vita wheat (creamy hot cereal). Whole wheat cream sticks. Whole wheat flour. Whole wheat wafers. ZO ("The vitamin breakfast food, ready to eat with cream and sugar. Made from whole wheat and barley and enriched with Savita... Supplies the daily vitamins and minerals"). Zwieback.

On page 23 is an ad for a 64-page booklet titled *Healthful Living: Fundamental Facts About Foods and Feeding.* Address: Battle Creek, Michigan.

721. Battle Creek Food Co. 1935? How to make savory roasts, steaks, croquettes without meat: Protose–A vegetable meat (Leaflet). Battle Creek, Michigan. 4 panels each side. Each panel: 16 x 8½ cm. Undated.

• ***Summary:*** See next page. Printed with brown and light orange on white. Contents: A brief history of Battle Creek Sanitarium Health Foods. Protose: A substantial food around which you can build your menu (2 panels; "Here is one of the most interesting of all the Battle Creek Health Foods..."). Six recipes using Protose. About Savita with 1 recipe. Send for "Healthful Living" (60 p. book).

Photos show: (1) On the front panel: A young lady in a white apron slicing a casserole containing Protose. (2) Three prepared Protose dishes. (3) A can of Protose. (4) Inside: The huge Battle Creek Sanitarium. (5) The huge Battle Creek Food Co. (5) The front cover of a 60-page book titled *Healthful Living.*

"A brief history of Battle Creek Sanitarium Health Foods: Battle Creek Sanitarium Health Foods were first made in 1899 for patients at the Battle Creek Sanitarium. Such Satisfactory results were obtained that soon outside demand made it advisable to stock them in leading grocery, drug, department and health food stores.

"At present there are over 100 Battle Creek Health Foods, including several groups covering almost every phase of diet–tasty vegetable meats, whole grain cereals, health

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SEND FOR : :
"HEALTHFUL LIVING"

PLACE YOUR ENTIRE DIET ON A HEALTH BASIS
—IT INVOLVES NO EXTRA COST

"Healthful Living," a 60-page book of fundamental facts about diet. Contains a brief account of Battle Creek Sanitarium foods and presents many important facts to guide the individual in making proper food selection. It is yours for the asking. Address—

THE BATTLE CREEK FOOD CO.
BATTLE CREEK, MICH.

VEGETARIAN CAFETERIA
Battle Creek Section
California Pacific International Exposition
San Diego, U. S. A.
Palace of Foods and Beverages

PRINTED IN U.S.A.MERICA

HOW TO MAKE SAVORY ROASTS, STEAKS, CROQUETTES WITHOUT MEAT

PROTOSE
A VEGETABLE MEAT

PROTOSE

A SUBSTANTIAL FOOD around which YOU can build Your . . . . MENU

HERE is one of the most interesting of all the Battle Creek Health Foods, and it deserves a place on every table because of its goodness. It is different from so many others in that it is a protein food serving the same purpose in the diet as meat, milk and eggs. Protein is that part of the daily food supply which contains the needed building material. It is essential for growth and replaces the tissue wear which results from one's daily work. The growing boy or girl, the laborer, and all who indulge in vigorous exercise need an extra measure of protein. With a few cans of Protose in your pantry, the protein part of the daily bill of fare is assured. It is a most delicious food with flavors which appeal to everyone, and at the same time lends itself to the preparation of a great variety of dishes.

Protose is made from the grains of choice nuts. It may be served cold just as it comes from the can but more often appears in the form of roasts, steaks, salads or a filling for sandwiches.

Protose is a substantial food containing materials needed for the heavier part of the diet. While it is easily digested and can be managed by the indoor worker of sedentary occupation, it supplies at the same time the sturdy staying qualities required by those leading a strenuous, active life.

Protose is an excellent food for those who cannot use meat.

You will enjoy the rich, meatlike flavor of Protose, and will find it a welcome addition to your regular food supply. Its convenience, wholesomeness and economy will appeal to you. It is not only a dependable source of protein but stands high in food minerals containing double the amount of iron found in meat dishes, five or six times as much lime, with appreciable amounts of vitamin B.

PROTOSE
A VEGETABLE MEAT

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A BRIEF HISTORY OF BATTLE CREEK SANITARIUM HEALTH FOODS

The Battle Creek Sanitarium

BATTLE CREEK SANITARIUM Health Foods were first made in 1889 for patients at the Battle Creek Sanitarium. Such satisfactory results were obtained that soon the outside demand made it advisable to stock them in leading grocery, drug, department and health food stores.

At present there are over 100 Battle Creek Health Foods, including several groups covering almost every phase of diet—tasty vegetable meats, whole grain cereals, health confections, foods for the reducing diet and laxative diet, others for blood building, with a large assortment for diabetic and other conditions.

The Battle Creek Food Company

Here are foods of highest quality supported by recognized authority and having a background of forty years' use that has met every test.

PROTOSE LOAF

1 pound Protose
1 onion
2 eggs
Cheese — yellow
½ cup crumbs
1 tablespoon Savita dissolved in ⅓ cup hot water

Mash the Protose, stir all ingredients together, roll into loaf and place in pan. Place thin strips of yellow cheese across the top. Bake in moderate oven until brown. Serve with Savita Brown Gravy.

ROAST PROTOSE WITH BROWN POTATOES

1 pound Protose
1 quart brown gravy
12 boiled potatoes
Butter

Remove Protose from can by first removing both ends of can. Cut the Protose in half lengthwise and make eight slices of each half. Arrange in buttered pan and cover with Savita Brown Gravy. Dip boiled potatoes in melted butter and arrange around the Protose. Bake in hot oven until potatoes are nicely browned.

PROTOSE VEGETABLE SALAD

½ cup chopped carrots
1 cup chopped celery
¼ chopped green pepper
½ cup chopped Protose
Salt
Mayonnaise

Mix the chopped vegetables and add the Protose. Fold in the mayonnaise.

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confections, foods for the reducing diet and laxative diet, others for blood building, with a large assortment for diabetic and other conditions.

"Protose: A substantial food around which you can build your menu. Here is the most interesting of all the Battle Creek Health Foods.

This leaflet was apparently printed for an exposition in San Diego, California. At the bottom of the back panel is printed in large bold letters: "Vegetarian cafeteria. Battle Creek Section. California Pacific International Exposition. San Diego, USA. Palace of Foods and Beverages."

Note: This Exposition was held in 1935-36 at San Diego's Balboa Park. It opened on 29 May 1935 and closed on 9 Sept. 1936. Address: Battle Creek, Michigan.

722. **Product Name:** Vita-Elm (With Slippery Elm). Blend of Cereal and Soy Flours plus Slippery Elm had started by 1948.
Manufacturer's Name: Roberts (F.G.) Health Food Products.
Manufacturer's Address: 40 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia. Phone: (03) 729-1738.
Date of Introduction: 1935?
Ingredients: 1995: Wholegrain wheat flour, barley flour, maize flour, oat flour, wheatgerm flour, wholegrain rye flour, whole soya flour (with oil and lecithin intact), and slippery elm.
Wt/Vol., Packaging, Price: Tin-plated steel can.
How Stored: Keep sealed. Store in a cool, dry, lightfree place.
New Product–Documentation: Ad in *Nature's Path to Health* (Melbourne, Australia). 1932. Oct. p. 21. "Good health by taking Vita Elm. Makes invalids strong. Children thrive on it. Invaluable to the athlete. Vita-Elm contains the germ of life of wheat, oats, barley, rye, and maize. [Note: Soy is not mentioned]. Abounding in all the valuable vitamines that give strength, energy and vitality. Delicious flavour. Nourishing. Nature's food. Obtainable at 342 St. Kilda Road, Melbourne, SC1."

Ad in Nature's Path to Health. 1935. May 1. Vita-Elm is now promoted as a "vitalizer" that can give "glorious health." Ad in Nature's Path to Health (Australia). 1937. Christmas. p. 36. "Natural health baby. Esmae Noelene Grimes. Aged four and a half months. Thrives on Vita Elm Dinner." A photo shows baby Esmae (the Roberts' granddaughter, aged 4½ months) sitting up and enjoying Vita Elm. Paul Smith notes (28 March 1995): "Esmae was reared on Vita Elm and Soy Compound and was using both at the time of the photo as her mother was experiencing difficulty in breastfeeding Esmae. As Esmae also later experienced difficulty in breastfeeding her own children, and resorted to the same two remedies... Esmae and family still purchase Vita Elm and Soy Crunch directly from us."

Ad in Nature's Path to Health. 1940. July. p. 36. "Vita-Elm builds bonny boys and girls. To avoid malnutrition and the many ills that beset children, a fully fortified food must be provided... Protect them from winter colds and deficiency disease by daily use."

Information brochure: "'Vita Elm' was originally developed as a therapeutic product to assist invalids of all ages to recuperate. Bland, nutritious, sustaining and easily digestible it is an ideal way to encourage people recovering from surgery or suffering from hiatus hernia, ulcers or diarrhoea [diarrhea] back onto solid foods. It also forms a valuable addition to the diets of infants, toddlers and children of all ages. Slippery Elm has long been recognised for its soothing, gelling properties and its ability to gently coat the sensitive linings of the human digestive system." Serve as a porridge, and a hot or cold drink or thickshake.

Letter from Paul Smith. 1995. March 14. "Interestingly none of the advertisements for Vita Elm from the mid-1930s into the 1950s acknowledge the use of soy in this product. However the practise of adding soy flour to Vita Elm was well established when my father, Ron, went to work for F.G. Roberts early in 1948, and he believes soy was used by the mid-1930s. Admittedly, it is a minor ingredient." "Esmae believes the soy was added to Vita Elm in 1937, when Roberts first became interested in it."

Letter from Paul Smith. 1995. April 1. Vita Elm was the most heavily, longest and continuously promoted of all the Roberts products from its inception in Oct. 1932 until 1947, in almost every issue of the magazine. A 2-page table shows, for each issue, on what page the ad appears.

723. *Advent Review and Sabbath Herald.* 1936. Obituaries: W.A. Colcord. 113(1):21. Jan. 2.
• ***Summary:*** William Allan Colcord was the husband of Mrs. Anna L. Colcord, who survives him. He was born on 8 Dec. 1860 at Coleta, Illinois. At about age 24 [ca. 1884] he became a Seventh-day Adventist and became a member of the church at Grand Junction, Iowa. Education: He attended the academy at Rockford, Illinois, and still later was a student in the Battle Creek College at Battle Creek, Michigan.

He began his work as a preacher of the gospel in 1886, laboring first in Des Moines, Iowa. From about 1893 to 1902 he preached in Australia. Returning to the USA, he worked at the denominational headquarters in Washington, DC, where he served for a number of years as one of the secretaries of the Religious Liberty Department, and later he became book editor for the Review and Herald Publishing House.

Not long after this he lost his faith in SDA doctrines and withdrew from the denomination. But in due time he became convinced of his mistake, returned with sincere repentance, was rebaptized, and again became a member of the church. He died on 4 Nov. 1935 at Washington, DC. He was the son of Ivory G. and Charlotte Colcord. The detailed biography

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does not mention when or where he married. In addition to his wife, he leaves two sons, Clarence G. and Glenn A. Colcord, and one daughter, Mrs. Walton C. John.

Note 1. His wife was the author of an excellent Seventh-day Adventist vegetarian cookbook, *A Friend in the Kitchen*, first published in 1899. Note 2. Janice Little of Del E. Webb Memorial Library, Loma Linda, California, was unable to find the birth or death dates of Anna L. Colcord (Dec. 2004).

724. Kellogg, John Harvey. 1936. Improvements in or relating to preparation of natural or artificial milk containing *Bacillus acidophilus. British Patent* 441,574. Jan. 22. Application filed 16 Nov. 1934. *

725. *Good Health* (*Battle Creek, Michigan*). 1936. The alkalizing power of the soy bean. 71(1):15-16. Jan.
• ***Summary:*** "The dried lima bean has heretofore been considered as one of the most strongly alkaline of all natural foodstuffs, its ratio of alkalinity being placed at 12 in standard tables. Christian Becker of Frankfort, Germany, in a recent paper places the alkalinity of the soy bean at 13.6. This places it at the head of all vegetable substances which may be used as food for increasing blood alkalinity and so combating acidosis, a condition which encourages degenerative changes in the tissues, such as arteriosclerosis and other senile changes in the heart and blood vessels.

"This fact gives new importance to the promotion of the use of the soy bean as a nutritional means of both preventing and curing a large class of grave and highly prevalent disorders, particularly those of a chronic character. The condition of acidosis which results from the use of foods which leave acid residues in the body, such as meats, eggs, and an excessive diet of cereals, lowers vital resistance and in so doing predisposes to acute infections of various sorts."

726. *Good Health* (*Battle Creek, Michigan*). 1936. Babies thrive on soy bean milk. 71(1):19. Jan.
• ***Summary:*** This summary of an article of: Rittinger, Fred; Dembo, L.; Torrey, G.G. 1935. "Soy bean (vegetable) milk in infant feeding." *J. of Pediatrics* 6(4):517-32. April. Includes a discussion of *Lactobacillus acidophilus* in the soy bean milk.

727. **Product Name:** Soy Ice Cream.
Manufacturer's Name: Vetose Nutritional Laboratories (Distributor). Made in Shanghai by Henningsen Produce Co.
Manufacturer's Address: Pting Liang Road, Shanghai, China.
Date of Introduction: 1936 January.
New Product–Documentation: Raymond S. Moore. 1961. *China Doctor.* p. 182. "Soon Miller was producing the ultimate–a primitive 'soy ice cream.'"

Interviews with Harry W. Miller Jr. 1981-85. This was one of the world's first semi-commercial soy ice creams. "This ice cream was made only for the staff and patients at our institutions, the Shanghai Sanitarium and Hospital, and the Shanghai Sanitarium Clinic, down town. It wasn't for sale and it wasn't advertised. It had no formal name; we just called it "Soy Ice Cream." We sometimes had it for parties at the hospital. It was made for us by Henningsen Produce Co., which had a big ice cream plant in Shanghai. They are now Henningsen Foods in White Plains, New York."

728. **Product Name:** Vetose Soya Milk [Natural, or Chocolate].
Manufacturer's Name: Vetose Nutritional Laboratories.
Manufacturer's Address: Pting Liang Road, Shanghai, China.
Date of Introduction: 1936 January.
Wt/Vol., Packaging, Price: Half pint or quart glass bottles.
New Product–Documentation: Miller, Harry W.; Wen, C. Jean. 1936. "Experimental nutrition studies of soymilk in human nutrition." *Chinese Medical Journal* 50(4):450-59. April. "Such milk can be and is being manufactured as a dried milk powder under the name of Vetose Soya Milk Powder with claims of nutritive value the equivalent of other prepared powdered milk food for infants."

Miller, Harry W. 1944. "The Story of Milk from the Soya Bean." Mount Vernon, Ohio: International Nutrition Laboratory. 37 p. "Milk routes were established in all parts of Shanghai, and the production doubled each succeeding month. Three types of liquid milk were produced: natural soya milk, chocolate soya milk and acidophilus milk, packaged in pint and quart bottles. The price to the consumer was less than that of cow's milk in Shanghai, which thus made available a milk rich in food value for all members of families whose circumstances did not permit them to buy the more expensive animal milk. It was here demonstrated that soya milk in every way filled the average family requirement for a milk, and that in countries where the economic conditions make impracticable dairies, where stock feed is scarce and costly, the people may still have an equally suitable milk." On 13 Aug. 1937 a Japanese bomb destroyed Dr. Miller's commercial soy milk plant.

Raymond S. Moore. 1961. *China Doctor.* p. 182. Dr. Miller established a soybean milk plant on Pting Liang Road in Shanghai, not far from his Shanghai clinic. "There the doctor worked with his production manager, Harry, Jr., who later was to become a consultant for the United Nations Food and Agricultural Organization. From the outset, however, the customers in areas without refrigeration were plagued by spoilage. After studying the American techniques for keeping milk drinks, Harry Miller and his helpers installed in-bottle sterilization equipment, and began deliveries anew. The milk kept indefinitely until uncapped. Malt and chocolate flavors were provided for the sophisticated taste... The price of the milk competed easily with that of cow and goat milk. In the late thirties, Japan was invading China. Within months after

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the soy-milk business began booming, a Japanese bomb blew up the Shanghai plant."

Interviews with Harry W. Miller Jr. 1981-87. Sold and delivered door to door in half pint and quart bottles, this was the earliest known commercial branded soymilk in East Asia. It was sold in wide-mouth glass milk bottles with Crown caps. The only labeling information was printed on the caps. The plant, which was connected with the Seventh-day Adventist Shanghai Sanitarium, was destroyed on 13 August 1937 during the Japanese invasion.

Note 1. This is the earliest known commercial soy product made by a Seventh-day Adventist food company outside the United States.

Note 2. This is the earliest document seen (Dec. 2013) concerning the work of Dr. Harry W. Miller with soyfoods.

729. **Product Name:** Acidophilus Vetose (Cultured Soya Milk). Vetose Nutritional Laboratories.
Manufacturer's Name: Vetose Nutritional Laboratories.
Manufacturer's Address: Pting Liang Road, Shanghai, China.
Date of Introduction: 1936 January.
New Product–Documentation: Raymond S. Moore. 1961. *China Doctor.* p. 182. "A special yogurtlike milk was praised by many; even non-Chinese began to drink it." Interviews with Harry W. Miller Jr. 1981-87. Note 1. This is the second earliest known commercial branded soymilk in East Asia. Note 2. This is the earliest known commercial soy product made with *Lactobacillus acidophilus*–which it features in the product name.

730. Kellogg, John Harvey. 1936. Re: Growing soybeans in Michigan and making condensed soy milk. Letter to Mr. William J. Morse, Bureau of Plant Industry, USDA, Washington, DC, Feb. 13. 2 p. Typed, without signature (carbon copy).
• ***Summary:*** Dr. Kellogg thanks Morse for his letter or Feb. 7. "The 78-day bean which you sent me a number of years ago reaches the shell bean state in 60 days and matures in 78 to 80 days." "I am interested in what you say about variety 81,031 which scored one hundred. We will be glad to obtain a supply of this variety and as much as is available."

"I shall be glad to have your criticism of the condensed soy milk sent you.

"Thanking you for the valuable information and for your gracious assistance, I am, Sincerely yours."

Note 2. This is the earliest letter seen (Aug. 1999) of various letters exchanged between Dr. Kellogg and William Morse. Note that Morse apparently wrote Kellogg first on 7 Feb. 1936. Letter from Jennifer Jacobs at Bentley Historical Library. 1999. Sept. 8. She is unable to find a letter from Morse to Kellogg dated 7 Feb. 1936 in the Kellogg Papers at Bentley. Address: Miami, Florida.

731. *Good Health* (*Battle Creek, Michigan*). 1936. The world famine. 71(2):48-49. Feb.
• ***Summary:*** "For the four hundred millions of China and several other hundreds of millions in the Far East, that most marvelous of food plants, the soy bean, supplies an abundance of protein and fat of the finest quality, far superior to the proteins and fats of flesh meats, and wholly free from the loathsome parasites, trichinæ, tapeworms, etc., and the filthy colon germs which swarm in fresh meats of all sorts.

"From an economic standpoint, the soy bean offers not only a more than complete substitute for meats, but salvation from the great economic evils to which flesh eating inevitably leads, evils so mischievous that they threaten destruction to the race by making the world uninhabitable." "The soybean contains 40 per cent protein of higher quality than that of the choicest meats. Its easily soluble protein resembles that of milk, and is more easily and quickly digestible. The proteins of the soy bean are of the basic or alkali-ash sort, while those of eggs and meat are acid-ash and so tend to cause acidosis, an evil to which the physiologic chemists have for many years been calling attention. This makes the soy bean a curative food instead of a cause of disease.

"In the market one can buy protein in the form of soy beans at one cent a pound, whereas protein in the form of meat costs from $1.00 to $2.00 a pound"

The "soy bean also improves instead of impoverishing the soil. Its roots gather nitrogen from the air and so enrich the soil.

"The soy bean, which in the Orient fills in the diet the place of flesh, fish, fowl, eggs, milk, butter, and cheese, and suffices for infants as well as for adults, is beginning to receive some attention in this country. An excellent flour is now being made which, added to ordinary wheat flour, greatly improves the loaf in nutritive values, and at the same time improves its flavor and keeping properties.

"Condensed soy milk in tin cans is also now being made and various other most wholesome products, the use of which enables one, if he chooses to do so, to exclude all animal products from his dietary and not only without loss but with an actual gain."

732. *Good Health* (*Battle Creek, Michigan*). 1936. Increasing use of the soy bean. 71(2):50-51. Feb.
• ***Summary:*** "Henry Ford has aided in the development of the soy bean industry, having urged the planting as a new opportunity for farmers.

"Manchukuo still produces the world's largest crop of soy beans. The culture of this bean is spreading as people come to know its value for food and many other purposes. Various attempts have been made to grow them in England, Germany, and other parts of Europe with poor success. But the *London Times* records the harvesting of twenty acres of soy beans on the Fordson estate, near Chelmsford [England].

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Here Henry Ford has a farm of about two or three thousand acres. His direct interest is due to the fact that he uses this product in his automobile industry.

"Four years ago Dr. Kellogg discovered that milk made from the soy bean made a remarkable culture medium for protective bacteria or so-called 'friendly germs.' In soy milk more than twice the number of these germs can be made to grow than in cow's milk. Remarkable results have been obtained in cases of intestinal disorders through the use of this milk. The Canadian quintuplets are protected against bowel trouble by the constant use of soy acidophilus milk."

733. Bansei: New U.S. domestic soybean variety. Large-seeded and/or vegetable-type soybean. 1936. Seed color: Yellow (straw), hilum pale/colorless to light brown.
• ***Summary:*** Sources: Morse, W.J. 1936. Re: Chusei and Bansei soybean varieties, and making soy milk. Letter to Dr. John Harvey Kellogg, Miami Springs (Miami), Florida, March 7. "I have your letter of February 13... Concerning variety 81031, which I wrote you had given such good results in making a high quality milk, we have given the varietal name Bansei to this number. I think that we shall be able to furnish you with 4 or 6 pounds of seed and I feel that it should mature in ample time at Battle Creek."

Morse, W.J. 1936. "Re: Evaporated soymilk, soybean varieties, and green vegetable soybeans." Letter to Dr. John Harvey Kellogg, The Miami-Battle Creek, Miami Springs, Florida, March 26. 2 p. "I have your letter of March 9 and with reference to the Bansei soybean, I will say that we will try to spare you as many pounds as possible." There are no longer large sources of either the Chusei or Bansei soybean in this country at present... we obtained the seed from The Yamato Seed Co., Tokyo, Japan. The Bansei was obtained from them under the name *Bansei O Sayada Mame* [probably *Bansei O Saya Eda Mame*] and the Chusei under the name *Chusei O Saya Eda Mame.* Note 1. In Japanese, *Bansei* and *Chusei* mean "late grower or late development" and "medium grower or medium development" respectively. Interestingly, Morse (1938, p. 32) reported that both varieties mature in the same time–110 days. *O Saya* means "large pod." *Eda Mamé*–pronounced ay-dah-MAH-may–means "green vegetable soybean." Note 2. Kellogg apparently wrote Morse first on 9 March 1936 to ask about the Bansei soybean.

Morse, W.J. 1936. *Soybean introductions named in January 1936.* Washington, DC: USDA, Bureau of Plant Industry, Div. of Forage Crops and Diseases. 2 p. April 7. See p. 1. F.P.I. No. 81031. Name: Bansei. Seed color: Straw yellow. Maturity: 110 days. Use: Green vegetable and dry edible bean. States grown: Northern and North Central.

Morse, W.J. 1938. "Edible varieties of soybeans." *Proceedings of the American Soybean Assoc.* p. 30-33. A table (p. 32) shows: F.P.I. No.: 81031. Days to ripen: 110. Seed color: Straw yellow. Hilum: Pale. Seeds per lb: 1,936. Oil and protein content (moisture-free basis): 21.72% and 39.12%. Use: Dry edible or green vegetable.

Lloyd, J.W.; Burlison, W.L. 1939. "Eighteen varieties of edible soybeans: Their adaptability, acceptability, culture and characteristics." *Illinois Agric. Exp. Station, Bulletin* No. 453. p. 385-439. March. See p. 394-97, 413, 423.

Bernard, R.L.; Juvik, G.A.; Nelson, R.L. 1987. "USDA soybean germplasm collection inventory." Vol. 1. INTSOY Series No. 30. p. 8-9. Bansei is in the USDA Germplasm Collection. Maturity group: II. Year named or released: 1936. Developer or sponsor: USDA. Literature: 07, 11. Source and other information: 'Banseiosayada Mame' from Sapporo, Japan, in 1929. Prior designation: PI 81031. Address: USA.

734. Morse, W.J. 1936. Re: Chusei and Bansei soybean varieties, and making soy milk. Letter to Dr. John Harvey Kellogg, Miami Springs (Miami), Florida, March 7. 1 p. Typed, with signature.
• ***Summary:*** "I have your letter of February 13 with regard to the variety of soybean which you have been increasing at Battle Creek [Michigan] for the past three or four years. The sample of beans was recently received from Battle Creek and in checking it over with our samples I find that it is identical with the type we are now calling Chusei. I may say that the seed is now being distributed under this varietal name.

"Concerning variety 81031, which I wrote you had given such good results in making a high quality milk, we have given the varietal name Bansei to this number. I think that we shall be able to furnish you with 4 or 6 pounds of seed and I feel that it should mature in ample time at Battle Creek. I take it that you wish this seed to be sent in your name at your Battle Creek address. Very truly yours, W.J. Morse, Senior Agronomist."

Note 1. This is the earliest document seen (June 2013) that mentions the soybean varieties Bansei or Chusei. Address: Senior Agronomist, Div. of Forage Crops and Diseases, Bureau of Plant Industry, USDA, Washington, DC.

735. Kellogg, John Harvey. 1936. Re: Bansei soybean and making soy milk. Letter to Mr. William J. Morse, Bureau of Plant Industry, USDA, Washington, DC, March 9. 2 p. Typed, without signature (carbon copy).
• ***Summary:*** Dr. Kellogg thanks Morse for his letter or March 7. "I am very glad to know about the Bansei bean. I shall be greatly pleased if you will send me as many pounds as you can of this seed and tell me if it is possible for me to get a larger quantity for planting this year.

"We are using very considerable quantities of soy beans for milk and at the rate it is increasing will soon be requiring about a ton a week.

"I am anxious to get started with your new bean as raw materials as soon as possible. I should also like to know whether the bean you call Chusei can be obtained in quantity for seed. I am hoping to plant two hundred acres of this bean

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this year to be used chiefly as a shell bean for canning. Can this be obtained in quantity either in this country or in Japan? Can the Bansei bean be obtained in Japan? I should also like to know if you can give me information about a bean which I am purchasing through a local agency here under the name of Tokyo. It comes from Norfolk here and I am informed that it is imported direct from Japan."

"I consider the soy bean one of the most remarkable of the world's food products and expect to make increasingly large use of it. I have been experimenting with it for many years, but have made rather slow progress because of the multiplicity of other matters requiring my attention. I think from now on I shall make much more rapid progress.

"Could you tell me if anyone has succeeded in making a satisfactory dry evaporated soy milk which will keep?

"Hoping I am not troubling you too much, I am

"Sincerely yours," Address: Miami, Florida.

736. Morse, W.J. 1936. Re: Evaporated soy milk, soybean varieties, and green vegetable soybeans. Letter to Dr. John Harvey Kellogg, The Miami-Battle Creek, Miami Springs (Miami), Florida, March 26. 2 p. Typed, with signature.
• ***Summary:*** "I have your letter of March 9 and with reference to the Bansei soybean, I will say that we will try to spare you as many pounds as possible." There are no longer large sources of either the Chusei or Bansei soybean in this country at present... we obtained the seed from The Yamato Seed Co., Tokyo, Japan. The Bansei was obtained from them under the name *Bansei O Sayada Mame* [probably *Bansei O Saya Eda Mame*] and the Chusei under the name *Chusei O Saya Eda Mame."*

Note: In Japanese, *Bansei* and *Chusei* mean "late grower or late development" and "medium grower or medium development" respectively. *O Saya* means "large pod." *Eda Mamé*–pronounced ay-dah-MAH-may–means "green vegetable soybean."

"The sample of seed which you enclosed is the Tokyo variety and has been grown in this country for many years. During the past two or three years it has increased to a considerable extent especially in North Carolina, Tennessee, and Mississippi. It is not imported from Japan. All of the seed which is in this country was grown in the states mentioned above. It may interest you to know that in North China and southern Manchuria this light, greenish yellow bean is used in the manufacture of bean milk and bean curd. I am quite sure that you will have no difficulty in obtaining almost any quantity of Tokyo through North Carolina growers and seed dealers... In North Carolina and Virginia you can obtain the Tokyo through the following: T.W. Wood & Sons, Richmond, Virginia, Geo. Tait & Sons, Norfolk, Virginia, The Buxton White Seed Co., Elizabeth City, North Carolina, and F.P. Latham, Belhaven, North Carolina."

"Mr. J.H. Strawser of the Washington Sanitarium, Takoma Park, Maryland, sent me one of the nicest samples of evaporated soy milk that I have ever seen... I understand that Dr. Miller, who is associated with the Missionary College and now stationed in China, has one or two factories producing this soy milk powder. While Mr. Strawser was experimenting with the milk I understood that the soy milk was evaporated through the regular process used in evaporating cow's milk."

Note: This is the earliest document seen (Aug. 2013) concerning the work of Dr. Harry Miller with soyfoods or soy milk.

"The Seaboard Airline Railway, at its experimental farm near Hamilton, North Carolina, has been testing some of our green vegetable soybean varieties. Last year they froze some of the beans and have been sending samples to various places. From all reports it is evident that the frozen bean is a most excellent food product."

Note: This is the earliest document seen (March 2001) concerning the work of a small Seventh-day Adventist food company (the Washington Sanitarium, Takoma Park, Maryland) with soyfoods. Address: Senior Agronomist, Div. of Forage Crops and Diseases, Bureau of Plant Industry, USDA, Washington, DC.

737. Kellogg, John Harvey. 1936. Re: Soy Acidophilus Milk and the Dionne quintuplets. Letter to Mr. William J. Morse, Bureau of Plant Industry, USDA, Washington, DC, March 30. 2 p. Typed, without signature (carbon copy).
• ***Summary:*** "We are having great success with our soy acidophilus milk. It cured the [Dionne] quintuplets of serious trouble and keeps them in good health. They have been using it regularly in their daily food for more than a year and a half. Dr. Dafoe writes me that he cannot get along without it. When he stops the use of it the bowels get bad and he has to resume its use at once. I shall be glad to have a liberal sample of this milk sent to you if you would like to try it."

"Sincerely yours,

"P.S. Dr. Miller of China is one of my old students. He sent me a sample of his soy milk powder. It was very fine in appearance, but had a rancid flavor...

"I shall be very glad indeed if you will let me have as much seed as you can of rapid growing vegetable varieties of soy beans. I am planting 150 acres this year, but will be glad to plant 50 more if I can get sufficient seed for the purpose." Address: Miami, Florida.

738. Battle Creek Food Co. 1936. Soy acidophilus milk. *Good Health* (*Battle Creek, Michigan*) 71(3):95. March. Ad.
• ***Summary:*** This is a full-page black-and-white ad for Soy Acidophilus Milk. Note 1. Throughout 1936 there are full-page ads for Soy Acidophilus Milk on the back inside cover of *Good Health.*

Note 2. This is the earliest document seen with the term "Soy acidophilus milk" in the title. Address: Battle Creek, Michigan.

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739. **Product Name:** Soy Acidophilus Milk (Lactobacillus Acidophilus Cultured in Soy Milk. Renamed Soy Acidophilus by 1940).
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1936 March.
Ingredients: Soybeans, water, lactic acid cultures.
Wt/Vol., Packaging, Price: Glass bottle.
New Product–Documentation: A.A. Horvath. 1932. Some recent views about soya flour (pamphlet). "In a recent personal letter to the writer Dr. John Harvey Kellogg of the Battle Creek Sanitarium brings out the following interesting experience: 'We are making increasing use of the soy acidophilus with splendid results. I am sure it is very much superior to ordinary acidophilus milk as a means of changing the flora.'" Note: The product was probably not yet sold commercially.

John Harvey Kellogg. 1934. Method of making acidophilus milk [from soymilk]. U.S. Patent 1,982,994. Dec. 4. 2 p. Application filed 14 June 1933.

Henry M. Stegman. 1935. *Good Health* (Battle Creek, Michigan). "Benefits from acidophilus milk." "This soy acidophilus milk has been prepared and used at the Battle Creek Sanitarium [in Michigan] and the Miami-Battle Creek institution [in Florida], and elsewhere for nearly two years [i.e. since early 1933], and has shown itself to be greatly superior to other cultures."

Full-page ads in *Good Health.* 1936. March to December. In August a recipe for Soy Acidophilus Ice Cream was published. In liquid form the milk contained 3.6% protein and 1.5% fat. L.B. Breedlove. 1936. *Chicago J. of Commerce and La Salle Street Journal.* June 25. p. 14. "Soy bean–The magic plant. Article XI." "Battle Creek Food Factory, Battle Creek, Michigan: Acidophilus, condensed, sweet." Photo of commercial soy products in William Morse's office. 1936. In a quart bottle with subtitle "A new and Highly Efficient Means of Changing the Intestinal Flora." Booklet. 1937. Soy Acidophilus Milk. March. 9 p.; Price List. 1940. 1 pint bottle. 6.25% soy solids.

USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. The company sells Soy Acidophilus, containing 6¼% soya. Distributed through health food stores.

Miller. 1943. Said that it was "6.25 soya and distributed through health food stores." Soybean Blue Book. 1947. p. 72. "Soy Acidophilus." Also listed in 1955. Price List. 1955.

Note: This is the second earliest known commercial soy product made with *Lactobacillus acidophilus*–which it features in the product name.

740. Beattie, W.R. 1936. Making and using peanut butter. *USDA Circular* No. 384. 13 p. March. [1 ref]

• ***Summary:*** Contents: Development of the peanut-butter industry. Commercial manufacture of peanut butter: The stock, factory and equipment, roasting, blanching, hand-picking, blending, grinding, bottling and packing. Home manufacture of peanut butter. Food value and ways of using peanut butter (11 recipes, prepared by the Bureau of Home Economics).

Concerning the origin and early history of peanut butter: "The commercial production of peanut butter has developed to large proportion in recent years. In the early days of its manufacture peanut butter was made in sanitariums [e.g., Battle Creek Sanitarium in Michigan] and used largely as a food for invalids, but its fine qualities and food value were soon appreciated, and it outgrew this limited use. At first peanut butter was manufactured in a small way by individuals and sold from house to house; then small factories sprang up, and peanut butter became an article on the grocers' shelves. Today there are a number of large and small factories turning out peanut butter and other peanut products in great volume... The quantity of peanuts now used annually in the manufacture of peanut butter is approximately 200,000,000 pounds of farmers' goods. More peanuts now go into peanut butter than any other one use."

Note 1. Note: No additional information is given concerning the early history of peanut butter. There is no mention of a physician in St. Louis, Missouri, who was reported by others to be the first to manufacture peanut butter commercially, and to recommend it for invalids because of its high nutritional value (as is implied by Woodruff 1973, p. 153).

Note 2. Supersedes USDA Bureau of Plant Industry, Circular 98, titled "Peanut butter," by W.R. Beattie, and USDA Department Circular 128, titled "The manufacture and use of peanut butter." Address: Senior Horticulturist, Div. of Fruit and Vegetable Crops and Diseases, Bureau of Plant Industry, USDA, Washington, DC.

741. *Good Health* (*Battle Creek, Michigan*). 1936. Change of habits necessary in gastric ulcer. 71(3):85-86. March.
• ***Summary:*** "Lacto-Dextrin and Soy Acidophilus Milk have been found wonderfully helpful in the treatment of gastric ulcer."

742. Lager, Mildred. 1936. The House of Better Living Catalog. Los Angeles, California: Published by the author. March. 14 p. March. 28 cm. Second expanded edition, March 1938.
• ***Summary:*** On the front cover is a large illustration of the exterior of the House of Better Living, and a 4-stanza poem about the House by Mildred Lager. Below the poem we read: "Catalog. The most unusual store in Southern California. Owned and operated by Mildred Lager, food economist, author, and radio lecturer."

The first section, titled "The origin of the House of

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Better Living!" (p. 1) begins: "Is it fate? Often the handicaps and obstacles that we have to overcome lead us into our life work, help us to find ourselves. A few years ago a young school teacher was forced to give up her chosen profession because of arthritis deformans. It was a severe obstacle to overcome, but it was that experience that led Mildred Lager into the study of foods and their relation to health, and led to the founding of the House of Better Living. No one *has* gained recognition as rapidly as Miss Lager. In a little over two years she has won her place among the 'leaders,' has received both national and international recognition, and has established the House of Better Living as an institution in Southern California... Her perfect radio voice reaches thousands who cannot attend her classes.

"Miss Lager is teaching the ounce of prevention, the health insurance that pays dividends in years of health and happiness. Her slogan is that Pure Air, Pure Water, Pure Food and Constructive Thought plus exercise and sunshine build health.

"The House of Better Living is more than a Health Food Store. It is a bureau of food information and a place and means where Miss Lager can conduct her classes free of charge–and *that* is her goal. Two years ago it seemed an impossibility–very few thought it would ever succeed. They did not know the sincerity and the spirit behind it... It is but two and a half years old. We cannot predict its future nor that of its charming founder–we can only wait and see, knowing that achievement and not time is the measure of success.–By one who has watched the growth from the start."

At the top of page 2 in large letters: "The House of Better Living offers you: 1. The best of natural foods at reasonable prices. 2. Free delivery of all $3.00 orders in Los Angeles. 3. Free cooking classes every Wednesday afternoon at 1:30. 4. Food classes Monday and Thursday afternoon at 1:30 (except during June, July and August). 5. Miss Lager's Radio talks every Monday, Tuesday, Wednesday and Thursday morning at 7:45 over KFAC."

Product categories and products mentioned include: Coffee substitutes (Soyco, Hollywood Cup, Breakfast Cup, Ficgo, Sipp). Broths (Vegebroth, Vegemineral Broth Concentrate, Hauser's Meatless Bouillon). Nut butters–Freshly ground (Soy Bean Butter, Almond butter, Cashew butter, peanut butter–dextrinized). Whole grain flour, meal, etc. (Soy Bean Flour, Bill Baker's Prepared Lima Bean Pancake or Waffle Flour, Bill Baker's Prepared Soy Bean Pancake or Waffle Flour {2 lb for $0.30}, whole wheat flour, wheat germ, bran, buckwheat flour, dextrinized flour, gluten flour, breakfast cereals–to cook {Cubbison's cracked wheat}). Ready to serve cereals (Soy bean breakfast food, wheat germ). Macaroni, noodles, etc. (Soy bean macaroni, garbanza shells). Legumes (soy bean {imported}, garbanza peas, natural brown rice, sesame seeds). Melba toast, crackers, cookies, etc. (Bill Baker's Soy Toast {$0.30/lb}, Cubbison's Melba Toast, Cubbison's Melbetts, Soy bean gluten cracker, Cubbison's whole wheat crackers, Cubbison's Whole Wheat Dunkeretts, Cubbison's wheat soda cracker, Cubbison's honey wheat cookies, Cubbison's Melba cookies, Soy bean wafers, soy bean macaroons, Bill Baker's 100% Soy Bean Fruit Cookies {$0.18/dozen}, Bill Baker's 100% Lima Bean Fruit Cookies {$0.18/dozen}, Olson's soy bean bread, sliced {$0.12}, Bill Baker's soy bean bread–unsliced {$0.16}, Bill Baker's Lima Bean Bread, unsliced {$0.16}). Natural aids (Agar, flaxseed, psyllium, Burbank kelp, kelp, Green kelp, Santay sea greens). Oils (Soy bean oil, sesame oil, Lindsay Cold Pressed California Oil). Meat substitutes (11 products, 5 with "Soy" in the name, such as Soyatose). Soy bean products (25 products! Makers incl. La Sierra, Loma Linda, etc.).

The 27 different soy products are: La Sierra Soy Beans, plain or with tomato sauce; Loma Linda Soy Beans, plain or with Proteena; Soy Beans, imported; Soy Beans, roasted; Soy Bean Loaf (meat substitute); Soy Bean Bologna; Soy Bean Spread; Soy Bean Butter (like peanut butter); Loma Linda Soy Mince Sandwich Spread; Soy Bean Sauce; Soy Bean Milk; Soy Bean Oil; Soy Bean Noodles, Macaroni, and Spaghetti; Soyco (Soy Coffee); Soy Bean Breakfast Food; Soy Bean Sprouts; Soy Bean Flour; Bill Baker's Prepared Soy Bean Pancake or Waffle Flour; Bill Baker's Soy Bean Bread; Olson Soy Bread (sliced); Bill Baker's Soy Toast; Bill Baker's Soy Bean Fruit Cookies; Soy Bean Macaroons; Soy Bean Wafers; Soy Bean Gluten Crackers.

Photos show: (1) A portrait of Mildred Lager smiling (p. 1). (2) Mildred conducting a free cooking class in her kitchen at The House of Better Living. Many men and women, all wearing hats, are seated around the perimeter of the kitchen (p. 6-7). (3) Packages of various "Bill Baker's Soy & Lima Bean Products" including Lime Bean Wafers, Pancake Waffle & Biscuit Lima-Bean "Neat Flour," Lima Bean Toast, Pancake Waffle & Biscuit Soya-Bean "Neat Flour," Lima Bean Bread, and Soy Bean Bread" (p. 10).

A small ad (3½ by 2¼ inches, p. 6) by the Cubbison Cracker Co. (3417-19 Pasadena Ave., Los Angeles, California) states: "Dextrinized and whole wheat products: Melba Toast, Melbetts, Cracked Wheat, Whole Wheat Crackers and Cookies." Note: This is the earliest document seen (June 2004) concerning the work of Sophie Cubbison with soyfoods.

A ¼-page ad (p. 12) titled "Hain 100% pure foods," describes Vege-Jell Puddings, Mal-Ba-Nuts (a powdered beverage), Potassium broth, and Col-Lax (whose ingredients are: Powdered psyllium, Powdered agar, and lactose). Address: 1207 West Sixth St., Los Angeles, California.

743. **Product Name:** Loma Linda Soy Beans (Plain Canned).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1936 March.

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Wt/Vol., Packaging, Price: Can.
New Product–Documentation: House of Better Living Catalog. 1936. March. p. 10. No. 1 can for $0.13, 2 cans for $0.25. House of Better Living. 1936. Sept. p. 4; Ad in Health magazine. 1937. April. 4(4):25. "Seven Items of a Quality Line." Company listed as "Loma Linda Food Company, Inc., Loma Linda, California."

Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 52. "Loma Linda Foods: Soy Products–Soy Beans, Plain. $0.11."

The Loma Linda line: 35 selected recipes (booklet). 1944? Page 3. "Soy Beans: 'The value of the soy bean to the diabetic has long been accepted...' (Dr. Chas. E. Fearn of Chicago). The soy beans we use for canning are selected for their uniformly large size... They are thoroughly cooked under controlled pressure in the can until every one is tender. Some are canned plain (with and without salt), some with Tomato Juice and some with Proteena and Tomato Sauce. Purely vegetable. Alkaline." Wholesale price list. 1945. "Soy Beans (Glass or Canned)."

744. **Product Name:** Soyco (Coffee Substitute).
Manufacturer's Name: Unknown. Perhaps Carque.
Manufacturer's Address: Los Angeles, California?
Date of Introduction: 1936 March.
New Product–Documentation: House of Better Living Catalog. 1938. March. p. 4. Note: This product could be Soyco, a coffee substitute introduced by La Sierra Industries in 1929, and still made by them in 1936.

Talk with Ben Kahan of Kahan & Lessin. 1988. Sept. 24. He thinks this product was made by Carque, pronounced kar-KAY. See sheet he sent.

745. Morse, W.J. 1936. Re: Soy acidophilus milk and the Dionne quintuplets. Letter to Dr. John Harvey Kellogg, The Miami-Battle Creek, Miami Springs (Miami), Florida, April 4. 1 p. Typed, with signature.
• ***Summary:*** "I have your letter of March 30 and was very much interested in the use of your acidophilous [sic, acidophilus] milk by the quintuplets. It seems that Dr. Dafoe certainly should give a good recommendation for your product.

"About a year ago when you returned from Miami [Florida] you left at the Union Station about a half gallon of this acidophilous milk. I liked the product very much and found no difficulty at all in keeping it in the ice box. I should be glad to receive another sample from you.

"I presume that after May 1 you will be at Battle Creek. It will probably be some time in May before I shall know just what amount of seed of Bansei I shall have available. I am planning to send you all that we have left at that time." Address: Senior Agronomist, Div. of Forage Crops and Diseases, Bureau of Plant Industry, USDA, Washington, DC.

746. Kellogg, John Harvey. 1936. Re: Soy acidophilus milk. Letter to Mr. William J. Morse, Bureau of Plant Industry, USDA, Washington, DC, April 11. 1 p. Typed, without signature (carbon copy).
• ***Summary:*** "I have your letter of April 4. I have some friends who are going from here to Washington about May 1st and will have them take along several bottles of soy acidophilus milk to hand out to you. It is becoming quite popular here. We have been using 30 to 40 gallons a day for several months. It is much more popular with our patrons than cow's milk."

747. Miller, Harry W.; Wen, C. Jean. 1936. Experimental nutrition studies of soymilk in human nutrition. *Chinese Medical Journal* 50(4):450-59. April. [15 ref]
• ***Summary:*** "Because of their small carbohydrate content soybean products have long been used as a diabetic food. Also hundreds of years ago, it was used in the form of soymilk, cheese, curd, various soy sauces, ferment products, bean sprouts, as salted roasted beans and as a coffee substitute. More recently it is used in ice-cream, ice-cream cones, in candies and confectionery, puddings, salad dressings, food drinks, breakfast-foods, etc., besides in the industries in making paints, linoleums, automobile parts, lacquers, celluloid substitute, glue, and vegetable casein. It is a valuable stock food, and in the human dietary the various soybean products not only give flavor and relish, but also supply a most valuable type of protein."

"The people in China use practically no dairy products and comparatively little meat, and yet have a well-balanced diet, which is obtained through the protective foods supplied them through the soybean. We have in China the common saying, '*Do-giang* [pinyin *doujiang* = soy milk] is the poor man's milk, *do-fuh* [*doufu* = tofu] is the poor man's meat.'"

"We have never observed soybean protein possessing an allergy in any single case. Recently a patient admitted to the sanitarium informed us that he could use neither wheat, eggs, nor milk. We placed him, therefore, on soybean protein as found in Vetose milk and soydophilus milk, and he got along remarkably well. We have never noted an instance where soybean has set up any reaction in the nature of skin eruptions, stomach or intestinal upsets" (p. 451-52).

"Much experimentation has been carried forward along the line of making palatable food products out of the soybean, of getting rid of the raw, beany, rather bitterish flavor in the uncooked or partially cooked bean. This objectionable beany taste has been shown by Schmalfuss and Treu [1927] to be a methyl-n-nonyl-ketone, which seems to be located in the outer layer of cotyledons.

"Since a process is now available for the removal of these ketone bodies immediately the possibilities loom before us of the use of soybean as an important element in the human dietary... we may have a true milk substitute.

"We have approached the formulae of cow's milk by the

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addition of a sufficient amount of carbohydrate in the form of a malt sugar and a little additional oil, together with vitamin C in the form of tomato juice, and by exposing this liquid to irradiation with ultra violet light to add vitamin D. Such milk can be and is being manufactured as a dried milk powder under the name of Vetose Soya Milk Powder with claims of nutritive value the equivalent of other prepared powdered milk food for infants."

"Our experimental work on infant feeding has been carried on over a period of more than two years, mostly in the Shanghai Sanitarium Clinic" (p. 454).

"In the Shanghai Sanitarium and Clinic, aside from the use of modified soya milk in the pediatrics department, the nurses and the helps have taken regularly the soya milk, with most satisfactory results. Our observations over this period of time lead us to believe that modified soya milk has every advantage over cow's milk; it is palatable and a liking for it is readily acquired. It is a complete food of very high nutritive value; it is readily digested, and free from all poisonous and deleterious substances. The standard formula used was protein 3.5%, fat 5%, carbohydrate 5.64%. The caloric value is a little higher than that of cow's milk, and will run 170 calories to the full glass" (p. 457).

Soya milk "can be used in cooking and baking; it makes delicious ice cream. At the same time it affords the advantages of being 100 per cent pure. Also the dread of so many diseases now known to be directly transferred from cows' milk, such as hoof and mouth diseases, undulant fever, typhoid fever, streptococcal infection, infection, dysentery, etc., is removed from users of soya milk.

"The new milk powder, which has now been used for upwards of a year, seems to be equal in quality with the freshly made soya milk. It is a little better tasting. Its advantage is that it can be transported to any place without deterioration, and can be freshly made up as required, and does not require refrigeration" (p. 457).

"We use a soydophilus made by inoculating sterilized soya milk with the acidophilus organisms." Soydophilus "creates an intestinal flora that overcomes intestinal autointoxication."

Note 1. This is the earliest English-language document seen (Aug. 2013) that contains the word "soymilk" spelled as one word, or that has the word "soymilk" in the title. However, the word "soymilk" does not appear in the text. Instead, the term "soya milk" is used at least 22 times and the term "soy milk" is used once. The term "modified soya milk" is used many times but the meaning of "modified" is never explained.

Note 2. This is the earliest document seen (Aug. 2013) that contains the word "Vetose" in connection with the work of Dr. Harry Miller with soyfoods. Address: M.D. (both), Shanghai Sanitarium and Pediatric Dep., Shanghai, China.

748. Kloss, Jethro. 1936. Re: Trip from Houston, Texas, to San Francisco. Letter to his daughter Promise Kloss, May 11. 1 p. Handwritten, with signature on letterhead. Facsimile printed in Back to Eden, 1981 ed. center insert section.
• ***Summary:*** This letter is of interest both for its contents–it shows a loving and caring father–and for its letterhead, which states in large letters: "Scientific Food & Benevolent Association." Below that, next to a photo of Kloss is typewritten: Jethro Kloss, President. Herbalist, Public Lecturer, Food Scientist and Demonstrator. Manufacturers, Jobbers, and Distributors. Home address: Takoma Park Station, Washington, D.C. A typed description of the Association continues at the bottom of the page: "Distributors of non-poisonous herbs for medicinal and culinary purposes. A very practical course in nursing, including hydrotherapy. Scientific feeding for every purpose. Unexcelled substitutes for meat, eggs, cow's milk and butter–cooking, canning, baking and health foods. How to live better on less money. A marvelous line of foods made from the soy bean, and their cultivation. Send for description of new book 'Back to Eden' (revised edition) revealing astounding truths on prevention of disease and revolutionary food and health methods not published before." Address: 913 Yale St., Houston, Texas.

749. Morse, W.J. 1936. Re: Bansei soybeans and acidophilus soybean milk. Letter to Dr. John Harvey Kellogg, Battle Creek Sanitarium, Battle Creek, Michigan, June 3. 1 p. Typed, with signature on letterhead.
• ***Summary:*** Morse is sending Kellogg 12 pounds of Bansei soybeans, the type Morse found most promising for making soybean milk. "I wish to thank you for the bottle of Soy Acidophilus which one of your assistants brought to Washington a few weeks ago. I like this milk very much and am planning to use the acidophilus culture with some soybean milk." Address: Senior Agronomist, Div. of Forage Crops and Diseases, Bureau of Plant Industry, USDA, Washington, DC.

750. Kellogg, John Harvey. 1936. Re: Growing soybeans in Michigan for used as a canned green vegetable. Letter to Mr. William J. Morse, Bureau of Plant Industry, USDA, Washington, DC, June 14. 1 p. Typed, without signature (carbon copy).
• ***Summary:*** "I have your letter of June 3. The seed has arrived and it has been planted and I hope it will mature in this climate.

"We are planting this year a hundred acres of soy beans of the 78-day variety. We expect to can a large part of those beans as shell beans. We shall let part of the crop ripen and may have some surplus as seed... Thanking you for your courtesy in sending us some more Bansei seed."

751. LeClerc, J.A. comp. 1936. Partial list of references on soybean milk. Washington, DC: Food Research Div., Bureau

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of Chemistry and Soils, USDA. 4 p. June 16. Unpublished manuscript. [50 ref]
• ***Summary:*** The 50 references are listed in chronological order, from Trimble (1896) to Castagnol (1934). Address: Food Research Div., Bureau of Chemistry & Soils, USDA, Washington, DC.

752. *Madison Survey* (*Madison, Tennessee*). 1936. Among the industries at Madison. 18(29):113-16. July 15.
• ***Summary:*** Madison stresses its industries not simply because they are a source of revenue for students. "If every student who enters this college were financially able to meet expenses with cash, still Madison would operate its industrial centers because they constitute one of the outstanding features of the educational system Madison fosters. Why? Madison is preparing men and women to fill places of responsibility in needy fields, in hard and trying places. It turns out to the world men and women capable of doing things worthwhile for the community in which they locate. Not all of these are by any means white-collar jobs. Labor itself is educational. Labor is needed to develop the whole man."

The Madison Printing Department prints all of the packages and labels for Madison Foods. Photos show the following products in paperboard boxes with labels: Date Stix, Fruit Stix, Breakfast Crisps, Bran Wafers, Thin-Things, Soy-Koff, Whole Wheat Wafers, and Minute Wheat. Labels for Vigorost and Kreme O'Soy [bread] are also pictured.

"One of the latest printing jobs is three thousand display units to accompany samples of Fruit Stix, Date Stix, Breakfast Crisps, and Soy-Koff."

"Kreme O'Soy Bread adds quality to every lunch and meal. You will enjoy its rich creamy nut-like flavor. Use it freely for toast, sandwiches, fillings, puddings, etc.

"Madison Kreme O'Soy Flour is used in this bread to reduce the starch content, to impart the creamy nut-like flavor, and to alkalinize the bread. Kreme O'Soy Flour is a rich food–a complete protein–containing only a trace of starch." Other products noted are Nut-Meat, Soy Beans with Tomato Sauce, and Soy Cheese.

753. Silver, Jack. 1936. Irvine to make Eastern tour for health promotion. *California Health News* (*Hollywood, California*) 4(14):1, 13. July 17.
• ***Summary:*** Clarke Irvine will address the national chiropractic convention in Indianapolis, Indiana, on Aug. 14. On the way, he plans to visit many friends and readers across America. He has invitations to visit the Battle Creek Sanitarium (in Michigan), Physical Culture Hotel, etc. The chiropractors first heard from Irvine last year at their national convention in Hollywood.

Note: A large portrait photo shows Clarke Irvine.

754. Webb, H.A. 1936. Review of the book *Food for Life*, by Frances Dittes. *Banner* (*Nashville, Tennessee*). July 26. Magazine Section Summarized in Madison Survey. March 3. 1937. p. 33-34. *
• ***Summary:*** "This book makes a real contribution to the literature of cookery and nutrition from at least two standpoints: First, it is written by a Southern author who knows the Southern taste in sickness and in health; second, it is the vegetarian school, whose life work consists in administering foods as a true medicine to those who seek for health." Address: Head of the Chemistry Dep., Peabody College.

755. **Product Name:** Green Shelled Soy Beans (Canned).
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1936 July.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: L.B. Breedlove. 1936. *Chicago J. of Commerce and La Salle Street Journal.* June 25. p. 14. "Soy bean–The magic plant. Article XI." "Battle Creek Food Factory, Battle Creek, Michigan: Green shelled soy beans (canned)."

Price List. 1937. Price List. 1940. Soy Beans, green. 19 oz. can. Distributed through health food stores. In tins.

USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. The company sells Green Soybeans in tins. Distributed through health food stores.

Note: This is the world's earliest known canned green vegetable soybean product.

756. **Product Name:** Soy Milk (Canned). Condensed and Canned by 1940. Brand-named Soygal by April 1942.
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1936 July.
Wt/Vol., Packaging, Price: 10 oz can.
New Product–Documentation: L.B. Breedlove. 1936. *Chicago J. of Commerce and La Salle Street Journal.* June 25. p. 14. "Soy bean–The magic plant. Article XI." "Battle Creek Food Factory, Battle Creek, Michigan: Milk (canned)."

Price List. 1940. 10 oz. can.

Good Health (Battle Creek, Michigan). 1942. April. p. 52-53. "Cow's milk a common cause of allergy." Soybean milk, now available under the commercial name of Soygal, is "wholly free from the unpleasant taste of the soybean."

757. *Good Health* (*Battle Creek, Michigan*). 1936. Soy beans versus beef. 71(7):210. July. Ad.
• ***Summary:*** This editorial states: "Soy bean protein has the advantage over animal proteins of all sorts that it has little tendency to decay."

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758. *Good Health* (*Battle Creek, Michigan*). 1936. Usefulness of the soy bean. 71(7):215-16. July.
• ***Summary:*** "The soy bean is not only an excellent but a very economical food. G.H. Banks, of the University of Arkansas College of Agriculture, tells that Henry T. Wallace, U.S. Secretary of Agriculture, once lived for six weeks on soy beans and corn meal, the cost of which was fifteen cents a week. Mr. Wallace was in college at the time. He carried on his regular school work and felt no bad physical effects from the diet."

"Mr. Banks, who is in charge of the Rice Experiment Station near Stuttgart, Arkansas, says it is wrong to speak of some varieties as "edible." Most of the field sorts are good to eat, those known as 'edible' being simply easier to prepare."

759. **Product Name:** Thin Things (Wafers made with soy flour).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1936 July.
Ingredients: Whole soy bean flour and wheat flour.
How Stored: Shelf stable.
New Product–Documentation: Madison Survey. 1936. July 15. p. 114. A photo shows a package of Thin-Things.

Madison Health Messenger. 1938. Spring. Page 4. "Thin-Things. Madison's new soy wafer for salads, soups, etc., is now on the market. The dainty one-bite size and delicate flavor make it especially desirable for guest dinners and luncheons. Thin-Things are made of whole soy bean flour and choice wheat flour and they do not contain soda or baking powder of any kind. 2–5 oz. packages 25 cents."

Madison Health Messenger. 1940. 2(3):5.

760. **Product Name:** Date Stix (Naturally sweet snack crackers made with soy flour).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1936 July.
Ingredients: Wheat flour, Kreme O'Soy Flour, dates, honey.
New Product–Documentation: Madison Survey. 1936. July 15. p. 115. Date Stix are mentioned.

Madison Survey. 1937. "The soy bean marches on." April 21. p. 59-60.

Madison Health Messenger. 1938. Spring. Page 4. "Date Stix. The wholesome blend of choice wheat flour, Kreme O'Soy Flour, dates, and honey combines several very nourishing foods into one irresistible delicacy. The flaky, appetizing biscuit holding the date filling makes Madison Date Stix and immediate for luncheons, dinners, parties, and school lunches. Children enjoy them with a glass of milk or crumbled in cream for dessert. When children ask for sweets, give them nature's best. 15 cents per package–6½ oz.

Madison Health Messenger. 1940. 2(3):5.

761. **Product Name:** Fruit Stix (Soy flour biscuit filled with figs, raisins, and dates).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1936 July.
Ingredients: Soy flour, figs, raisins, dates.
How Stored: Shelf stable.
New Product–Documentation: Madison Survey. 1936. July 15. p. 115. Fruit Stix are mentioned.

Madison Survey. 1937. "The soy bean marches on." April 21. p. 59-60.

Madison Health Messenger. 1938. Spring, p. 4. "Fruit Stix. A soy flour biscuit filled with choice figs, raisins, and dates. 15 cents per package–6½ oz." Madison Health Messenger. 1940. 2(3):5.

762. **Product Name:** Kreme O'Soy [sliced bread].
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1936 July.
Ingredients: Wheat flour, water, soy flour, sugar, shortening, salt, yeast, malt...
New Product–Documentation: Madison Survey. 1936. July 15, p. 114-15. "Kreme O'Soy Bread."

Walter M. Kollmorgen. 1943. Tennessee Planner. Sept/Oct. p. 16-17. A photo shows a package of Kreme O'Soy, a sliced bread. The ingredients (though hard to read) appear to be: "Wheat flour, water, soy flour, sugar, shortening, salt, yeast, malt..."

763. *Good Health* (*Battle Creek, Michigan*). 1936. Healthful recipes. 71(8):249. Aug.
• ***Summary:*** Contains recipes for: Baked soy bean sandwiches (using canned baked soy beans). "Soy acidophilus ice cream" (using 1½ Soy Acidophilus Milk, 2½ cups cream, various fruit juices, rinds, and grated pineapple).

Note. This is the earliest English-language document seen (Sept. 2013) that contains the term "soy acidophilus ice cream."

764. Kellogg, John Harvey. 1936. Regimen and technic for changing the intestinal flora. *Good Health* (*Battle Creek, Michigan*) 71(8):230-33. Aug.
• ***Summary:*** The author offers a four-step plan which "has been found efficient in the treatment of hundreds of cases requiring change of the intestinal flora." These include: "1. Liberal carbohydrate feeding (Lactose, Dextrin, Lacto-Dextrin). 2. Discarding of flesh meats (Combe) of all sorts. 3. Increasing the activity and efficiency of the colon so as to

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secure complete clearance of the intestinal tract at least once in twenty-four hours. 4. Liberal feeding of a potent culture of *L. acidophilus.*

In place of "animal proteins," one should use "milk and vegetable proteins." Note that "milk proteins are less putrescible than are flesh proteins, and besides are protected against putrefaction by the presence of lactose." "The peanut and the soy bean supply a high percentage of protein of most excellent quality... The soy bean provides a basic protein of high quality, and is rich in food minerals and vitamins and has the added advantage that it stimulates the development of the protective flora. This gives to the soy bean special value in efforts to change the flora by special feeding. All soy bean products are to be recommended, especially a milk prepared from this legume which closely resembles ordinary milk in appearance and composition."

Avoid all medical laxatives, which seriously interfere "with the effort to develop or implant a protective flora... Only purely physiologic means may be employed, such as liberal increase of bulkage (Kaba, psyllium seed, agar) and the enema."

765. **Product Name:** Roberts Soy-Wheat Macaroni.
Manufacturer's Name: Roberts (F.G.) Health Food Products.
Manufacturer's Address: 430 St. Kilda Road, Melbourne, S.C.2, Victoria, Australia.
Date of Introduction: 1936 August.
How Stored: Shelf stable.
New Product–Documentation: Ad in *Nature's Path to Health* (*Melbourne, Australia*). 1936. Aug. 15. p. 8. "Look for the name on the packet. Health Brand (a logo illustration shows a stylized portrait of F.G. Roberts wearing a bow tie). 12 ozs. Nett. "Obtainable at all Health Centres." Note: It is not clear who manufactured this product, and where it was made.

Ad in *Nature's Path to Health* (*Melbourne, Australia*). 1937. Sept/Oct. p. 34. "The perfectly balanced food. Made by and obtained at Roberts Health Services throughout the Commonwealth." Address: 40 Chapel St., St. Kilda. Same ad in Nov/Dec. 1937 issue, p. 14 and in the Christmas 1937 issue, p. 19 and 28. However on p. 28 we read: F.G. Roberts, N.D., D.O. [Doctor of Osteopathy], 430 St. Kilda Road, S.C.2.

Note: This is the earliest known commercial soy product made in Australia. In fact, F.G. Roberts Health Food Products, which made only vegetarian food products, launched the first twelve commercial soy products in Australia. The first soy product introduced by Sanitarium Health Food Co. in Australia was launched in 1954. It was named "Soya Beans in Tomato Sauce."

766. Battle Creek Food Co. 1936. Re: The Dionne quintuplets and soy acidophilus milk. Letter to Hon. David Croll, Minister of Public Affairs, Parliament Buildings, Toronto, Ontario, Canada, Sept. 17. 2 p. Typed, without signature (carbon copy).
• ***Summary:*** "On inquiry of Dr. Allan Roy Dafoe you will learn that under his advice the quintuplets make daily use of soy acidophilus milk, a preparation which has cured them of bowel trouble and keeps them free from this distressing ailment. For many months, under instruction from Dr. John Harvey Kellogg, who gave us the formula for making soy acidophilus milk, we supplied the quintuplets with this preparation without charge and even paid the expense of transportation by parcel post. For several months we have been supplying it at a nominal cost. Dr. Dafoe has mentioned the use of acidophilus in papers published in medical journals and the same fact has been broadcast through the newspaper press."

"We are anxious that other infants, thousands of whom are dying of this same trouble every year, should have the benefit of this most efficient and practically unfailing remedy for this very common affection from which all bottle-fed babies are likely to suffer and with a mortality rate of ten times that of breast-fed infants.

"We are preparing to introduce this preparation to both the profession and the public end desire to refer to the experience of the quintuplets as evidence that the claims made for the preparation are valid.

"Will you kindly write us whether we will be expected to pay a royalty for mentioning the fact that soy acidophilus milk is used by the quintuplets and, if so, how much." Address: Battle Creek, Michigan.

767. Kellogg, John Harvey. 1936. Re: Soy acidophilus milk and the Dionne quintuplets. Letter to Dr. Allan Roy Dafoe, The Dionne Quintuplet Guardianship, Callander, ONT, Canada, Sept. 21. 2 p. Typed, without signature (carbon copy).
• ***Summary:*** "We are seeing such wonderful results from the soy acidophilus milk that I feel the time has come when it should be placed before the public so that a larger number of people may benefit by it... this business of making soy acidophilus milk is a purely philanthropic effort. No one will make any money out of it. The patents have been turned over to the Race Betterment Foundation and any profit will be used for educational work along health lines, chiefly the support of Battle Creek College... The manufacture of soy acidophilus milk will never be a large business, but the manufacturers will, I am sure, be glad to pay a modest royalty for use of the pictures of the quints in selling the ideas to the public... There are parties waiting to undertake the manufacture and distribution of soy acidophilus here in the South. P.S. Admiral Byrd has been using this milk with great benefit. During his lecture tour..." Address: Miami, Florida.

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768. *Good Health* (*Battle Creek, Michigan*). 1936. Soy milk versus cow's milk. 71(9):275. Sept.
• ***Summary:*** This editorial argues that soy milk is healthier and less subject to food-borne diseases than cow's milk. "The use of soy acidophilus milk is also recommended because it encourages the growth of *acidophilus,* the protective germ which stands guard in the intestine to prevent invasion by the disease-producing organisms."

769. *Good Health* (*Battle Creek, Michigan*). 1936. Heating milk prevents injury to persons sensitized to it. 71(9):280. Sept.
• ***Summary:*** "A better plan is to substitute milk prepared from the soy bean or cow's milk when the latter is found to disagree. Soy milk looks like cow's milk, has essentially the same nutritive value when dextrin or milk sugar is added, and when properly prepared, has an agreeable flavor which infants do not dislike.

"Infants also profit greatly by the use of cultured soy milk, known as Soy Acidophilus Milk."

"Soy milk may now be obtained in condensed form, put up in tins resembling various brands of condensed cow's milk. It is hoped that a good quality of powdered soy milk may be available in dried form."

770. Kellogg, John Harvey. 1936. How to change the intestinal flora: The use of enemas. *Good Health* (*Battle Creek, Michigan*) 71(9):268-70, 284-85. Sept.
• ***Summary:*** This is the third in a 4-part series of articles. Lactic acid, a chemical stimulant provided by Nature to encourage bowel action, is "produced by the action of the protective organism, *Lactobacillus bifidus acidophilus,* which, if present in adequate numbers (85-100 per cent of the bacteria found in the stools) will not only prevent the development of disease-producing germs, thus affording protection against colitis, appendicitis and other bowel troubles, but will secure in a normal colon evacuation after each meal of residues free from ill-smelling putrefaction products.

"Enemas of acidophilus cultures, especially of the soy acidophilus type, such as Soy Acidophilus Milk, are most effective, but ordinary sour milk or buttermilk enemas are useful...

"It is best to use in each enema a mixture of soy acidophilus culture with water, Nuflora and lemon juice or lactic acid... From two to three pints of Soy Acidophilus Milk should be used daily, with one or two ounces of Lacto-Dextrin for each pint of the culture."

For gas distention, use a pint of soy acidophilus milk with an ounce of dextrin and a pint of hot water (115° F). "*Soy acidophilus milk should be used regularly.* One or two pints a day is usually sufficient to keep the flora in good condition if the diet is right."

771. Loma Linda Foods. 1936. Soy milk (Ad). *House of Better Living* (*Newsletter, Los Angeles*) 3(10):4. Sept.
• ***Summary:*** "... with a pleasing taste, and full of nutrition, Soy Milk is one of several Loma Linda Soy Products." A logo, with "Loma Linda Foods" written on a black oval background, shows the company's name. Address: [California].

772. **Product Name:** Glantone.
Manufacturer's Name: Roberts (F.G.) Health Food Products.
Manufacturer's Address: 40a Chapel St., St. Kilda, Melbourne, Victoria, Australia.
Date of Introduction: 1936 September.
Wt/Vol., Packaging, Price: Price: 2/6 (Postage extra).
How Stored: Shelf stable.
New Product–Documentation: Ad in *Nature's Path to Health* (*Melbourne, Australia*). 1936. Sept. 15, p. 15. "Glantone–'Gland-tone' means perfect health." The ad features a stylized face of F.G. Roberts. "The Health Food of a Nation. F.G. Roberts' Health Food Products. 40a Chapel Street, St. Kilda." Another ad for Glantone is found in the July/Aug. 1937 issue, p. 36.

Note: This product contained no soy. But note that it was apparently manufactured at 40a Chapel St., a factory that F.G. Roberts would later own.

773. Van Gundy, Dorothea. 1936. Soy beans in the human diet. *Proceedings of the American Soybean Association* p. 22, 24. 16th annual meeting. Held 14-16 Sept. in Iowa.
• ***Summary:*** "The introduction of the Soy Bean into the human diet is no experiment, for it was introduced thousands of years ago to the teeming millions of China, and has been of great success. Careful examination shows that their diet to be well balanced.

"In the occidental countries the soy bean in the diet has been practically unknown until the last few years." This is largely because there is an oversupply of high-carbohydrate foods, while a "careful examination of the diets of a large percentage of the population will show a decided shortage in edible fats and complete proteins. This is due largely to the high price of meat, eggs, and milk. This shortage is supplied in the soy bean.

"There are several reasons why the Soy Bean should increase in popularity in the human diet. These are: 1. Nutritional qualities. 2. Versatility. 3. Economy."

"One of the most outstanding nutritional points in connection with the Soy bean is its high alkaline ash. When added to the diet it builds the alkaline reserve in a remarkable way, thus building the resistance to disease and infection.

"The Soy is unique from the standpoint of versatility, for it can be used in any of the courses in the menu from soup to nuts. It lends itself very easily to methods of preparation that cover up the strong bean flavor usually present. The

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Orientals have hundreds of ways to prepare the Soy bean and can produce almost any flavor of meat, fish or fowl with various soy products. With such a variety of ways to serve the Soy bean it may be introduced into the diet and used quite freely without becoming tiresome." Address: Manager, La Sierra Industries, Ontario, California.

774. Kellogg, John Harvey. 1936. Re: Soy beans, soy milk, and okara. Letter to Dr. A.A. Horvath at University of Delaware, Newark, Delaware, Oct. 5. 2 p. Typed, without signature (carbon copy).
• ***Summary:*** "I have your letter of Sept. 24th. We have harvested and canned our shell beans and have about 250 bushels of seed of the 78-day variety of beans... It is an excellent green bean variety.

"I have been using the Tokyo bean for milk and find it very satisfactory. Do you know any other varieties of beans equal to it or better? I need a few tons more beans for milk before the new crop arrives, which I understand will be in about two months. I do not find the Manchu or the Dunfield as good for milk as the Tokyo. I find the Tokyo is out of the market. Can you give me any helpful information respecting other varieties that are still available?

"As regards to the effects of soy beans on laying hens, I have not the precise information I ought to have, but I can tell you this: I fed the hens with the residue left after making soy milk. They did not like it very well even when it was mixed with other foods. I used it as a substitute for meat meal and was very much disappointed with the results. The number of eggs began to fall off almost immediately, the chickens lost weight and though I soon discontinued the use of the soy bean they did not seem to recover, but continued to deteriorate. I left them in charge of an experienced poultryman who has hens of the same variety... They began to moult very early and 25 to 30 per cent of them died. It appeared as though feeding with soy residue produced a permanently damaging effect.

"This experience was certainly very disappointing because I thought the soy bean would certainly prove a complete substitute for meat. I even tried to encourage the chickens by feeding them Savita mixed with the residue. This seemed to help a little, but not very much. If you can give me any light on this problem I will be greatly obliged.

"Very truly yours,"

775. LeClerc, J.A. 1936. Partial list of manufacturers of soybean flour. Washington, DC: Food Research Div., Bureau of Chemistry and Soils, USDA. 1 p. Oct. 19. First ed, Oct. 1933. Unpublished manuscript.
• ***Summary:*** The following are listed: 1. Funk Brothers, Bloomington, Illinois. 2. A.E. Staley Manufacturing Co., Decatur, Illinois. 3. Shellabarger Grain Products Company, Decatur, Illinois. 4. Soya Millers, Inc., Seattle, Washington. 5. American Soya Products Corp., Evansville, Indiana. 6. Fearn Soya Food Products, 355 W. Ontario Street, Chicago, Illinois. 7. Allied Mills, Inc., Peoria, Illinois. 8. The Glidden Co., Union Trust Bldg., Cleveland, Ohio. 9. Archer-Daniels-Midland Company, Chicago, Illinois. 10. Madison Foods, Madison, Tennessee. 11. Battle Creek Food Factory, Battle Creek, Michigan. 12. Cereo Company, Tappan, New York. 13. LaSierra [La Sierra] Industries, Ontario, California. 14. MacDowell Brothers, Brookville [sic, Brockville], Ontario [Canada]. 15. The Dietetic Supply House, Inc., 1750 W. Van Buren St., Chicago, Illinois. 16. Hilkrest Health Products, 120 Carroll Ave., Takoma Park, Maryland. 17. The Wilbur-Gardner Company, Glendale, California. 18. General Soya Corp., 120 Broadway, New York, New York. 19. Soybean Products Company, 4900 W. Flournoy Street, Chicago, Illinois. 20. El Molino Mills, 5604 Valley Blvd., Los Angeles, California. 21. Mitchell Milling Co., 5613 Lexington Ave., Los Angeles, California.

Note: This is the earliest document seen (Sept. 2009) concerning El Molino Mills and soy. Address: Washington, DC.

776. Kellogg, John Harvey. 1936. Re: Bifidus acidophilus and Soy Acidophilus. Letter to Mr. John M. Lonsdale, 46 Westwood Ave., Altrincham, Cheshire, England, Oct. 31. 2 p. Typed, without signature (carbon copy).
• ***Summary:*** "Yours of October 17 has reached me here at my winter headquarters [in Florida].

"I first obtained the organism bifidus acidophilus from Dr. Tissier, of the Pasteur Institute, in 1912, and have been making use of it ever since. A report from the laboratory that made the culture for me, a short time ago showed that between 1912 and 1935, we had received from the laboratory over 28,000 gallons of the culture.

"Dr. Tissier informed me that he could not make the organism grow in milk." Dr. Kellogg eventually succeeded in making it grow "in the whey of milk with the addition of peptone, and later a type of acidophilus was developed by making 25 or 30 transfers which grew quite well in milk.

"The trouble is, it seems to me, that the long process of adapting the organism to a cow's milk medium, denatures it so that it doesn't do so well... when attempts are made to reimplant it.

"The new type, Soy Acidophilus, is easily developed by planting the organism in soy milk under exacting laboratory conditions. It starts off a vigorous growth at once.

"The clinical results obtained by the use of the soy acidophilus type appear to be much better than those obtained from the dairy milk cultures, and the count is very much higher.

"It is easy to obtain cultures with a count of four or five billions per cc., which certainly is not often obtained with cow's milk." Address: [Miami, Florida].

777. Kellogg, John Harvey. 1936. Eating fruit before meals.

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Good Health (*Battle Creek, Michigan*) 71(10):302-03. Oct.
• ***Summary:*** Dr. Kellogg advocates eating thoroughly ripened fruits before meals. The *Lactobacillus bifidus-acidophilus* protects the digestive tract and maintains it in an acid state. If these bacilli are lost, they "may be restored by feeding an artificial culture, made by growing *Lactobacillus bifidus-acidophilus* in milk. Ordinary dairy milk is commonly employed, but recent experiments have shown that a milk prepared from the soy beans produced more vigorous and rapid-growing organisms. The latter culture is now available under the name of Soy Acidophilus Milk. The culture may be had, ready for use, or the milk may be prepared from materials which have been sterilized and assembled in readiness to be prepared at home.

"The writer has made extensive use of the banana in combination with Soy Acidophilus Milk and found this a most effective means of eliminating putrefactive bacteria and thus arresting the putrefactive process in the intestinal tract."

778. Stegman, Henry M. 1936. Hope for the farmer in the soy bean. *Good Health* (*Battle Creek, Michigan*) 71(10):297. Oct. [1 ref]
• ***Summary:*** "The soy bean promises to prove a great boon to the farmer in this country and to create numerous new industries which will relieve unemployment... It might also develop into one of our most valuable foodstuffs." Details are given on the extensive use of soybean protein and soybean oil in cars made by the Ford Motor Company. This is a summary of an article titled "The soybean points the way to agricultural recovery," by Dr. A.A. Horvath (*Scientific Monthly*, July, p. 63-69).

779. Kellogg, John Harvey. 1936. Soybeans as human food. *Nature's Path to Health* (*Melbourne, Australia*). Nov. 15. p. 9.
• ***Summary:*** Dr. Kellogg wrote an article and gave a speech on this subject in the USA in 1930-31. After summarizing the nutritional benefits of soybeans, he discusses a new subject. "The soy bean contains progestin, hormone of the human ovary–Aid in sterility seen. Dr. Willard Allen, biological chemist of the University of Rochester [New York], recently received an award for his discovery that the Soy Bean may be made to reproduce the action of the female reproductive gland. Dr. Allen's discovery was that the action of the corpus luteum of the human ovary, which plays an essential role in the process of reproduction, could be created chemically through the Soy Bean.

"By the use of an extract of pig's corpora lutea injected into sterilised rabbits, after fertilization, it was found that a reproductive process which would otherwise have been interrupted by sterilization, could be continued. In other words, the hormone Progestin, used in this manner would restore the normal reproductive process after an operation which ordinarily caused sterilization.

"After these experiments, the synthetic reproduction of the substance was worked out and the soy bean was found to be the basic necessity of artificial creation. This resulted in the isolation of the female hormone progestin, and on the basis of this discovery, the research was carried still further by Dr. Adolph Butenandt of Danzig [Germany], who announced that he had reached the point where the chemical formula of Progrestin could be stated.

"'Since the hormone plays such an important part in the reproduction, it will probably be found useful in treating sundry disorders in the child-bearing organs of the female,' Dr. Allen said.

"The best form in which the soy bean can be obtained is in the Soy Wheat Macaroni, a scientifically balanced food."

Note: At the end of this article is a short piece stating that Roberts and his organization have campaigned for many years to promote the use of the "Whole Meal Loaf [whole-wheat bread] in the face of severe opposition from vested interests, that have endeavoured to push the claims of the White Loaf." "The F.G. Roberts National Health Organisation is gratified to learn to-day, November 4th, the Commonwealth Advisory Council on Nutrition, tabled [presented] its second report in the House of Representatives, stating that 'Whole Meal Bread is definitely *superior* to White Bread as a Staple Food.'"

780. *Good Health* (*Battle Creek, Michigan*). 1936. The dangerous character of colon germs. 71(11):334-35. Nov.
• ***Summary:*** Doctor Tissier of the Pasteur Institute "made the great discovery that every nursing infant gets from its mother in the act of nursing, a powerful germ which, when properly encourages, is capable of driving out of the human intestine" trillions of unwanted, mischief-making germs. This good and powerful germ, called *"bifidus"* by Tissier and *"acidophilus"* by Morrow, makes harmless lactic acid–the acid of buttermilk, and thus protects the intestine against the germs which cause putrefaction and disease.

"Soy Acidophilus Milk, a superior and highly potent type of *acidophilus* discovered at the Battle Creek Sanitarium, and now available,... [is] perhaps the most effective means of combating mischievous colon germs which directly and indirectly are probably the most active of all causes of disease, senility and premature death." Address: M.D.

781. *Good Health* (*Battle Creek, Michigan*). 1936. The great future of the soy bean. 71(12):360. Dec. 28 cm.
• ***Summary:*** "The soy has many unusually excellent qualities, many of which are presented in a most interesting manner in *Time* [magazine], for October 12." Four long excerpted paragraphs follow.

"Food. Soy beans are ideal for diabetics because they contain little starch."

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782. *Good Health* (*Battle Creek, Michigan*). 1936. From the editor's pen: The quintuplets. 71(2):366. Dec.
• ***Summary:*** "The Soy Acidophilus Milk which the [Dionne] quintuplets take is given them to prevent the recurrence of the severe bowel infection which they suffered when four months old. They were relieved by the use of Soy Acidophilus Milk after other measures had failed. Whenever the use of this new and most potent type of acidophilus is discontinued, the bowel trouble quickly returns. By means of its regular use, the children are kept in excellent health."

There follows a summary of the use of acidophilus therapy as a curative agent, the work of Dr. Tissier of the Pasteur Institute, and the history of its use by the quintuplets.

Note: The editor is Dr. John Harvey Kellogg.

783. Kellogg, John Harvey. 1936. Metchnikoff's great discovery. *Good Health* (*Battle Creek, Michigan*) 71(12):380. Dec.
• ***Summary:*** "Prof. Metchnikoff and his assistants Tissier and Quinck, all of the Pasteur Institute of Paris [France], made nearly forty years ago, one of the most important discoveries ever made concerning the prevention and cure of digestive and many other disorders.

"Quinck suggested that the pernicious germs found in adult colons, which cause putrefaction, colitis, and appendicitis, and produce poisons which are the active or predisposing causes of many diseases, might be driven out by introducing a germ which would produce no poisons and do no harm.

"Metchnikoff adopted the suggestion and developed and exploited the idea, but failed of success because he selected the wrong germ, the *B. Bulgaricus,* which can not live in the colon.

"Prof. Tissier discovered a milk-souring germ (*bifidus-acidophilus*) which appears in the stools of infants soon after they begin to nurse, and drives out the putrefactive and other poison-forming germs with which the colons of infants become infected almost as soon as they are born.

"As early as 1912, Tissier's discovery was utilized in the United States in saving the life of an infant suffering from acute colitis, by changing the intestinal flora. Since that time the method has been employed in many thousands of cases by the use of milk cultures of the germ, and also by the use of Lacto-Dextrin, a special food which stimulates the growth of *B. Acidophilus* in a most remarkable manner.

"*B. Acidophilus,* or to be more exact the *Lactobacillus bifidus-acidophilus,* is a beneficent germ to which Nature has assigned the task of guarding the intestinal tract and protecting it from invasion and injury by the parasitic germs which cause putrefaction and produce virulent poisons and destructive inflammations... Bottle-fed infants who have never been breast-fed, as in the case of the famous [Dionne] quintuplets" lack the protective germs and thus are very subject to bowel troubles.

One easy way for people to change their "intestinal floras" is by the use of Soy Acidophilus Milk, which (because of recently perfected means) may now be made at home, and is thus within reach of everybody who needs it. Address: M.D.

784. Original Health Food Store. 1936. Soybean products (Ad). *Naturopath and Herald of Health* (*New York City*) 41(12):381. Dec.
• ***Summary:*** Down the left side of this 4.75 by 5½ inch ad is a list of soybean products by brand a price is also given for each: "BakerLust" brand: Soybean milk powder, plain or banana flavored, 14 oz, 1½ lb, or 5 lb. Soya bean vegetable soup powder, trial size, 14 oz, 1½ lb bag. Soy muffins, ½ dozen. Soy bean bread, 14 oz or 26 oz loaf. Soy beans–raw, per lb.

"Vita-Soy" brand: Soybean milk powder, 1 lb, 2 lb, 5 lb. Soya bean vegetable soup powder, ½ lb or 1 lb. Soya confection powder, ½ lb or 1 lb. Soya date sugar, 1 lb.

Madison brand: Soy fruit stix, 6½ oz. Soy date stix, 6½ oz. Soy koff, 12 oz.

Morey brand: Soy cocoa, 4 oz, 8 oz, or 16 oz cans.

Pfaffman brand: Soymac macaroni, 7 oz package. Soy noodles, 7 oz package.

Winroy brand: Soy nuts–roasted, 1½ oz, 8 oz, or 16 oz.

Coyle-Lawson brand: Soy malt–chocolated or plain, ½ lb.

Down the right hand side, under the title "Products of the marvelous soybean," is a brief description of each type of product. The first item, and that with by far the longest description, is "soybean milk powder."

Note 1. This is the earliest English-language document seen (Nov. 2009) that contains the word "BakerLust." It appears to be used as a brand name only for soy products.

Note 2. Benedict Lust apparently owned this store (See ad in the Feb. 1937 issue, p. 64). His brother, Louis Lust, owned a bakery (established in 1903) at Corner 105th St. and Park Ave., New York City. He baked wholegrain breads and related baked goods. Louis used (and may have coined) the brand name "BakerLust" to refer to products he made or sold.

Note 3. This ad also appears (with the same content but in a different form) in the Jan. 1937 edition of this magazine (p. 27), and of *Nature's Path* (New York City) (p. 38). It appeared in the same form in the July 1937 (p. 224) issue. Address: 343 Lexington Ave., New York City.

785. **Product Name:** Saucettes (Meatless Sausages).
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1936.
New Product–Documentation: Gray. 1936. All About the Soya Bean. p. 121.

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786. LeClerc, J.A.; Bailey, L.H. 1936. Soya flour. *USDA Food Research Div., Contribution* No. 303. *

787. **Product Name:** Soy-Koff (Alkaline Coffee Substitute. Renamed Zoy-Koff in about 1939) [Regular, or Fine Grinds].
Manufacturer's Name: Madison Foods (Renamed Nutrition International Corp. in about 1965).
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1936.
Ingredients: Soybeans, bran, brown sugar.
Wt/Vol., Packaging, Price: 12 oz box or 1 lb bag.
How Stored: Shelf stable.
Nutrition: 6 oz. liquid: Protein 0.8%, fat 0.0004%, carbohydrates 0.98%, ash 0.12%, calories 4.3/100 gm.
New Product–Documentation: Madison Survey. 1936. July 15. p. 115.

Madison Survey. 1937. "The soy bean marches on." April 21. p. 59-60.

Ad in Nature's Path (USA). June 1943. p. 227. "Zoy-Koff: Coffee flavor without coffee after-effects." Taylor. 1944. Soy Cook Book. p. 201. Madison Health Messenger. 1949. V. 49-2. p. 5.

Soybean Blue Book. 1950. p. 84.

Francis Kalnay. 1959. House Beautiful. May. p. 174-75. "Soybean has all the answers." A photo shows the bag and label. The front panel reads: "A satisfying hot beverage made of soy beans and molasses." Also listed in 1963 Blue Book (p. 97) as Zoy-koff. Soybean Blue Book. 1965. p. 111.

788. Dittes, Frances L. 1936. The biological availability of cystine found in soybean cheese. PhD thesis, George Peabody College for Teachers. In: Doctoral Dissertations Accepted by American Universities, 1936. *
Address: George Peabody College for Teachers, Nashville, Tennessee.

789. Gray, George Douglas. 1936. All about the soya bean: In agriculture, industry and commerce. London: John Bale, Sons & Danielsson Ltd. ix + 144 p. Introduction by James L. North. Late curator, Royal Botanic Gardens, Regent's Park, London. Index. 28 cm. [19 ref]
• ***Summary:*** A comprehensive, early work on the soybean. Gray was a Scotch physician. Contents: 1. Introducing the soya bean. 2. The soya bean plant and its cultivation. 3. The soya bean as food: Dietetics, immature green beans, mature dried beans, soya bean coffee, soya bean chocolate, soya bean sprouts, soya bean milk, soya bean flour (incl. Berczeller flour, Soyvita bread made by Messrs. Wm. Beattie, Ltd., Glasgow), bean curd [tofu], soy (also called soya bean sauce, Chinese bean sauce, or shoyu), miso, fermented bean curd (p. 66-67). 4. Soya bean oil. 5. Soya bean trade. 6. The soya bean in agriculture.

Addenda: Soya bean products in the USA. Dieting and recipes. Statistics. India. Bibliography.

In the chapter on "Soya bean oil" we read (p. 75): "In England, the bean oil trade is carried on by the following firms:–The British Oil and Cake Mills Ltd., the ordinary shares of which are held by Lever Bros., Ltd., so that they are a branch of Unilever, Ltd.

"The Hull Oil Manufacturing Co., Ltd., Hull, now merged in the foregoing concern.

"The Premier Oil Extracting Mills, Ltd., Hull.

"Messrs. Wray Sanderson & Co., Hull.

"The Medina Refinery Ltd., Deptford, London.

"Messrs. J. Bibby & Sons Ltd., Liverpool.

"The Erith Oil Works Ltd., Erith" [Kent].

The first addendum, titled "Soybean products exhibited by the American Soybean Association" (at Washington, DC, p. 120-24) lists the following companies and each of the soy products that they manufacture: American Lecithin Corp. (Atlanta, Georgia), Archer-Daniels-Midland Co. (Milwaukee, Wisconsin), Armstrong Paint and Varnish Works (Chicago, Illinois), Battle Creek [Food] Factory (Battle Creek, Michigan), The Blanton Co. (St. Louis, Missouri), Cereo Co. (Tappan, New York), The Davies-Young Soap Co. (Dayton, Ohio), Detroit Graphite Co. (Detroit, Michigan), Eastern Health Food Stores Association (Washington, DC), Funk Brothers Seed Company (Bloomington, Illinois), Harshaw Essential Foods, Inc. (Cleveland, Ohio), Keystone Macaroni Mfg. Co. (Lebanon, Pennsylvania), Kloss, Jethro (Takoma Park, Maryland: Fresh [soybean] milk. Pumpkin pie [soybean milk and soybean flour]. Soybean cheese. Soybean bread [20% soybean flour]. Soybean buns. Soybean sprouts. Soybean cake), Laucks, I.F., Inc. (Bloomington, Illinois–home office, Seattle, Washington), Madison Food Company (Madison, Tennessee; Vigorost, Cheese [Tofu], Soybeans canned with Tomato, Soybeans canned plain, Dixie Fruit Crackers), Mead Johnson and Co. (Evansville, Indiana; Makes Sobee [Infant Formula]), Oriental Show-You Co. (Columbia City, Indiana), Paintcraft Co. (Galesburg, Illinois), Prince Macaroni Mfg. Co. (Boston, Massachusetts), Purina Mills (St. Louis, Missouri; makes Cresol disinfectant, Purina turkey and growing fattening chow, Purina lay chow, Purina egg chowder, Purina breeder egg chowder, Purina fitting chow, Purina rabbit chow, Purina chick Growena chow, Purina 34% cow chow, Purina chowder, Purina bulky cow chow, Purina 24% cow chow, Purina pig and hog chow, Protena all mash starting and growing food), Shellabarger Grain Products Company (Decatur, Illinois), Soyex Company, Inc. (Nutley, New Jersey), Staley Sales Corporation (Decatur, Illinois), The Stamford Rubber Supply Company (Stamford, Connecticut), Dr. Roy Monier, President, Board of Managers, State Hospitals (Jefferson City, Missouri), United Drug Company (Boston, Massachusetts), Vi-tone Company (Hamilton, Canada), Woolsey Paint and Color Co., C.A. (Jersey City, New Jersey), Bureau of Chemistry and Soils, Department

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of Agriculture (Washington, D.C.). Page 120 adds: "The exhibit also contained some 200 soybean products, mostly foods, brought from the Orient by Mr. W.J. Morse, Senior Agronomist, Department of Agriculture, Washington, DC, U.S.A." Note 1. Morse and P.H. Dorsett were in East Asia from 1929 to 1931, when they collected many samples of soybeans and soyfoods.

In the second addendum, recipes, the author notes that soy flour is widely used in diabetic diets. Two leading firms who make soy flour in England and who also incorporate it in various products are: Soya Foods, Ltd., Rickmansworth, Herts, and Dietetic Foods Ltd. 124 Victoria St., London, S.W. 1. "The former specialize in Soyolk which is flour prepared on the principles laid down by Professor Berczeller; it is a mealy powder, fatty to the touch. The latter firm are the sole distributors in Great Britain of the well-known 'Heudebert' Dietetic Food products, a French concern which makes different kinds of diabetic breads." The following recipes are then given; * = Calls for Soyolk soy flour: Soybeans, southern style. Soybean salad. Roasted soybeans [like dry-roasted peanuts]. Soybean croquettes. Soybean soufflé. Stuffing for baked fish*. White sponge pudding*. Shortbread*. Madeira cake*. Soya soup à la Reine (uses Heudebert soya flour). Soya chocolate (with soya flour). Soya vegetable soup (with soya flour). Soya bean sprout salad.

Note 2. This is the earliest English-language document seen (Jan. 2013) that uses the term "soya bean sprouts" to refer to these sprouts. Address: M.D. (Scotch physician) England. Late medical officer to H.B.M. Legation, Peking, China. Lieut.-Colonel, Retired.

790. Hagstotz, Gideon David. 1936. The Seventh-day Adventists in the British Isles, 1878-1933. Lincoln, Nebraska: Union College Press. 231 p. Index. 23 cm. [611 ref]

• ***Summary:*** Chapter 1 begins with a historical sketch of the early Seventh-day Adventist church in the United States, plus general organization, work and doctrine: 1831-1844–William Miller of Low Hampton, New York, delivers his famous prophetic lectures concerning Christ's return to earth in 1844 (based on Daniel 14 in the Bible). 1844–The "disappointment" when Christ fails to appear, and attempts to predict another date (based on Revelation 14:6-14). Ellen Harmon experiences her first "vision" at age 17. 1845 (about)–A new religious movement is started by Captain James Bates, James White, and Ellen G. White; they follow the Ten Commandments, start to keep the Sabbath on Saturday, and preach the word of God for the "cleansing of the sanctuary" in heaven.

1848 Oct. 30–Ellen Harmon and Elder James White (a Methodist) are married. 1849–A newspaper titled *Present Truth* is published in Middletown, Connecticut, largely under the aegis of James White. "Shortly after this time Mr. and Mrs. White moved their headquarters to Rochester, New York. 1855–They relocated in Battle Creek, Michigan, which later became the SDA denominational headquarters. 1860 Oct.–The name Seventh-day Adventists is adopted at a conference held in Battle Creek. 1863–There are now about 3,500 Seventh-day Adventists having about 125 churches. 1873–There are now about 5,875 Seventh-day Adventists. 1893–The number of the SDAs has increased to 37,404. 1903–The SDA denominational headquarters is moved to Washington, DC, from Battle Creek.

Chapter 2 is "Organization of the British Union Conference," and Chapter 10 is "Medical Work and Health Food Factory." A merged chronology follows: From 1878 "until 1 July 1902, when the British Union Conference came into existence, the General Conference of Seventh-day Adventists located at Battle Creek, Michigan, directly controlled the denominational mission program in the British Isles." The headquarters was in London.

1898–Definite denominational medical endeavors began when Dr. D.H. and Dr. Lauretta Kress arrived in England under the auspices of the General Conferences of SDAs.

1899–These physicians began to publish a magazine devoted to healthful living titled *Life and Health.* They also "started a small 'health home' in Dunedin, a country villa Meadville, near Redhill Surrey, which they reported full to capacity by November of the first year."

1899 (about, p. 146)–"The first venture at manufacturing health foods by the Seventh-day Adventists in England began in conjunction with the Sanitarium work of Dr. D.H. and Dr. Lauretta Kress near Redhill, Surrey. Here the International Health Association purchased Harley Mill, which it enlarged and called Salford Mill before starting production of health products. The management imported some of the machinery and purchased the remainder in England. The products resembled the noted Kellogg and Post health foods; in fact the association had procured the 'rights' to make Battle Creek foods in England.

"Early in 1900, just after the factory gave promise of developing into a profitable industry, fire destroyed the plant... With the undamaged machinery as a nucleus for a new start, the Association leased property in Birmingham [far to the northwest, between London and Manchester] the following November [1901] where it functioned as a stock holding company under British law. Unfavorable conditions in the form of high rent and improper location" led to "a financial loss of £1,500 at the end of the first year of operation." Thereafter "each year the plant showed a profit in spite of some competition created by substitutes for the commodities it produced."

In the spring of 1900, Dr. and Mrs. Kress had to leave England. But before they left, Dr. A.B. Olsen and his wife, also a physician, had arrived in England to replace them. The first magazine was discontinued.

1901 Oct.–A new health journal, *Good Health*, appears

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on the market thanks to a gift of $300 from Dr. J.H. Kellogg and $400 worth of advance subscriptions. By Feb. 1902 this periodical had reached a circulation of 30,000. Note: It advocated a vegetarian diet.

1902 Aug.–During the Bank Holiday the SDA food factory's products were served as refreshments at the Salvation Army gathering at the London Country Athletic Grounds, Herne Hill; they were widely praised.

1903 March–Dr. Olsen completes the purchase of a small hydropathic institution in Caterham, Surrey, 18 miles south of London. The new property is named Caterham Sanitarium and Surrey Hills Hydropathic. The Sanitarium as soon thriving.

1906–A company named the Seventh-day Adventist Union Ltd. was created at the annual meeting to care for SDA property and transact all legal business with dispatch. "After some negotiations the company purchased an estate known as The Stanboroughs for £8,250. This property, located near Watford, England, about 15 miles northwest of London, included fifty-five acres, a large residence and stables all surrounded by timber. Here the British Union Conference located its publishing plant, food factory, college, and sanitarium." In Dec. 1906, when the Union Conference gained possession of the property, the denominational headquarters was moved to here from London, where it had been located since 1877.

1907 Oct.–The SDA food factory closes in Birmingham and starts to operate at Watford, 15 miles northwest of London. From 1907 to 1914 the SDA health food factory liquidated a deficit of $7,000 and indicated a yearly profit of $3,000 to $400.

1908 Dec. 31–Organizations owned by the British Union Conference include "The International Health Association Limited, The Good Health Association Ltd., and Stanborough Park Training College..." (p. 28).

1913–The International Health Association recorded a net profit of $3,930. Then came World War I and hard times, but business continue to improve.

1918–By the end of this year "the factory could no longer supply the demand, although operating on a twenty-four hour schedule with forty employees." Assets totaled $28,800 whereas liabilities were only $5,400.

1926–The International Health Association is renamed Granose Foods Ltd. By year's end the company had no more liabilities.

Note 1. Seventh-day Adventists appear to have been the first to make health foods in the UK, starting in 1899. In 1896 or 1897 a vegetarian restaurant opened in a new building on Corporation Street in Birmingham. James Henry Cook was appointed the manager. The landlord asked the consortium of businessmen funding the restaurant if they would like to use the whole seven story building and convert the upper five stories into a hotel. They agreed to do so. Thus, in the summer of 1898, the Pitman Vegetarian Hotel, the first Vegetarian Hotel in England, opened in Birmingham, again with James Henry Cook appointed manager. In about 1902, James Henry Cook opened a health food store either in the hotel or nearby, and some time after that he began to manufacture health foods in Birmingham. The manufacturing company was initially named the Pitman Health Food Co., but in about 1929 it was renamed Vitaland. Unfortunately the last two dates are not known. (See Kathleen Keleny. 1996. *The First Century of Health Foods*).

Note 2. This book is very well documented with 515 footnotes and 96 bibliographical references from both primary and secondary sources. Gideon David Hagstotz was born in 1896. Address: PhD.

791. Richter, John T. 1936. Nature–The healer. As edited by Henry Winfred Splitter, M.A. (Univ. of Wisconsin). Los Angeles, California: Published by the authors. 433 + [6] p. Illust. Index. 21 cm.

• ***Summary:*** John T. Richter was born in 1864. He earned his Doctor of Chiropractic and Naturopathy in Minnesota, but he did not practice "since coming to California. The management of his restaurants and educational work connected with the live-food movement have demanded his entire time." This book is dedicated to "to humanity whom we serve."

Perhaps the most interesting part of this book is the Biography (on unnumbered pages at the front). "My father was a country physician of the conventional medical type. He also owned a drug store in the little North Dakota town of Fargo" in which I was raised. He wanted me to be a medical doctor, just as he was; but, as it happened I had worked as a young man, for nine years in his drug store, and had had plenty of experience in the compounding of inorganic and organic drugs. I had observed their effects on my father's patients. He decided to send me to the Rush Medical College in Chicago [Illinois], and he thought it was strange when I showed no desire to fulfill his wishes."

He did go to Chicago and earned some type of diploma from an unnamed "institute" that taught the "'movement-cure' in which the general theory and practice of vegetarianism of the cooked food type was incorporated.

When he returned home, his father, upon seeing his degree said it was "quack." John drove with his father on rounds to see his patients. Some 20-30 were incurable charity patients. John offered to take all these from his father. Soon he had cured them all. "Notice all that all these cures were accomplished under the Battle Creek system of diet–cooked food vegetarianism, with a considerable amount of green vegetables and fruits. The results I had obtained were marvelous."

"After having lived for 15 years largely on a cooked-food diet (no meat, of course). I noticed that something was physically wrong with me. My kidneys were not functioning properly. I seemed to lack recuperative energy." He often

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felt tired. He then read an article in a naturopathic magazine "describing how a certain Dr. Lust had been invited by Dr. George Drew of Chicago to partake of an uncooked food dinner." He decided to give the new diet a trial. "Dr. Drew came to Minneapolis to teach me as well as the class I had organized for him." After 9 months he felt much better. Tests showed his blood had changed from acid to alkaline. His weight, which began at 145 pounds, dwindled to 123, but eventually returned to 145 plus a little more. "For 25 years now I have lived according to this [raw food] system." He was in his late 40s when he started. "Today, at age 72 (I was born in 1864), I can do more work, can do it more accurately, than I could when I was 35."

This book consists of a number of health conditions / problems, foods, and stimulants, arranged in alphabetical order, and his advice concerning each. For example: Abscesses, acidity, adenoids, adhesions, alcohol, aluminum, anæmia, apoplexy, appendicitis, appetite, arthritis, asthma, auto-intoxication, bacteria and germs, etc. Other interesting sections include drugs and drug poisoning, eggs (forbidden), fasting, food–cooked, meat, milk, patent foods, philosophy of live food, sex, tobacco, vaccination, vegetable and olive oils, and vegetables and legumes.

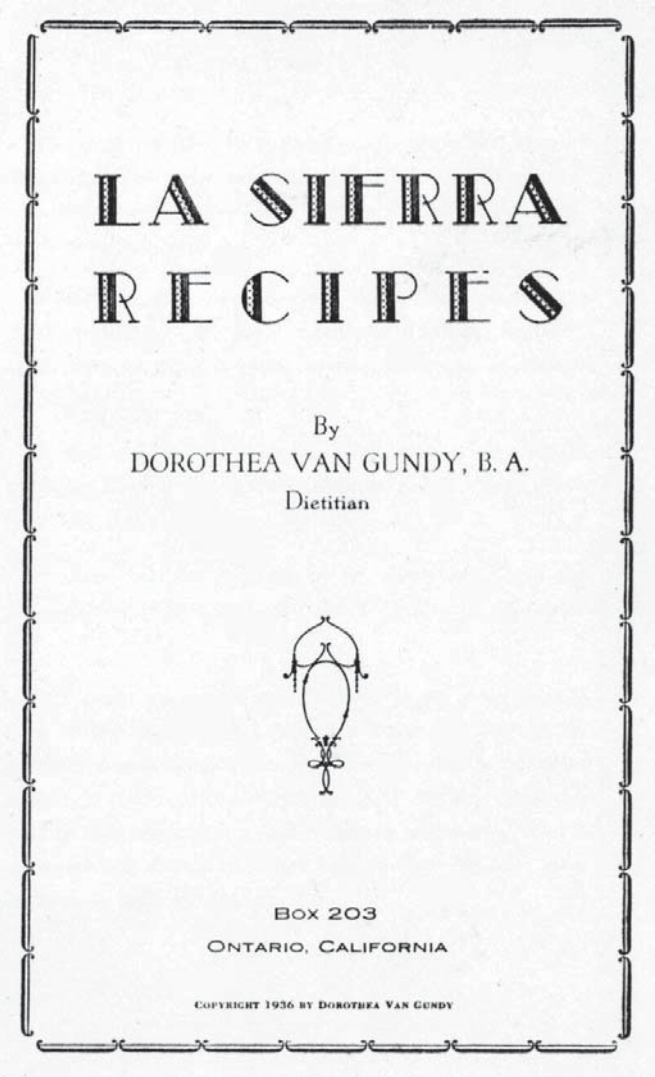
He repeatedly advises people to "eat natural foods" and to live naturally. Richter was opposed to alcoholic beverages, coffee, cooked foods, dairy products, meat, salt, sugar, tobacco, and vaccination. He advocated conservation of bodily energy through continence–except for the purpose of reproduction. A full page portrait photo (frontispiece) shows John T. Richter.

Note 1. The index is largely useless, since it simply lists health conditions in alphabetical order. Note 2. Despite the bibliography, this book contains relatively little information about John Richter's life. When and where did he earn his "Doctor of Chiropractic and Naturopathy"? How long did it take him to complete the course? When did he move to California (by 1917) and when did he start each of his living food Eutropheon restaurants there (by Sept. 1923)? When and where did he meet his wife (who was very active in his restaurants and educational work)? When and where were they married? Address: 2844 Avenel St., Los Angeles 26, California.

792. Rombauer, Irma S. 1936. The joy of cooking: A compilation of reliable recipes with a casual culinary chat. Indianapolis/New York: Bobbs-Merrill Co. v + 628 p. Illust. by Marion Rombauer Becker. 24 cm.

• ***Summary:*** This is the earliest known edition of *Joy* published by Bobbs-Merrill. Soy is not mentioned in the index; neither is "vegetarian"–although recipes for three "meatless" soups are given (p. 29-30). However soy sauce is used in: Chow mein with fried noodles (p. 96). Chicken chop suey (p. 96). Soy sauce is not mentioned as a seasoning for gravy, sauces, or soups–but Worcestershire sauce is (p. 248). Under "Soups" (p. 22) we read: "Canned bouillon and beef cubes are in general use, but Savita, a meatless Battle Creek product, is a better substitute..." The amount of meat and sugar used in this cookbook is surprising. Address: St. Louis, Missouri.

793. Van Gundy, Dorothea. 1936. La Sierra recipes. Campus and Maitland, Ontario, California: Published by the author. 47 p. 19 cm.


LA SIERRA
RECIPES

By
DOROTHEA VAN GUNDY, B. A.
Dietitian

BOX 203
ONTARIO, CALIFORNIA

COPYRIGHT 1936 BY DOROTHEA VAN GUNDY

• ***Summary:*** Most (but not all) of the recipes in this book call for soy-based ingredients. Contents: Dedication. "This book is lovingly dedicated to the memory of my father." Foreword: "Due to the increase of disease in the animal kingdom, the diet should be as free as possible from these elements, including meat, eggs, and milk." Approximate composition for La Sierra Products: Soy butter [soynut butter] (27.6% protein, 47.1% fats). Soy breakfast food. Soy flour. Cooked soy beans. Soy loaf. Milk. Bean sprouts. Soy cheese [tofu]. Soy spread. Soy bologna. Dry soy beans.

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1. The soy bean as a human food: Nutritional value, varieties of soy beans, flour, soy milk, soy milk from flour, soy milk from raw beans, soy cream (made by homogenizing / blending equal parts of soy milk and soy oil or other vegetable oil), soy cheese, soy bean sprouts, soy sauce.

2. Soups: Incl. Soyament bouillon. Many use Soyament (Soy Sauce), soy milk, or soy cream. 3. Entrees. Recipes incl. Soy croquettes (with Soy Bean Pulp and Smoein). Walnut Loaf (with Smoein and soy milk). Soy protose (with soy butter and Mamenoko flour). Gluten patties (with Smoein). Soy cheese with tomato sauce. Soy cheese croquettes. Soy cheese and Soyament sauce. Baked macaroni with La Sierra Vegetable Bologna. Soy loaf. Soy loaf a la king. Baked soy noodles. Chow mein (with La Sierra Soy Cheese). Lentil patties (with Smoein).

4. Sauces and gravies: Many use soy milk, Smoein, or soy sauce. 5. Vegetables. Incl. Creamed vegetables (with soy milk). 6. Salads and salad dressings. Soy recipes include: Carrot and soy cheese. Tomato and soy cheese. Pineapple and soy cheese. Stuffed celery (with soy cheese). Soy loaf salad. Cabbage and banana salad (with soy mayonnaise). Head lettuce (with soy butter dressing). Salad dressing (uses soy milk in place of eggs). Soy mayonnaise [Note: This is the earliest recipe seen for a soy mayonnaise]. Tomato mayonnaise (tomato juice beaten into soy mayonnaise). Thousand island dressing (with soy mayonnaise). Parsley and olive dressing (with soy mayonnaise; uses ¼ cup chopped olives, not olive oil). Soy cream dressing. Soy butter dressing [with soynut butter]. Cream golden dressing (with soy cream). French dressing (with soy oil or any vegetable oil).

7. Desserts. * = with soy milk. + = with soy cream. Cream rice pudding*. Rice pudding+. Blanc mange*+ [Blancmange]. Orange cream pudding+. Lemon fluff+. Fruit fluff+. Cream tapioca*+. Frozen pudding*+. Vanilla Ice Cream*+. Almond cream [Almond ice cream] (incl. 1 cup chopped almonds)*+. Strawberry sherbet+. Raspberry sherbet+. Butterscotch chiffon pie+. Lemon pie+. Banana cream pie*+. Pumpkin pie without eggs*. Soy pastry with soy flour. Soy cookies+.

8. Bread: Soy bread (with 4 cups entire wheat flour and 1 cup soy flour). Entire wheat bread (with 2 cups soy milk). Entire wheat sticks (with 3 parts wheat flour and 1 part soy flour). Corn meal crisps (with 4 parts corn meal, 3 parts wheat flour, and 1 part soy flour). Short cake (with 2 parts soy milk, 5 parts wheat flour, 1 part soy flour). Waffles (with 12 parts wheat flour, 2 parts soy flour, and 7 parts soy milk).

9. Sandwiches: Soy bean filling. Vegetable bologna. Soy delight filling (with soy[nut] butter). Soy cheese and raisin sandwiches. Soy butter (soynut butter thinned with tomato juice). Soy butter and honey. Soy cheese and olive [chopped green olives]. Soy spread [Made by La Sierra]. Sandwich salad (with many soy possibilities).

10. Beverages: "A very fine coffee substitute is made [by La Sierra] from the Soy Bean, and tastes remarkably like Coffee. It is particularly fine from an alkaline standpoint, and is particularly excellent to be used in connection with high alkaline diets." Soy-co (Beverage) Add 1 rounding teaspoon to 1 cup of water. "Percolate or boil until desired strength. Serve plain or with Soy Cream." Also delicious iced. Soy-co (Made with soy milk). Soy milk shake. Soy banana drink. Mamenoko drink (uses 3 tablespoons Mamenoko, which is processed soy flour). Soyament cocktail ("A very refreshing beverage may be made by using 1 to 2 tablespoons Soyament sauce to 1 cup of water").

11. Healthful confections: Beanut brittle (2 cups each Soy Beanuts and brown sugar). Victoria fudge (with "3/4 c Soy Milk").

Use of soy beans in the diet: Outline for 3 meals. Suggestion for 3 days' menus, using soy products.

La Sierra Industries manufactures the following 14 foods from soy beans: Canned soy beans, plain or with tomato sauce. Soy loaf. Soy vegetable bologna. Soy milk. Soy breakfast food. Soy butter [like peanut butter]. Soy-co (beverage) [coffee substitute]. Smoein (smoked meat flavor). Soy spread. Soy flour, raw and processed. Soy beanuts (parched soy beans).

Soyament brand bean sauce. This soya bean sauce is "prepared from soya beans by splitting up the bean protein by a special process which thoroughly decomposes it into Amino Acids. A number of Amino Acids, each possessing a sweet taste, is the most remarkable feature of the Soyament Sauce and makes it different from many of the so-called soy sauces... On sale at all grocery stores or write to Soya Bean Products Co., 3522 East Third St., Los Angeles."

In the section on "Soy milk" (p. 8) is a long quotation from Dr. [Walter] Siegmeister: "So well has the Soy bean served as a source of vegetable milk, that the records tend to show that it has proven superior to cow's milk in certain important respects. The most marked of these is the almost complete absence of rickets in China, which is quite probable in view of the fact that not only is the Soy bean rich in Vitamin D, but also in Calcium and Phosphorous, the chief requirements for healthy bone development."

Note: This is the earliest document seen (Dec. 2003) that mentions a soy-based shake. It is also the earliest English-language document seen (Dec. 2003) that uses the term "Milk Shake" to refer to a non-dairy soy milk shake or that contains the term "Soy Milk Shake" (p. 41). The recipe with that title states: "Soy Milk may be mixed with any of the fruit juices and beaten with a small amount of chipped ice. It fluffs up and is very palatable. Soy Milk and orange juice combine splendidly." Address: Dietitian, Box 203, Ontario, California.

794. Jones Grain Mill. 1936? Natural foods: Catalog, recipes, information. Los Angeles, California. 74 p. Undated. 22 cm. • ***Summary:*** On the cover is a white mill behind a mill wheel

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(unrealistic) on a mill pond. Contents: Foreword. Health recipes: Cereals (incl. Soy bean or Mamenoke {Mamenoka, Mamenoko} breakfast cereal), breakfast cakes (incl. soy hot cakes with soy milk and Mamenoka flour, soy waffles, soy bean griddle cakes), desserts, breads (incl. soy bean flour gems, whole wheat bread), candies. Vital information: Vitamins and minerals essential to life.

Price list (prices are given for each item listed on pages 46-72): Alberty products, Alvita products, Battle Creek Sanitarium Health Foods [Michigan] (p. 47-48), beverages–coffee substitutes (Loma Linda Breakfast Cup, Soyco {soy bean coffee}, Javex {soy bean}, Carque's Soy Bean Coffee), books (by Dr. Benjamin Gayelord Hauser, Paul C. Bragg, Mrs. Alberty, Martin W. Pretorius, Otto Carque, Clark Irvine, Dr. Harry Finkel), Dr. Paul Bragg products, Jones Grain Mill Bakery (operated by Alberty Specialty Bakers), Burbank products, Carque's products, crackers and toast (Cubbison's bulk or packaged), honey, jams & jellies, juices (fruit & vegetable), KAL products, kelp products (products of the sea, incl. sea lettuce, dulse, Parkelp), Kovac products, Loma Linda Foods (Soy products: Soy beans–plain, tomato, or tomato and Proteena, Soy milk–8½ oz, No. 1, or No. 2, Soy Mince sandwich spread), macaroni & noodles (incl. soy bean macaroni, soy bean noodles), meat substitutes (incl. Simoein [Smoein], Soy loaf, Alfa Soy Spread, Soy Mince) McCollum products, maple syrup and candies, Martin Pretorius products, nuts and butters, Nature Ade products, Nutro Links (Santay, Swiss, Hauser), oils, olives, Radiance products, salts (vegetable, vegetized, and vegetablized), salad dressing and mayonnaise (made with lemon and vegetable oil), health sugars and sugar substitutes, seeds, soya bean products, teas.

The price list of "Soya bean products" (p. 72) reads as follows: "Breakfast Cereal with Carob Flour ([and soya beans] tastes like Grape Nuts), pkg., 25¢. Breakfast Cereal (prepared [with soya beans]), pkg., 25¢. Soya bean flakes, pkg., 30¢. Soya bean grits, pkg., 25¢. Soya bean bread, lb. loaf, 14¢. Soya bean melba toast, lb., 30¢. Soya bean wafers, lb., 40¢. Soya bean cookies (sweetened with dextrose), doz., 15¢. Soya bean coffee cakes (sweetened with honey), each, 5¢. Soya beans cooked: Soya beans (plain cooked), No. 2 can, 13¢. Imported soya beans from Manchuria, lb., 10¢. Pre-cooked soya beans (easily prepared in 30 minutes), lb., 15¢. Soya beans with tomatoes (ready to serve), No. 2 can, 15¢. Cooked soya beans with Proteena, No. 2 can, 15¢. Other soya bean products: Non-fattening [sic] soya bean oil (for all cooking purposes), pint, 40¢. Soya bean coffee, lb., 25¢. Soya bean flour, lb., 10¢; 3 lbs., 25¢. Dextrinized soya bean flour, lb., 15¢. Soya bean milk flour, lb., 60¢. Soya bean candy (with pure chocolate and Dextrose), lb., 50¢. Soya bean sandwich spread, 25¢. Soy sauce, 20¢. Soya bean loaf, No. 2 can, 25¢. Soya bean milk, No. 2 can, 15¢. Soya bean cheese (made from soya bean milk), lb., 30¢. Soya bean mince, 8-oz. can, 25¢. Soya bean spaghetti, lb., 25¢. Soya bean macaroni, lb., 25¢. Soya bean noodles, lb., 25¢. Soy beverage (Cocoalette), 10¢.

Ads include: Hollywood Cup (p. 20). Otto Carque Co. (Glendale, California, p. 30). Loma Linda Foods (p. 33, sells soy wafers, three styles of soy beans, liquid soy milk, soy mince). Vita-Pekan (p. 46, formula includes soya bean as a major ingredient). Alberty dried brewers yeast (p. 50). Kovac Laboratories (p. 67). Cubbison (p. 73, incl. Soya Toast, Soya Cookies, Soya Gluten Crackers).

Note: This catalog was probably published in 1933, since the company's location in Beverly Hills is not mentioned; it opened in 1934. Moreover, the book titled *Vital Facts about Foods,* by Otto Carque was first published in 1933. Address: 322 So. Hill St. and 504 So. Broadway. Both: Los Angeles, California.

795. Dafoe, Allan Roy. 1937. Re: The Dionne quintuplets, dried soy bean milk, and soy acidophilus milk. Letter to Dr. John H. Kellogg, Miami-Battle Creek, Miami Springs, Florida, Jan. 4. 1 p. Typed, with signature on letterhead.
• ***Summary:*** See next page. Dr. Dafoe is the attending physician for the Dionne quintuplets. He thanks Dr. Kellogg for the shipment of fruit which arrived today. "Since writing you last you have also favored us with the dried soy bean milk and the gallon shipment of acidophilus, both of which, you may be sure, are appreciated."

Note: On the letterhead is a photo of the five babies with their names printed under each: Yvonne, Cecile, Marie, Annette, and Emilie [spelled Emelie by Feb. 23].

On Jan. 27 Dr. Dafoe writes Dr. Kellogg requesting that he double the amount of acidophilus sent each week. On the letter is written by hand: "1 case been shipped weekly for 6 months." Next to it is a stamp: "Approved–Jan. 29 1937. Credit Dept."

On Jan. 29 Dr. Kellogg writes that he is sending a number of special foods especially designed for infants, made by his Battle Creek Food Company in Michigan. One of these is made from the soy bean. "It may interest you to know that the specimen of soy acidophilus milk which I sent you is particularly rich in vitamins B and G, containing 50 units per 10 grams of vitamin B and 90 units of vitamin G." He then raises the idea of using a picture or pictures of the quintuplets in connection with the sale of these infant foods if is agreeable to the trustees of the Guardianship to do so.

In another letter of 29 Jan. 1937 to Hon. David Croll, Minister of Public Affairs, Parliament Buildings, Toronto, Ontario, Canada, he proposes the same idea, but now with a royalty payment: "We have an application from two other milk companies who desire to manufacture and distribute our soy acidophilus milk. We will be greatly pleased if you can see your way clear to quote us terms for a royalty arrangement." Address: The Dionne Quintuplet Guardianship, Callander, Ontario, Canada.

796. *Good Health* (*Battle Creek, Michigan*). 1937. Cow's

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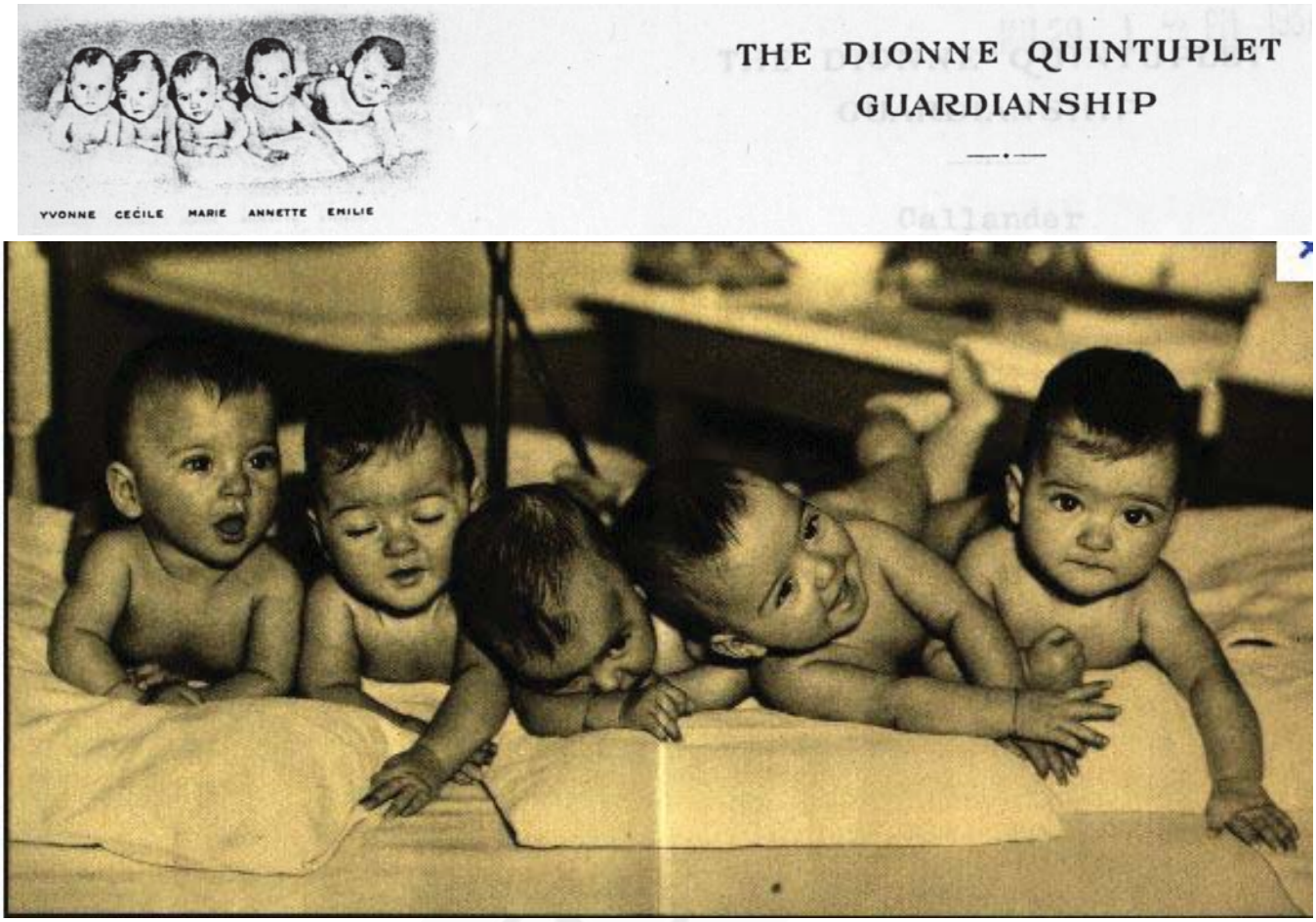

milk harmful to both infants and adults. 72(1):22. Jan.
• ***Summary:*** "Allergic reaction, or sensitization, to cow's milk is most common in infants and young children but no age is exempt from it." And it is becoming more and more widespread, according to an article by Dr. Charles G. Kerley in the *New York State Journal of Medicine.* The allergy in children may take one of three forms: Shack, gastrointestinal symptoms, or skin reactions (eczema, urticaria, giant hives, etc.).

"The best plan for securing quick relief in these cases is to feed Malted Nuts or a vegetable milk prepared from the soy bean. Milk prepared from almonds or pecans may also be used successfully." Address: USDA, Washington, DC.

797. Kellogg, John Harvey. 1937. Re: Soy acidophilus milk, cottage cheese, and the Dionne Quintuplets. Letter to Dr. Allan Roy Dafoe, The Dionne Quintuplet Guardianship, Callander, ONT, Canada, Feb. 11. 2 p. Typed, without signature (carbon copy).
• ***Summary:*** Dr. Kellogg is sending Dr. Dafoe a box of oranges and other fruits, plus a new table showing the vitamin content of different foods. "I am also sending you a package of soy acidophilus cheese which resembles cottage cheese in appearance. It is made from soy acidophilus milk in essentially the same manner in which cottage cheese is prepared. With the addition of thick cream, sweet or sour, and if desired, a little salt, it becomes as palatable as ordinary cottage cheese and has the advantage that it contains a high percentage of *Lactobacillus acidophilus.* A count made today (February 11) shows 250 billion to the gram. I thought the quintuplets might like this for a change.

"If you will consult the table you will see that the soy bean is a good source for vitamin B and also one of the best of all known vegetable sources for vitamin G. This gives an additional value to soy acidophilus milk and other soy bean preparations." Address: M.D., Battle Creek, Michigan.

798. Kellogg, John Harvey. 1937. Re: Dr. Tissier's bifidus culture and soy bean milk. Letter to Prof. A. Besredka, 25 Rue du Docteur Roux, Paris, France, Feb. 20. 2 p. Typed, without signature (carbon copy).
• ***Summary:*** Prof. Besredka of the Pasteur Inst. is a world-famous bacteriologist. "I have been much interested in the work initiated by Metchnikoff in relation to changing the flora. I think I have made much more use of this principle than any other person. I obtained from Dr. Tissier a culture of his bifidus... I began quite extensive use of the culture in 1912, and between that time and 1935 used over a

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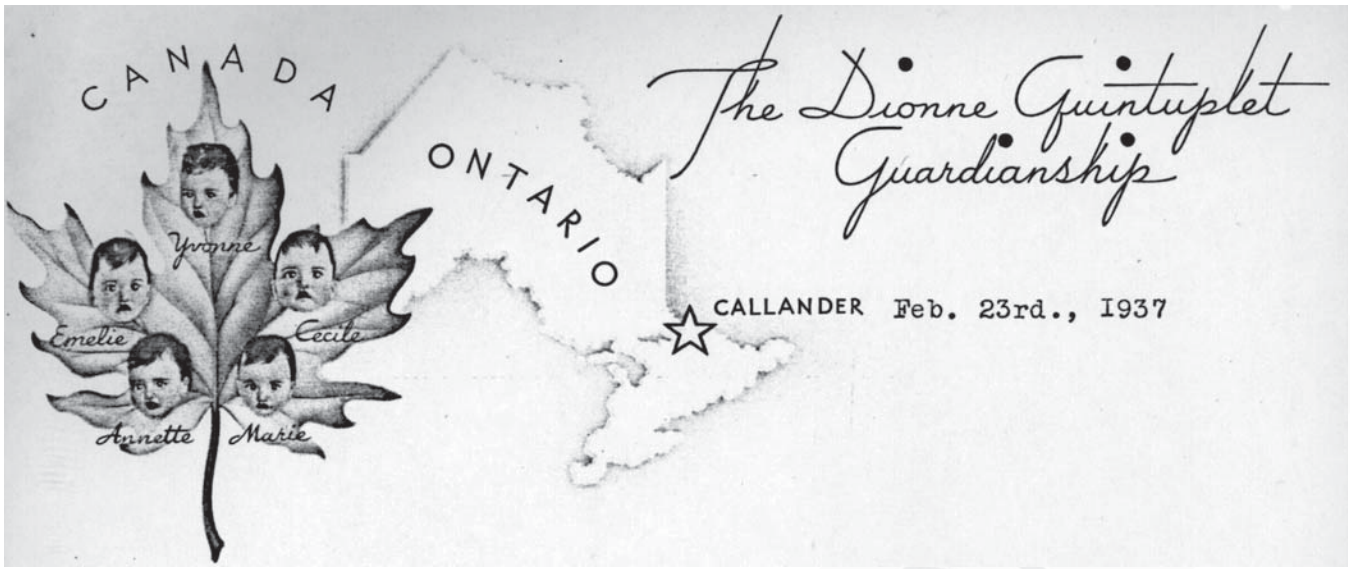

hundred thousand gallons of the culture in the treatment of my patients at the Battle Creek Sanitarium where we had annually about 12,000 patients until the late depression which cut down our patronage about one half, but it is coming back...

"I have found that the organism grows much more rapidly in a milk prepared from the soy bean than in cow's milk. It seems, in fact, to produce a new type. This new type, which we call Lactobacillus soy acidophilus, has been studied by a number of bacteriologists in this country. It occurred to me that perhaps you might be willing to make such a study for me." Address: Miami, Florida.

799. Moffatt, R. Gordon. 1937. Re: The Dionne quintuplets, meltose, and acidophilus cheese. Letter to Dr. John H. Kellogg, The Miami-Battle Creek, Miami, Florida, Feb. 23. 1 p. Typed, with signature on letterhead.

• ***Summary:*** "In the absence of Dr. Dafoe, who has been a patient in the Toronto hospital the past two weeks, I am writing to acknowledge the receipt of your two letters of Feb. 11th and one of Feb. 17th. They will receive the Doctor's attention on his return home next week.

"Please let me acknowledge receipt, for the doctor, of the meltose, acidophilus cheese, and box of fruit which you kindly sent him recently."

"The quintuplets, fortunately, had only slight colds for a few days, from which they have now completely recovered.

Note: The Guardianship now has a new letterhead with the photo and name of each baby against the background of a maple leaf. Clockwise, their names are Yvonne, Cecile, Marie, Annette, and Emelie [formerly spelled "Emilie"]. Behind the Maple Leaf is a map of Ontario, Canada, showing the location of Callander. Address: Secretary to Dr. A.R. Dafoe, The Dionne Quintuplet Guardianship, Callander, Ontario, Canada.

800. *Nature's Path to Health* (*Melbourne, Australia*). 1937. Soy bean recipes. Jan/Feb. p. 11-12.

• ***Summary:*** "Soy Beans are among Nature's greatest gifts to mankind. It has constituted the chief source of protein food of hundreds of millions of Oriental people for over 4,000 years of recorded history and for centuries prior to that time. Soy Beans play a much greater role in the nutrition of these people than does wheat in our country. It was sown yearly with great ceremony by Emperors of China, and poets in the ages before the Christian Era extolled the virtues of the Soy Bean in its services to humanity.

"Weight for weight the protein yield from Soy Bean is approximately twice that of meat, four times that of eggs and cereals, five times that of bread, and twelve times that of milk. As compared with meat, Soy Bean is free from ingredients which form uric acid It is an energy producing food and it is also one of the cheapest foods." Describes how to soak and pressure cook soy beans, and to mash them to make Soy Bean pulp.

Gives recipes for: Baked beans. Soy beans southern style (seasoned with a dash of Marmite). Baked soy bean croquettes (with 2 tablespoons copha [vegetable shortening] and 3 cups Soy Bean pulp, cooked and ground). Soy bean loaf. Soy bean vegetable soup. Soy loaf (with eggs). Soy bean souffle. Salad.

Note: A 4-page illustrated brochure titled "Curative Exercises," published at about this time, is by Mrs. G.M. Roberts–Osteopath, Dietitian, and Curative Exercise Expert. Associate Principal of–Roberts Health Academy. Head Office: 284 Post Office Place, Melbourne.

A large chart published by Roberts in the late 1930s, titled "Food Combination Chart," shows that he was interested in combining foods in what many naturopaths considered good and bad combinations. Thus, protein foods (incl. beans and nuts) were a bad combination with cooked fruit and acid fruit, and a fair combination with starch

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(such as bread, rice, cereal grains, and potatoes). Address: Australia.

801. *Nature's Path to Health* (*Melbourne, Australia*). 1937. Directory of health aids. Jan/Feb. p. 25.
• ***Summary:*** This is a directory of F.G. Roberts' health stores, services, and clinics in Melbourne, Ballarat, Geelong, Adelaide, Cessnock, Bundaberg, Newcastle, Sydney, Toowoomba, Brisbane, Rockhampton, and Maryborough. A nurse, osteopath, or "consulting practitioner" is in attendance at many locations.

Roberts describes his own work and headquarters as follows: "Victoria. Home of the Nature Cure Movement. 430 St. Kilda Rd., Melbourne. Phone: Win. 4206. Treatments in harmony with Nature. Curative Dietetics, Osteopathy, Chiropractic, Hydrotherapy, Spinal Diagnosis, Iridiagnosis, Urinalysis, Diathermy, and Blood Washing, etc. All the latest methods of natural treatment obtainable. Experienced and qualified nurses in attendance. Herbal Foods, Herbal Pills, and All Natural Remedies Obtainable. F.G. Roberts, N.D., Principal, assisted by G.M. [Gladys Maud] Roberts and Staff."

Also in Melbourne are located (1) the Elmsdale Guest House at 428 St. Kilda Road. "Under the personal supervision of Mr. and Mrs. F.G. Roberts." Phone: Win. 4606; (2) F.G.R.'s Health Food Products, 40a Chapel St., E. St. Kilda. (Note: In Aug/Sept. 1933 Mr. W.H. Willson, a nature cure dentist, had his offices at 40 Chapel St.); and (3) Joyce's Health and Dining Service, 300 Little Collins St.

Harold S. Grimes, N.D., is in attendance at the Sydney location. The Brisbane shop and clinic is "Now under F. E. Roberts, Jr., N.D., Supervisor, who cordially invites you to Free Consultations on all your Health Problems."

Examples of names of other organizations listed are: "Roberts Health Service Pty. Ltd." (Ballarat, Victoria). "Health Centre and Clinic" (Chessnock). "Natural Health Store" (Bundaberg, Queensland), "Health Food Store and Milk Bar" (East Street).

A similar but revised directory is published in the 1 Aug. 1938 issue of this magazine, p. 46. Address: Australia.

802. Siegmeister, Walter. 1937. Dietary value of soybean milk in infant feeding. *Naturopath and Herald of Health* (*New York City*) 42(2):36, 55, 59. Feb.
• ***Summary:*** This article is largely composed of carefully cited quotations from many authoritative articles about the value of soybean milk in infant feeding when mother's milk is not available–starting with Ruhrah (1915, p. 502). "Since soy bean milk is deficient in milk sugar [lactose], as compared with human milk, [Dr. J.H.] Kellogg advises sweetening it with honey." Address: Dr.

803. *Madison Survey* (*Madison, Tennessee*). 1937. Experimental work with foods. 19(9):35-36. March 3.
• ***Summary:*** "Soy milk, fresh every day, is used in quantities by the institution. Soy milk in cans is on the market, its sale increasing continually as people become acquainted with the value of this product.

"Not only is Madison publishing the virtues of soy milk, but scientists in various places are advocating its use instead of dairy milk. Professor Madder of the University of Frankfurt, Germany, showed recently that infants fed on soybean milk are able to resist infection to a remarkable degree. This is attributed to the alkalinity of the soy milk, which increases the resistance of cell tissues.

"An experiment conducted in Cleveland, Ohio, in the feeding of over 200 infants on soy milk and gruel [with okara, probably], shows that the cellulose of soybean gruel relieves constipation. When soybean milk is used, the intestinal flora show a predominance of gram-positive organisms, thus resembling the stools of normal breast-fed babies."

804. *Madison Survey* (*Madison, Tennessee*). 1937. Home economics and nutrition courses. 19(9):33-34. March 3.
• ***Summary:*** In recent years, the college has provided liberally for science courses and "other departments for the education of workers in the Southland. But the Home Economics Department has been operating in temporary quarters, and with meager equipment, waiting for the hour to strike, for the opportune time to arrive for advancement." Now the time has come. Madison College is eminently fitted to operate a strong department in Diet and Nutrition. Its medical department, known as Madison Rural Sanitarium and Hospital, makes a specialty in its treatment of diet in disease. In its Food Manufacturing Department it is experimenting with foods and is placing on the market a variety of health products. Its experimental work with the soy bean has brought it into prominence in that field.

"Students in Diet and Nutrition have the privilege of practical demonstration and daily work in the Sanitarium diet kitchens and in the preparation and service of foods in the College Cafeteria. They are at work with foods in the Food Manufacturing Department, in the Cannery and Soy Milk departments, and it is from the college diet classes that the City Cafeteria draws its cooks and dietitians. Dr. Frances Dittes, who heads the college Department of Home Economics, has been Sanitarium dietitian for years. She is author of the cook book, to which you have been introduced, entitled "Food for Life.' Something of her equipment for her work both as teacher and writer is voiced in the review, of "Food for Life," written by Dr. H. A, Webb, head of the Department of Chemistry, Peabody College, for the Magazine Section of Nashville *Banner,* issue of July 26, 1936. He says: "'This book makes a real contribution to the literature of cookery and nutrition from at least two standpoints: First, it is written by a Southern author who knows the Southern taste in sickness and in health; second,

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it is the vegetarian school, whose life work consists in administering foods as a true medicine to those who seek for health.'

"By education, by close association with the Sanitarium staff of physicians in their care of patients, and by collaboration with Dr. Philip Chen of the College Department of Chemistry who is also chemist for the Food Manufacturing Department, Miss Dittes has a wide background for training dietitians and for leadership in the Department of Home Economics. Students otherwise qualified and who are interested in food work are unhesitatingly directed into this section of the college.

"It is in recognition of the wide field of usefulness open to those who are well trained in food preparation and food service, that Madison College is now preparing to equip new headquarters for this department of instruction, and solicits your cooperation."

805. Sutherland, E.A. 1937. Madison activities for nineteen hundred thirty-six. *Madison Survey* (*Madison, Tennessee*) 19(10):39. March 10.
• ***Summary:*** "Food factory: In point of equipment the farm is the second and the Food Factory is the third of the industries. [The sanitarium is first.] The present method of operation in the Food Factory is the work largely of E.M. Bisalski. Foods have been standardized and a more extensive program of advertising followed than ever before. During the year, Capt. C.D. Bush became manager of the factory, releasing Mr. Bisalski for field work. H.J. Miller carries the burden of manufacturing foods."

806. Kellogg, John Harvey. 1937. Re: Vitamin content of soy acidophilus milk, and the Dionne quintuplets. Letter to Dr. Allan Roy Dafoe, The Dionne Quintuplet Guardianship, Callander, ONT, Canada, March 26. 2 p.
• ***Summary:*** "I received a letter a few weeks ago from the secretary of the Nutrition Department of the American Public Health Association of which I have been a member for more than 50 years, asking me to prepare a paper for the next meeting which is to be held in October. I have chosen as my subject 'Some of the Health Values of the Soy Bean.' Thinking you might be interested in some of the facts which I have embodied in the paper in relation to soy acidophilus milk, I am enclosing a few sheets from a manuscript which I am preparing which will be published later.

"I was much gratified to learn from the unpublished data recently sent me by Dr. Munsell of the U.S. Department of Agriculture that soy acidophilus milk contains six times as much vitamin G (anti-pellagra) and more than twenty times as much vitamin B as does cow's milk. The addition of a thousand vitamin A units of plant origin to each half pint gives it greater potency in vitamin A than the best dairy milk, fully double, in fact. The addition of B-Lac or lactose gives it a very close resemblance to mother's milk in every particular with a few points of slight superiority."

807. Battle Creek Food Co. 1937. Soy acidophilus milk: A highly potent culture of a new type of Lactobacillus acidophilus for changing the intestinal flora. Battle Creek, Michigan. 9 p. March. 28 cm.
• ***Summary:*** Contents: Introduction (Bouchard of Paris, Herter of New York). Origin of the idea (Quinck, Metchnikoff, Tissier). Why *Bacillus Bulgaricus* failed (Rettger {of Yale} and others demonstrated "that this organism could not be implanted in the colon and that it rarely if ever survived in the alimentary tract at a level lower than the duodenum"). Discovery of *Lactobacillus acidophilus:* The natural protective organism of the intestinal tract (Dr. Tissier). The first therapeutic use of *Lactobacillus acidophilus* in the United States (by J.H. Kellogg using cultures obtained from the Pasteur Institute through Dr. Tissier. "It has proved itself of very great service in combating colitis and various forms of intestinal and digestive disorders... Our records show that between 1912 and the present time, our laboratories have supplied to hospitals and private physicians more than 1,500,000 quarter liters {250 ml}, the usual dose of whey milk cultures of acidophilus. It was not, however, until publication of papers by Rettger of Yale in 1922 and later that this remarkable was brought to the attention of the profession in this country").

Cruickshank's demonstration of change of the flora in vitro ("A few years later, Cruickshank of Aberdeen, Scotland, demonstrated experimentally that under proper lactose feeding, acidophilus will cause the rapid disappearance of... all putrefactive and pathogenic organisms in vitro").

The discovery of a new type of *Lactobacillus acidophilus*–soy acidophilus (At the bacteriological laboratory of Battle Creek College it was discovered "that when grown in soy milk, a new and more vigorous type of *Lactobacillus acidophilus* is produced. This new type has been studied by a number of able bacteriologists... all noted with surprise the extraordinarily rapid growth, the high count, and the very large size of the individual organisms...").

Soy acidophilus shows much higher counts than acidophilus milk (Powell found "an average of five times the number of viable organisms...").

The prophylactic and therapeutic value of soy acidophilus is well established. Soy acidophilus contrasted with dairy milk acidophilus (incl. two micro-photographs, showing the bacilli are twice as long–16 vs. 8 microns–when grown in milk prepared from the soy bean). Dairy milk not a good culture medium for acidophilus (Note: Leo Frederick Rettger, a bacteriologist at Yale from 1902 to 1942, was lead author of a book titled *Lactobacillus acidophilus and Its Therapeutic Applications*). Cow's milk a poor culture medium for acidophilus. The superior food value of soy acidophilus milk (A table compares the composition of Soy

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acidophilus milk, Cow's milk, and human milk. The soy has more protein, less fat, less carbohydrates than human milk, same calcium as human milk, more iron, more minerals, and fewer calories per ounce. The soy "is a basic ash product, and combats acidosis"). Vitamin contents. The energy value of soy acidophilus milk. Clinical results ("Since the discovery of the soy type of acidophilus in 1933, its clinical use has grown rapidly." Example of Dr. Dafoe and the Dionne quintuplets in Canada. Two roentgenogram photos of the colon).

How much to take ("For a three year old child a half glassful of soy acidophilus milk with a large spoonful of Lacto Dextrin, taken three times a day, will effect a rapid change of flora. A much larger amount may be taken without injury. We understand that Dr. Dafoe keeps the quintuplets in good health by giving them a glassful of soy acidophilus milk every afternoon and another half pint at or between the different meals. Very small doses, one or two teaspoonfuls, mixed with the regular feeding, may give excellent results in very young children. Dr. Dafoe began its use with the quintuplets with teaspoonful doses"). Address: Battle Creek, Michigan.

808. Kellogg, John Harvey. 1937. Re: Soy acidophilus milk. Letter to Dr. G. Efremoff, Totleben 2, Sofia VI, Bulgaria, April 8. 4 p. Typed, without signature (carbon copy).
• ***Summary:*** "I spend my winters now here in Florida on account of the more favorable weather. Here I do not take cold as I do at Battle Creek and consequently am able to do much more work. I do not stand the cold winters well because of weak lungs on account of tuberculosis which destroyed my left lung before I was 20 and left my respiratory organs in a susceptible state.

"I assure you I am most happy to know of the success which has attended your efforts to promulgate the ideals of biologic living in your country [Bulgaria]. You have certainly done a noble work. You will some time find yourself at the head of a great sanitarium.

"... Have you become acquainted with soy acidophilus milk and with methods of changing the intestinal flora? I am sending you with this a copy of a paper which you may publish in your journal if you wish. I am also sending you a couple of tubes of *Lactobacillus acidophilus* which I call soy acidophilus. You can make cultures of this and get a start in this same line if you wish. I have patented the product in this country,... It is really a wonderful product and proves of immense service in the treatment of all kinds of intestinal disease, particularly colitis, in which it is used by mouth and by enema. It needs to be taken in liberal doses two or three times a day and by enema, a half pint or so along with warm water and the juice of one or two lemons or a teaspoonful of lactic acid to each pint of water. It stimulates the colon to act and is wonderfully efficacious, clearing out the colon at once and planting the protective aciduric flora."

Dr. Dafoe is now feeding the Dionne quintuplets [in Callander, Ontario, Canada] about one pint each per day of soy acidophilus milk; Dr. Kellogg sends him 36 pints a week. "The Doctor sends me specimens for examination. We are keeping their acidophilus at 85 per cent of the intestinal flora." Address: Florida.

809. Karlick, Joseph R. 1937. Student activities at Madison. *Madison Survey* (*Madison, Tennessee*) 19(15):57-58. April 21.
• ***Summary:*** As part of the industries operated with student labor, Madison has a "900-acre farm which produces forage, grain, and garden crops, and orchard and vineyard trees.

"There is the program of food manufacturing in which students have an active part. Experimental and manufacturing work with the soy bean, making the flour, making the milk, and utilizing the by-products in other foods, has attracted the attention of the attention of the U.S. Department of Agriculture as well as firms in this country and abroad."

There is "a student publication called *The Peptimist Crier,* the object of which is to reflect on the spirit of the college. It provides a medium of expression for the students and a medium of exchange between the alumni and the present student body."

810. *Madison Survey* (*Madison, Tennessee*). 1937. The soy bean marches on. 19(15):59-60. April 21.
• ***Summary:*** "There is a constant hum of motors in our food factory these days to supply the orders resulting from Mr. Bisalski's recent trip to Knoxville [Tennessee]. Asheville [North Carolina], Washington [DC], Philadelphia, and New York. Since eight of the twelve items appearing in the Madison Foods price list contain soy beans, the value of the soy bean as a food is naturally emphasized in the sales program. Attractive window displays, featuring the soy bean as an ingredient of eight Madison Foods, have effectively stimulated sales... The constant increase of business, which is far above the normal curve, showing recovery from the depression, is evidence of the whole-hearted acceptance of soy bean foods by the public."

"In the May issue of *Popular Mechanics* five pages were devoted to a review of the soy bean since its introduction to the United States in 1804. At that time it was grown as a curiosity..."

"A soy bean article is not complete without a mention or a picture of Madison Foods. In *Popular Mechanics* one can see the Madison soy bean foods on display. In this picture Dr. W.J. Morse, of the United States Department of Agriculture, stands in front of several sections of display cases where only soy bean foods and other soy bean products appear.

"On the level of his left hand three Madison Food packages (Soy-Koff, Date Stix, Fruit Stix) stand like soldiers in the line of soy bean foods. Four shelves above can be

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singled out Vigorost, Soy Beans canned in Tomato Sauce, and one shelf below is Breakfast Crisps. Here then are seen all but two of the Madison Foods that are on display in Dr. Morse's rare collection. Soy Cheese and Kreme O'Soy Flour are there also, but they are blocked out with insertions of other types and pictures.

"For many years, Dr. Morse, who might rightfully be called the father of soy bean development in the United States, has been studying this interesting plant all over the world."

"Dr. Morse is a frequent visitor at Madison and likewise Mr. Bislaski is a frequent visitor to Dr. Morse's Washington headquarters."

811. Dittes, Frances L. 1937. Soybeans and human nutrition. *Health* (*Mountain View, California*) 4(4):18-19, 26. April. [3 ref]
• ***Summary:*** Discusses history of the soybean, food uses, nutritional value, recent scientific studies. Address: PhD, Dietitian, Madison College, Madison, Tennessee.

812. *Good Health* (*Battle Creek, Michigan*). 1937. The health question box: Thyroid disease. 72(4):122-23. April.
• ***Summary:*** "A recent analysis of soy bean milk shows that its composition closely resembles that of human milk, which differs considerably from that of dairy milk, containing much less lime [calcium] and more iron and sugar. Soy bean milk contains more than five times as much iron as does cow's milk and double as much as is found in human milk.

"Soy acidophilus milk, made and distributed by the Battle Creek Food Company and the Home Milk Producers Association, the largest milk company in Miami, Florida, is much richer in vitamins than cow's milk, containing double the quantity of vitamin A (2,000 units to the pint), six times as much vitamin G, and still a greater preponderance of vitamin B.

"Soy acidophilus milk has proven of great service to the quintuplets, who have used it continuously for more than two years, having been cured of a severe bowel infection from which they suffered when four months old. They have been kept in excellent health, free from bowel troubles, by its daily use. Each one of them takes a glassful of soy acidophilus milk every afternoon at four o'clock and uses an equal amount in connection with other meals." Address: M.D.

813. **Product Name:** Soy Acidophilus Milk (Lactobacillus Acidophilus Cultured in Soy Milk).
Manufacturer's Name: Home Milk Producers Association.
Manufacturer's Address: Miami, Florida.
Date of Introduction: 1937 April.
Ingredients: Soybeans, water, lactic acid cultures.
Wt/Vol., Packaging, Price: Glass bottle.
New Product–Documentation: *Good Health* (Battle Creek, Michigan). 1937. April. p. 122. "The health question box." Dr. John Harvey Kellogg is the developer of and creative force behind this product.

814. Loma Linda Food Company, Inc. 1937. Seven items of a quality line (Ad). *Health* (*Mountain View, California*) 4(4):25. April.
• ***Summary:*** The ad describes and a photo shows each package of Soy Mince Sandwich Spread, canned Soy Beans, Garbanzos, Syl-Dex Breakfast Wheat, Fruit Cereal, Date Sandwich, and Fruit Wafers. The company, which now makes 19 products (sold at health-food stores, markets, and groceries) is listed as "Loma Linda Food Company, Inc., Loma Linda, California." Address: Loma Linda, California.

815. **Product Name:** Kreme O'Soy Flour (Whole Soy Flour).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1937 April.
New Product–Documentation: *Madison Survey.* 1937. "The soy bean marches on." April 21. p. 59-60.

Madison Health Messenger. 1939. Sold in 2 lb. or 5 lb. bags.

816. Dimock, E.M. 1937. The prevention of constipation. *British Medical Journal* i(3982):906-09. May 1. [10 ref]
• ***Summary:*** "The progress of medicine is towards prevention. Yet constipation, one of the commonest ailments of civilization, receives only remedies. The present attitude of the medical profession towards constipation is deplorable. Students at many hospitals are brought up in an atmosphere where the indiscriminate use of purgatives is condoned." "Under the term 'purgative' I include aperients, salines, and all laxatives that are not purely mechanical... I believe that the frequent use of purgatives is responsible for numerous minor ailments, especially digestive disorders, headaches, and nervous irritability."

The author notes that "constipation is practically unknown among savage tribes." To cure it, he has used "diets with a high-fibre content, such as bran." "There is now ample experimental evidence that the laxative effect of vegetable foodstuffs depends on their 'fibre' content."

"Summary: The principle for the use of high-fibre diets for constipation has not been appreciated. High-fibre diets should be used for prevention and not for treatment. Investigations have shown that: (1) the laxative value of foodstuffs depends on the type of fibre contained therein; (2) the fibre of wheat bran is much more effective than that of fruit and vegetables; (3) no evidence of irritation of the alimentary tract by bran has been observed... One hundred and twenty-one patients with habitual constipation, 80 per cent. of the total, were treated with processed bran. The

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results in 110 cases of simple habitual constipation showed that: the treatment was successful in restoring normal bowel habits in 90 per cent. of the cases... The processed bran used in the investigations was Kellogg's All-Bran." Address: M.D., B.Ch.

817. Miller, Harry Willis. 1937. Process of making vegetable milk. *U.S. Patent* 2,078,962. May 4. 2 p. Application filed 3 Dec. 1935.

• ***Summary:*** This patent is "especially for the production of vegetable milk from the soya bean, the various steps of the process being physical and at no time chemical."

It has "been found of decided advantage to grind the soaked beans in a burr mill and during the grinding operation to constantly add a small stream of water to the beans. The beans should be ground to the finest possible state.

"During the grinding operation the water added is such as to result in the formation of about twenty gallons of pulp [okara] for twenty-five pounds of beans."

The saturated mass is added to boiling water in a "kettle and stirred or agitated while being heated to the boiling point, such boiling being continued until the pulp has lost its viscosity stickiness so that when separated the pulp comes out quite dry..."

"After the fluid has been heated to the boiling point it is then strained through a very fine straining cloth to separate cellular residue from the milk allowing only the food particles in solution to pass through. This straining operation is preferably facilitated by use of a centrifuge making 2,500 revolutions per minute."

To the hot milk are then added a cereal sugar (7 lb), a vegetable fat (7 lb) and salt (3 oz). The mixture is then reheated to the boiling point and during this heating and cooking the fluid is agitated very carefully until the entire taste of the milk is "changed from a beany flavor to what might be termed a 'nutty' flavor." After proper cooling, the milk is run through a colloid mill or homogenizer.

This improved process extracts from the soya bean approximately 85% of its protein and 70% of its fat, together with vitamins A, B, E, and G and the larger portion of the mineral ash. Address: Shanghai, China.

818. Kellogg, John Harvey. 1937. Re: Battle Creek Sanitarium, Battle Creek Food Company, and soy beans. Letter to Mr. E.C. Liebold, c/o Mr. Henry Ford, Dearborn, Michigan, May 10. 2 p. Typed, without signature (carbon copy).

• ***Summary:*** On 3 April 1937 Dr. Kellogg sent a Western Union telegram to Henry Ford requesting a brief interview. On May 5, E.G. Liebold, General Secretary to Henry Ford, wrote Kellogg (on "Henry Ford" letterhead, with signature) saying he regretted that Mr. Ford was away but that if Dr. Kellogg planned to come to Detroit, Liebold would be "be very glad to discuss the matter with you and submit it to Mr. Ford later on when he might be available."

Dr. Kellogg replied with this letter: "The bankers are making a very determined effort to get control of the Battle Creek Sanitarium... I will not surrender control or submit to any change of ideals or principles of the Sanitarium... I have begun at the bottom twice and can do it again if necessary, but Mr. Ford has shown so much interest in the food reform and race betterment work I am carrying on, I am anxious to have his advice before making a final decision if he is willing to give me a few moments.

"An attempt is being made by large financial interests to get possession of my food company [the Battle Creek Food Company].

"Incidentally, I might mention that I have made some discoveries in relation to the soy bean which I am sure Mr. Ford would like to know about. This relates to a preparation [soy acidophilus milk] by which I have been able to save the lives of the [Dionne] quintuplets, and I have also found it the most successful means yet discovered for combating old age processes. I will write Mr. Ford about this later if he as not time for a short interview some time within the next few days."

On May 12 Liebold replies that Mr. Ford has been away almost continuously for the past two weeks. Dr. Kellogg writes again on May 15 (see separate letter).

819. Kellogg, John Harvey. 1937. Re: Soy acidophilus milk. Letter to Mr. E.C. Liebold, c/o Mr. Henry Ford, Dearborn, Michigan, May 15. 2 p. Typed, without signature (carbon copy).

• ***Summary:*** "I know Mr. Ford must be very busy just now because of the labor agitation as well as the usual press of business, and as it will not be convenient for him to see me, I will postpone my visit to some future time. The information I wanted to give him about the soy bean is pretty well covered in a paper which I am sending herewith which sometime he may be glad to hear about.

"I find this Soy Acidophilus Milk extremely useful because of its rejuvenating effects. I am in my 86th year and am as hard at work as ever.

"If Mr. Ford wishes to try the Soy Acidophilus Milk, I shall be glad to order a case sent to him. We send three cases to the quintuplets every week. It keeps them free from bowel trouble which, because of the liver Dr. Dafoe insists on giving them, comes back as soon as they stop the use of the Soy Acidophilus Milk... It cured them of bowel trouble when they were four months old and they have been taking it ever since in gradually increasing quantities. They began with a teaspoonful at each feeding. Each one is now taking a pint a day."

820. Kellogg, John Harvey. 1937. Re: The Hay diet, and soy acidophilus milk. Letter to Admiral R.E. Byrd, 9 Brimmer Street, Boston, Massachusetts, May 16. 6 p. Typed, without

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signature (carbon copy).
• ***Summary:*** "You inquire with reference to the Hay diet and whether the soy acidophilus milk is a carbohydrate and whether it contains protein." The philosophy on which the Hay diet rests "that carbohydrates and proteins should not be eaten together is entirely unscientific..." A detailed analysis of this fallacy follows. The originator of this regimen was not Dr. Hay, but "a Dr. Tilden of Denver [Colorado] many years ago [20 years before Hay]. He was an advertising doctor and employed the late Elbert Hubbard, then a young reporter, as a publicity agent to create business."

"I hope that you are adhering closely to the biologic way and that you are prospering as a result. It is evident that your vital margin has become greatly reduced." A table (p. 4) compares the composition of soy acidophilus milk, cow's milk, and human milk. Soy acidophilus milk "has a little less carbohydrate that human milk, but it resembles human milk more closely than cow's milk and contains lactic acid, which of course is found in buttermilk but not in mother's milk or ordinary sweet dairy milk."

Mrs. Mary F. Henderson, author of the book titled "The Aristocracy of Health," has left a legacy to Battle Creek College. "I have set apart one hundred numbers to be assigned to persons of distinction who are nationally and internationally known as leaders in various lines of activity for the promotion of human welfare. I should like very much to put your name down as one of the first ten. I should be glad if you would nominate some prominent person who you know to be eligible to be one of the initial one hundred. There is no particular prestige connected with this initial enrollment, but I entertain the hope that Mrs. Henderson's dream that the Aristocracy of Health might prove to be the nucleus of a group of health minded individuals which might grow in time to be the beginning of a new and better human race through biologic living and eugenics may be realized..."

"P.S. It makes me very happy to know that my most distinguished patients, Admiral Byrd and the quintuplets, are profiting by keeping the interior department in fine condition by the use of soy acidophilus milk." Address: En route to Miami Springs, Florida.

821. Kellogg, John Harvey. 1937. Re: Sending soy acidophilus milk to Dale Carnegie. Letter to Food Company, Battle Creek, Michigan, June 17. 1 p. Typed, without signature (carbon copy).
• ***Summary:*** "Please send half a dozen bottles of soy acidophilus milk together with samples of our foods we send to doctors to Dale Carnegie, 27 Wendover Road, Forest Hills, New York, complimentary." Address: Battle Creek, Michigan.

822. Carver, G.W. 1937. Re: Peanut milk. Letter to Mrs. L.C. Barnes, 459 Marlborough Road, Yonkers, New York, June 21. 1 p. Typed, without signature (carbon copy).
• ***Summary:*** "Dear Madam: Peanut milk is not on the market and is not being manufactured. I suggest that you get in touch with the Nashville Agricultural Normal Institute, Madison College, Madison, Tennessee. They manufacture many kinds of health foods from soybeans including soybean milk, which is similar in many respects to peanut milk. They make an excellent product."

John Ferrell, who located this document, adds (Dec. 1992). "Carver seemed to like Madison College. I've noted maybe six letters much like this one to people who enquired about soybeans." Address: Director, Research and Experiment Station [Tuskegee, Alabama].

823. Carver, G.W. 1937. Re: Soybean milk, peanut milk, and Madison College. Letter to Mr. N.A. Alexander, Harrison, New York, June 27. 1 p. Typed, without signature (carbon copy).
• ***Summary:*** "Dear Sir: Our station has never issued any publications on the soybean or peanut milk. I just received yesterday a can of chocolate milk and one that is of the same composition as cow's milk. Both are made by the Madison College, Madison, Tennessee. They are supreme authority on the use of the soybean, and it would be well for you to get their literature, as I do not know of an institution that is doing more remarkable things with the soybean along food lines as they are." Address: Director, Research and Experiment Station [Tuskegee, Alabama].

824. *Nature's Path to Health* (*Melbourne, Australia*). 1937. F.G. Roberts Health Food Products. May/June. p. 20-22.
• ***Summary:*** On page 20, a full-page black-and-white photo shows the front of Roberts Health Service, a health food store at Geelong. There are many boxed and canned products in the two large front windows. On page 21 is a photo of the interior of the Geelong store. Paul Smith has photos of similar stores at Ballarat, Fremantle, and Toowoomba.

On page 22 a full-page photo shows a "View of our main factory and store." This is a fairly small but neat red brick factory, with delivery trucks parked at the side and front.

Note 1. This, factory was located at 40 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia. Roberts' original factory, it remained virtually unchanged until 1954.

The inside rear cover of this issue states: "F.G. Roberts, N.D., F.S.D., Australia's leading naturopath. 430 St. Kilda Rd., Melbourne."

Note 2. Other issues of this magazine published in 1937 show health food stores that are part of the Roberts Health Service: Rockhampton (Jan/Feb. p. 19), Maryborough (March/April, p. 19), Newcastle "Health Academy" (March/April, p. 20). Address: Australia.

825. Radcliffe, Jack B. 1937. Soybean: The perfect protein.

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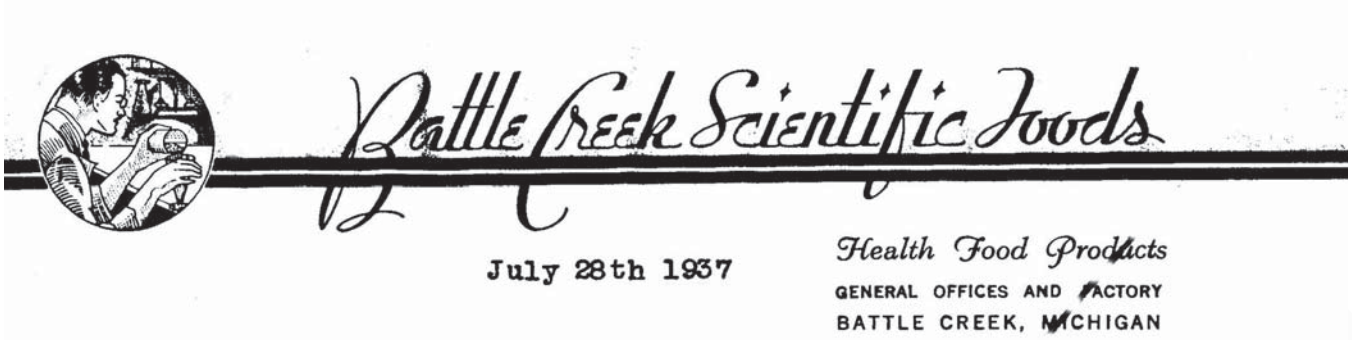

Nature's Path (*New York City*). June. p. 210.
• ***Summary:*** "Packed into the tiny soya bean is a wealth of nutrition; minerals, tiny vitamins, easily assimilated carbohydrates, and the greatest hoard of proteins that any food in the vegetable kingdom contains." Just imagine. "A vegetable product equal to most, and superior to some animal products in proteins, the body building element in food, without which there would be no life."

Unlike meat and fish, the soybean is one of those rare foods that alkalinize the body. Milk and butter made from soybeans are better than their dairy counterparts. Its oil is equal to the best grade of olive oil. It is the world's leading source of lecithin, and the source of protein-rich soy flour, soy sauce, roasted soybeans, vegetables, cheese, etc. Dr. Kellogg is making increasing use of "soy acidophilus" [a type of liquid fermented soy milk].

826. *California Health News* (*Hollywood, California*). 1937. See blue Hawaii. "Had a marvelous time." July 23. p. 9.
• ***Summary:*** "Singing the praises of Hawaii, Mildred Lager has just returned to her House of Better Living, 1207 W. Sixth, after a three-weeks trip."

"Her radio fame having preceded her, Miss Lager was invited to speak over KGU, NBC station where Skipper Irvine presented "Roaming in the South Seas" for two years... A delightful luncheon visit was with Mrs. Agnes B. Bonell, Battle Creek Health Food store, 183 S. King street, Honolulu... The trip to Hawaii was on the Lurline, return on the Malolo." A large portrait photo shows Mildred Lager.

827. Sadacca, Albert V. 1937. Re: Health addicts in California. Offer to distribute Fearn products in middle west. Letter to Dr. Charles E. Fearn, Fearn Soya Foods Co., 355 West Ontario St., Chicago, Illinois, July 28. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "Dear Dr. Fearn: With much interest I digested your letter of July 27th. I do believe that it is a good move for you to go to California inasmuch as most of the health addicts are located there." The writer then offers to distribute Fearn products in Chicago and the "middle west," "either under our brand name or under our own."

Note: Battle Creek Scientific Foods is not connected in any way with Dr. John Harvey Kellogg or any other member of the Kellogg family. Across the bottom of the letterhead are printed six products made or distributed by the company, including one named "Soy-O." Address: Battle Creek Scientific Foods, Health Food Products, General Offices and Factory, Battle Creek, Michigan.

828. Kellogg, John Harvey. 1937. Re: Hydrolyzing soy protein. Letter to Dr. A.A. Horvath at University of Delaware, Agricultural Experiment Station, Aug. 10. 1 p. Typed, without signature (carbon copy).
• ***Summary:*** "Here I am with another inquiry.

"Can you tell me anything about the effect of hydrolyzing soy protein?

"Can you tell me whether hydrolyzing the glycinin of the soy bean will seriously affect the vitamins?

"I will be glad to have your paper with reference to the anti-hemorrhagic properties of the soy bean.

"Sincerely yours."

829. Horvath, A.A. 1937. Re: Hydrolysis of soybean protein. Letter to Dr. John Harvey Kellogg, The Battle Creek Sanitarium, Battle Creek, Michigan, Aug. 13. 1 p. Typed, with signature on letterhead. [1 ref]
• ***Summary:*** "I have your letter of August 10-th with an inquiry regarding the hydrolising of soybean protein. As the hydrolysis of proteins of various nature for commercial purposes is usually done by acids under pressure at moderate heat, and since the Vitamins B-1 and B-2 are quite resistant to acids, one should not expect much destruction of these vitamins during such hydrolysis.

"I have been interested in the commercial angle of products of hydrolysis from soybean protein, and have done some work along lines of the manufacture of soy sauce and sodium glutamate by chemicals. If you feel that a closer cooperation between the Battle Creek Food Company [Battle Creek, Michigan] and myself would be profitable commercially, I would be glad to discuss it with you."

Horvath plans to drive to Ontario, Canada, with his family to present a paper. "On Sept. 14-th I could stop for a day or two at Battle Creek (with my family) to discuss soya matters with you." Address: Chemist, Univ. of Delaware,

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Agric. Exp. Station, Newark, Delaware.

830. Kellogg, John Harvey. 1937. Re: Soy beans. Letter to Dr. A.A. Horvath at University of Delaware, Agricultural Experiment Station, Aug. 13. 1 p. Typed, without signature (carbon copy).
• ***Summary:*** "If you are passing this way this summer by all means drop in for a chat about the soy bean. I am thoroughly convinced that it is the most wonderful food product grown and it must have been of immeasurable service to the Chinese."

831. *Washington Post.* 1937. Lowly soybean startles capital as exhibit illustrates varied uses. Aug. 18. p. 15.
• ***Summary:*** "The soybean, chameleon of agriculture, made its formal debut in Washington [DC] last night when an exhibit of its wonders, mounted in a Pennsylvania Railroad car, stopped for two hours in Union Station." It met with popular approval as shown by the continuous flow of visitors which filed through the car. The "spectators were all amazed to see one little bean pop up under so many different guises."

A series of charts showed how the U.S. soybean crop has developed from 5,000,000 bushels in 1925 to 37,000,000 in 1935 and about 20,000,000 more [i.e., 57,000,000 bushels] this year.

Describes many of the different ways that soybeans can be used. Handfuls of roasted salted soybeans, courtesy of the American Soybean Association, were served to visitors. They tasted like a cross between peanuts and almonds. Madison Agricultural College, a Seventh Day Adventist institution in Madison, Tennessee, has developed a "number of meat substitutes, including an enticing 'ham' loaf, and a coffee substitute.

A series of harvest scenes showed how harvesting methods have changed. "The biggest step forward was the perfection of the combine, the forerunner of which was developed in 1925 by the late Harvey Spaulding Clapp, son of the late Moses Edwin Clapp, of Minnesota. Clap grew soybeans on his Virginia estate, which used to be part of Mount Vernon. According to Russell G. East, general agricultural agent for the Pennsylvania Railroad and director of the exhibit, it was Clapp who conceived the idea of a machine which would beat the beans from the pods as the plants stood in the field." The plants are left standing and gradually turn to hay.

In 1804, the soybean was introduced to the United States from China, "where natives have grown it for roughly 5,000 years. Orientals use it solely for food. Soybean sauce is familiar to all lovers of Chinese dishes."

832. Kellogg, John Harvey. 1937. Re: The soybean is an excellent food. Soy products made by Battle Creek Food Company. Letter to Mr. Richard Haughton, Valley Mill Farm, Great Valley Mills, Paoli, Pennsylvania, Aug. 26. 3 p. Typed, with signature on letterhead.
• ***Summary:*** Mr. Haughton wrote Dr. Kellogg on Aug. 26 that "One of your patients at Battle Creek has advised me that we should look into Soy Bean as a food." It is said to be helpful for intestinal disorders.

Dr. Kellogg replies: "You have been correctly informed. The soybean is an exceedingly useful food and ought to be widely used. It is on the whole, I believe, the most remarkable and most useful of all food products...

"If you will address a letter to W.J. Morse, Bureau of Plant Introduction [sic, Plant Industry], U.S. Department of Agriculture, Washington D.C., you will obtain a large amount of literature about the soy bean which you will find very interesting.

"The Battle Creek Food Company makes a number of products from the soy bean, among which are soy gluten biscuit, which consists of equal parts of soy flour and wheat gluten. It is extremely toothsome and the most highly nourishing of all foodstuffs with which I am acquainted." Address: Florida.

833. Kellogg, John Harvey. 1937. Bran as a remedy for constipation. *Good Health* (*Battle Creek, Michigan*) 72(8):239-40. Aug. [1 ref]
• ***Summary:*** "There is perhaps no common remedy concerning the use of which there has been more controversy than respecting the use of bran in the treatment of constipation." This article is a summary of: Dimock, E.M. 1937. "The prevention of constipation." *British Medical Journal* May 1. p. 906-09–which concludes that bran should be the "mainstay" for treatment of constipation. Address: M.D.

834. Kellogg, John Harvey. 1937. Re: Dr. Henri Tissier and use of the bacillus bifidus for changing the intestinal flora. Letter to Mrs. Henri Tissier, The Pasteur Institute, Paris, France, Sept. 2. 2 p. Typed, without signature (carbon copy).
• ***Summary:*** "Twenty-five years ago I had some correspondence with your husband... He sent me a culture of the bacillus bifidus which he had discovered in the stools of infants. A few years later I learned through an associate, Dr. Martin who visited your husband in Paris, that Dr. Tissier had begun using the bacillus bifidus as a means of changing the flora in the treatment of invalids. Dr. Tissier told me that he had succeeded in a few cases, one of whom was yourself, in making a complete change in the intestinal flora.

"I am preparing a paper to read before the American Public Health Association in which I mention Dr. Tissier's work. I would consider it a great favor if you will answer a few questions for me as I wish to make use of the data in making known in this country the fact that to Dr. Tissier rather than to Metchnikoff is due the credit for having devised a successful method of changing the intestinal flora. Dr. Tissier's discovery has been of very great service to

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me and I want to make the world acquainted with the great service which he rendered." Address: Florida.

835. Klix, Inc. 1937. Announces its organization to manufacture and promote Soy Bean Foods (Ad). *Proceedings of the American Soybean Association* p. 76.
• ***Summary:*** A one-fifth page ad. "Included in the personnel is Miss Dorothy Van Gundy and the Van Gundy family who for years have produced a complete line of Soy Bean Foods under the trade name of La Sierra Industries." Note: Klix is taking over La Sierra Industries after T.A. Van Gundy's death. Address: 108 West Second St., Los Angeles, California.

836. *Chicago J. of Commerce and La Salle Street Journal.* 1937. Ice cream, milk from soy beans: Tennessee scientists start new industry. Oct. 13. p. 9, col. 8.
• ***Summary:*** In a small group of buildings located a few miles from Nashville, a small group of chemical and agricultural scientists are doing "big things with the soy bean..."

It all started some 25 years ago when some agricultural chemists at the small, self-supporting the Nashville Agricultural Normal Institute started experimenting with the soy bean, then used mainly as forage.

Today, in a small group of buildings housing the 3-month old industry, E.M. Bisalski, his staff of assistants, and Dr. Philip Chen (a research chemist from China) are making "milk, meat, coffee, and automobile accessories from the vegetable."

Chen says there was soy bean milk in China 3,000 years ago, yet it has taken the scientists about 25 years to "neutralize the bean flavor and approximate that of the cow." Experiments in the institute laboratory showed that many generations of rats living exclusively on soy bean milk grew strong and produced prolific offspring. The scientists believe that the "bean milk can be produced more cheaply than dairy milk and that it can be produced under conditions of chemical sterility, almost germ free."

Having developed good milk, the group next "sought to compete with cattle as food producers in the form of beef.

"A product called soy-burger has been produced. It tastes like hamburger.

"The scientists have made ice cream and buttermilk and even chocolate flavored milk. They also have a cheese [probably tofu] which is said to be the closest thing to pure protein known to chemistry. It tastes like Swiss cheese but costs only a fraction as much."

Note: This is the earliest document seen (Jan. 2007) concerning a meatless burger made from soy. This is also the earliest English-language document seen (Jan. 2007) that contains the term "soy-burger."

837. Kellogg, John Harvey. 1937. Special health values of the soybean. Paper presented before the Section of Food and Nutrition at the American Public Health Assoc., 68th meeting. Oct. 5. 7 p. typescript. Reprinted in 1937 by Soya Foods Ltd., Rickmansworth, England. 6 p. [9 ref]
• ***Summary:*** This paper begins: "The rapid development of the production and use of the soybean (*Soja hispida*) in this country within the last quarter of a century, and the multitudinous uses to which it is being put, fully justify the name 'wonder bean', which it has been called by American writers, and the appellation, 'little honorable plant', by which it is known in China.

In South China, the soybean so completely replaces other sources of protein that there is no dairy industry, and meat, fish and even eggs, are very little used. The soybean is the chief source of protein for the common people and is referred to as 'the poor man's meat.'

"Studies of this most remarkable of food products, especially in the United States and Germany, have shown it to possess not only extraordinary nutrient properties, but also some highly important prophylactic and therapeutic values, knowledge of which ought to be popularized as rapidly and widely as possible.

"Although botanically classed with legumes, the soybean rather closely resembles the nut in its very low content of starch and high percentage of protein. It easily takes precedence over all other natural foodstuffs in the great percentage of protein which it contains, and protein of such superior quality that in animal feeding experiments it has proved itself to be capable of replacing proteins of all other sorts, even milk proteins. The soybean protein content is 40%, nearly twice that of average meat and four times that of eggs, three to four times that of wheat and other cereals, five to six times that of bread, twice that of lima and navy beans, walnuts, filberts and most other nuts. The protein of the soybean (glycinin) is of high quality, like that of milk, containing certain amino acids of which the proteins of nearly all other legumes and all cereals are deficient."

Contains a long discussion of soy acidophilus milk, changing the protective flora, and the experience of Dr. Dafoe with the Dionne quintuplets in Canada.

"Forty years ago, I was requested by Dr. Dabney, then Assistant Secretary of the United States Department of Agriculture, to prepare from plant sources a substitute for meat, and found in a combination of the gluten of wheat with peanuts a product having not only the essential nutrient values of meat, but a fairly close approximation in flavor and appearance. The soybean solves the problem so completely and so satisfactorily that with the proper development of its culture and use, there need be no fear of protein shortage and no need of a substitute. There is, indeed, evidence that Americans might profit greatly as the Chinese have by giving the soybean a large place in the national bill of fare.

"A few years ago (1923), Dr. Arthur Hunter, Chief Actuary of the New York Life Insurance Company, in an

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international study of blood pressures, found the systolic pressure of the average Chinaman to be ten points lower than that of the average American and gave conclusive evidence that the cause is to be found in the difference in the dietary habits of the Chinese and Americans. In concluding an address before the American Life Underwriter's Association, Dr. Hunter said, 'Taking the population of the United States as a whole, I believe that a better adjusted diet, with less animal food, would result in a lower blood pressure and in greater longevity with an equal ability to carry on their occupations.'

"In view of the facts cited in this paper, is it not reasonable to believe that the general use of the soybean in this country would tend to lessen the mortality rate from intestinal infections and many other acute and chronic disorders, and to increase individual life expectation?" Address: M.D., LL.D., F.A.C.S., Medical Director of the Battle Creek Sanitarium, Battle Creek, Michigan, and of the Miami-Battle Creek, Miami Springs, Florida.

838. **Product Name:** Soy-Burger. Renamed Soyburger or Soyburger Loaf in 1939 (Canned Meatless Loaf, Sandwich Spread, or Entree). Renamed Zoyburger in 1939.
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1937 October.
Ingredients: Soybeans [actually okara], wheat gluten, raw peanut meal, tomato paste, vegetable seasonings.
Wt/Vol., Packaging, Price: No. 2 can, 20 oz.
How Stored: Shelf stable.
Nutrition: Protein 12.5%, fat 6.7%, carbohydrates 19.0%, ash 1.4%, calories 187/100 gm.
New Product–Documentation: *Chicago J. of Commerce.* 1937. "Ice cream, milk from soy beans: Tennessee scientists start new industry." Oct. 13. p. 9, col. 8. Having developed good milk, the group next "sought to compete with cattle as food producers in the form of beef. A product called soy-burger has been produced. It tastes like hamburger."

Madison Health Messenger. 1939. "Soyburger." Ad in House of Better Living. 1940. May. p. 4. "Soyburger."

Ad (2¼ by 3 inches) in *Nature's Path* (USA). 1941. July. p. 273. "A treat without meat." Soyburger is one of five basic food products made and sold by Madison Foods. Madison Health Messenger. V. 49-2. p. 5. Taylor. 1944. Soy Cook Book. p. 201.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Zoyburger contains 20.90% protein, 3.10% fat, and 11.85% carbohydrate.

Letter from Sam Yoshimura. 1981. March 19. Okara was used in the Madison Zoyburger exclusively. The product consisted of wheat gluten, okara, tomato paste and seasonings. It was a canned, meat loaf type of product.

Note: This is the earliest known vegetarian "burger" (with the word "Burger" or "Burgers" in the product name) made in the United States.

839. Morse, W.J. 1937. Green vegetable soy beans. *Good Health* (*Battle Creek, Michigan*) 72(10):299. Oct. Reprint of Morse 1935c.
• ***Summary:*** Reprinted from: *Proceedings of the American Soybean Assoc.* 1935, p. 44-45. This article was originally titled "Green Vegetable Soybeans." Address: USDA, Washington, DC.

840. *Nature's Path to Health* (*Melbourne, Australia*). 1937. Soy bean–The perfect protein. Sept/Oct. p. 34.
• ***Summary:*** "Packed into the tiny soya bean is a wealth of nutrition; minerals, tiny vitamins, easily assimilated carbohydrates, and the greatest hoard of proteins that any food in the vegetable kingdom contains. Think of it! A vegetable product equal to most, and superior to some animal products in proteins, the body building element in food, without which there would be no life. And this same Soya Bean, so rich in all the food essentials, produces an alkaline reaction in the body. It sounds almost unbelievable!

"The chief argument against a heavy meat diet is the acid reaction in the human system. So it is with all highly protein foods commonly used as meat substitutes–fish, eggs, etc.; but here is the most nearly perfect substitute for meat known to man, and it is one of the extremely rare foods which alkalinize the body."

"Milk and butter made from soya beans are richer and more satisfactory than dairy products. Its oil equals the best grade of olive oil."

"Lecithin, in which the soya bean is rich, is a nerve, brain, and sex building food. Calcium builds bone, teeth, finger nails and accessories.

"From the seed comes meal and oil. Out of the meal can be made a flour for use of infants, macaroni, breakfast foods, bread, cakes... From the dried beans come soya sauce, soups, roasted beans, vegetable, milk, liquid and powder, cheese, soy cultures that taste like buttermilk, beverages, confections and so-called candy.

"Another valuable property of the soy bean is its high alkalinity, which amounts to twenty-four times that of cow's milk. Concerning this point, Dr. Kellogg says: 'We are certainly eating too much meat and not enough alkaline products.' A meat diet is heavily charged with acids which lower the alkalinity of the blood and tissue fluids and tend to cause acidosis, thus inducing chronic fatigue, lowered resistance to disease, and setting up degenerative processes in the liver, kidneys, blood vessels and other parts of the body. More people die in this country from these causes than from any other." Address: Australia.

841. *Madison Survey* (*Madison, Tennessee*). 1937. Manufacture of foods. 19(42):167. Nov. 10.

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• ***Summary:*** "Madison is giving a message of healthful living to the public, and in this program the food factory plays an important part. Among the products it is placing on the market are crackers of various composition; foods to use in place of meat, such as, Vigorost, Soy Cheese, Soybeans canned with Tomato; a beverage to take the place of coffee called Soy-Koff. Kreme O'Soy Milk, plain and chocolate, is also on the market in cans."

842. **Product Name:** Kreme O'Soy Milk (called Kreme-O-Soy in 1947) [Plain, or Chocolate].
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1937 November.
Ingredients: Fall, 1948: Soybeans, soy oil, dextrose, calcium phosphate, sodium chloride.
Wt/Vol., Packaging, Price: 15 oz, 19 oz, or 20 oz can.
How Stored: Shelf stable.
Nutrition: Protein 3.5%, fat 3.9%, carbohydrates 4.9%, ash 0.7%, calcium 0.34%, iron 4.4 mg/k.
New Product–Documentation: Madison Survey. 1937. Nov. 10. p. 167. "Kreme O'Soy Milk, plain and chocolate, is also on the market in cans."

Madison Health Messenger. 1938. "The only homogenized soymilk on the market to date."

Madison Health Messenger. 1948. Fall. p. 3. "A unique food developed." A black-and-white photo shows a can of Kreme O'Soy." A table compares the composition of Kreme O'Soy, human milk, and cow's milk. A list of ingredients is given on p. 4. Madison Health Messenger. 1949? V. 49-2. p. 5.

Shurtleff & Aoyagi. 1984. Soymilk Industry and Market. p. 25-26. "By May 1929 fresh soymilk and tofu were being served occasionally in the dining hall and sanitarium, and soymilk was used in place of water in some yeasted breads. Soymilk was first sold commercially in 1931 and canned in 1932. It became popular nationwide." Soybean Blue Book. 1947. p. 69. Sold in Chicago by Dietetic Supply House. Soybean Blue Book. 1950. p. 88. No brand name given. Soybean Blue Book. 1956. p. 100. "Kreme-O-Soy."

Note: This is earliest commercial soymilk product seen worldwide to be fortified with calcium. It is also the second earliest commercial soy product seen introduced by a Seventh-day Adventist company that contained chocolate.

843. *Nature's Path to Health* (*Melbourne, Australia*). 1937. Nutrition: Bernard Shaw, Gandhi, Henry Ford advocate soy beans and vegetarianism. Nov/Dec. p. 13-14.
• ***Summary:*** "In a recent visit to this country, Bernard Shaw was observed drinking a glass of milk. When questioned why he used milk, since he opposed exploitation of cows, Shaw replied that it was not cow's milk he used, but Soybean Milk. Bernard Shaw has been a vegetarian for a long time and has lately become interested in the Soybean.

"Gandhi becomes a champion of soybean–Abandoning his famous goat-milk, Gandhi, who is also a vegetarian, has become an advocate of soybean milk. Gandhi is a great believer in the soya bean. He thinks that soya milk will eventually replace the dairy product." A long article about the soya bean published in a recent issue of *Harijan* is quoted.

"Ford predicts vegetarian world. Dearborn, Michigan–Henry Ford, billionaire, automobile maker, has visioned a future world without ham sandwiches, juicy steaks, and chicken dinners, but with a worthy substitute produced by science from grains and vegetables... Ford is now 73 and is in excellent health."

"In a recent interview with newspaper men, Ford predicted: 'The farm animal will go, but the farm will become larger. The horse is dying out through the increased use of machines. The cow is losing its economic importance through the great advances in chemistry. The farmer of the future will grow vegetable foods instead of livestock.'

"According to Dr. Kellogg, a vegetarian diet is not new to Mr. Ford. For many years he has been practically a vegetarian. He owes to a vegetarian diet the health and vigor necessary to conduct successfully the gigantic industries his remarkable genius has created.

"Henry Ford, looking into the future, sees that the use of meat will have to be abandoned for economic reasons." Address: Australia.

844. *Nature's Path to Health* (*Melbourne, Australia*). 1937. The aims and objects of the F.G. Roberts Natural Health Organisation. Christmas.
• ***Summary:*** "1. To free humanity from the destructive influence of alcoholism, meat eating, tobacco habit, of drug poisoning, vaccination, surgical mutilation, vivisection, and other abuses practised in the name of science.

"2. To aim at returning to a natural way of living by the regulation of eating, drinking, breathing, bathing, dressing, working, resting and thinking; and establishing sexual and social relations on a normal and natural basis.

"3. To teach that the primary cause of disease is the violation of Nature's Laws, and that Nature Cure is a system of man building in harmony with the constructive principles in Nature on the physical and moral plane of being.

"4. To teach that Naturopathy presents man with the master key to all higher development on the mental, moral, and spiritual plane of being, and self-control of the physical body.

"5. To teach that Naturopathy selects and combines everything that is good in Dietetic Treatment, Hydrotherapy, Massage, Osteopathy, Chiropractic, Curative Gymnastics, and in Magnetic and Mental Therapeutics.

"6. Our Field.–The Universe is our school, Humanity out Text Book, and Nature our Instructor.

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"7. Our Creed.–We believe in the ultimate triumph of Truth over Error, or Harmony over Discord, of Love over Hate, of Purity over Vice, of Smiles over Tears, of Life over Darkness, of Life over Death."

Note: An undated leaflet (from about 1937) with almost the same title ("The aims and objects of Australia's National Health Organization") has ten aims and objectives; it adds: "4. By joining the Natural Health Club of your own city you are not only able to exchange with others your ideas and experiences but you enjoy benefits that repay many times the nominal membership fee.

"5. In Melbourne, club meetings are held every Tuesday evening at 8 p.m., at The Athenaeum Art Gallery Hall, 188 Collins Street, next to the Town Hall. This weekly programme consists of bright, uplifting community singing, guest speaker, social items, questions and discussion, friendly free health guidance, physical culture and dietetic demonstrations." Address: Australia.

845. **Product Name:** Soy-Bev (Tea or Coffee Substitute).
Manufacturer's Name: Roberts (F.G.) Health Food Products.
Manufacturer's Address: 48 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia.
Date of Introduction: 1937 December.
Ingredients: Incl. roasted and ground soybeans, chicory.
Wt/Vol., Packaging, Price: Canned.
New Product–Documentation: Ads in *Nature's Path to Health* (*Melbourne, Australia*). 1937. Nov/Dec. p. 15 and 27. "A Delicious Beverage to take the place of Tea or Coffee. Made from the best Soya Beans. An F.G.R's Health Food Product." The address is given as 48 Chapel St., St. Kilda, Melbourne. But it is not clear what kind of facility was located at this address.

Ad in *Nature's Path to Health.* 1937. Christmas issue. p. 34. "Soy-Bev. The national nightcap. A Delicious Beverage to take the place of Tea or Coffee. Invigorating. Health giving. Blood purifying. Fortifies the system. A sure thing against insomnia. Made by F.G. Roberts & Sons. In the Health Food Factory. 48 Chapel St., St. Kilda, Melbourne. At all Health Centres. The new health beverage that everybody is drinking." See also smaller ad on p. 19.

Ad in *Nature's Path to Health.* 1938. Aug. 1. p. 40. "Soy-Bev. The ideal night-cap. Why upset your system by taking tea or coffee?" Made at 48 Chapel St., St. Kilda, Melbourne. An illustration shows a man and woman seated in chairs by their fireplace each enjoying a cup of Soy-Bev. Below this is a steaming cup of Soy-Bev–which looks like coffee.

Ad in *Nature's Path to Health.* 1946. Aug/Sept. p. 23. "Your best moment. When the drink is Soy-Bev or Soya-Choc. These are the nicest drinks. Freshly made from the choicest soya beans in our modern factory, St. Kilda, Melbourne. In Hygienic ½ lb. and 1 lb. Tins at all Health Centres Throughout Australia." This ad also appeared in the April/May 1949 issue (p. 8) of this magazine.

Note from Paul Smith of Soy Products of Australia (Pte.) Ltd. 1995. March 14. Paul thinks Soy-Bev was first introduced in about 1936-36. It was made with roasted soybeans and chicory, The product was discontinued in 1973.

846. **Product Name:** Soy Flakes.
Manufacturer's Name: Roberts (F.G.) Health Food Products.
Manufacturer's Address: 40 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia.
Date of Introduction: 1937 December.
Ingredients: Soybeans.
How Stored: Shelf stable.
New Product–Documentation: Ad in *Nature's Path to Health* (*Melbourne, Australia*). 1937. Nov/Dec. p. 15. "Cooking eliminated! Now we have–Soy Flakes. The greatest things ever placed before health reformers. Gives to busy housewives the best food product ready to use. Soy bean has been welcomed by all vegetarians. Worry of preparation, waste of gas, labour in preparing. Soy-flakes large flakes of specially-prepared soy beans." Another ad is found in the Christmas 1937 issue, p. 12.

Note: This is the 2nd earliest English-language product or document seen (June 2013) that contains the term "Soy Flakes."

847. Abbott, George Knapp. 1937. High blood pressure: And degenerative diseases of the heart, blood vessels, and kidneys. 2nd ed. Takoma Park, Washington, DC, Peekskill, New York, and South Bend, Indiana: Review and Herald Publishing Assoc. 205 p. Illust. No index. 20 cm. [50+ ref]
• ***Summary:*** This book, by a Seventh-day Adventist physician, is an expanded version of the original 1927 edition. It is "the outgrowth of 34 years of medical and surgical practice,–institutional, where high blood pressure and degenerative diseases have been an ever-present problem..." The information about the soy bean and its use in rabbit feeding experiments is the same as in the 1927 edition. Address: A.B., M.D., F.A.C.S. [Former Medical Director of the Washington Sanitarium and Hospital, Washington, DC].

848. Comstock, Belle Jessie (Wood) (Mrs.). 1937. Three times a day. Takoma Park, Washington, DC, South Bend, Indiana, Peekskill, New York: Review and Herald Publishing Co. 96 p. Illust. No index. 20 cm.
• ***Summary:*** The author, whose name on the title page is written Belle Wood-Comstock, was born in 1880. Address: M.D., Asst. Prof. of Medicine (Nutrition and Endocrinology), White Memorial Hospital.

849. Battle Creek Food Co. 1937? Order form. Battle Creek, Michigan. Undated.

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• ***Summary:*** This list of 59 products and publications, with no title, date, company name or address, runs down the side of a carbon copy of a letter dictated by Dr. Kellogg to Dr. Allan Roy Dafoe on 19 April 1937. The products include foods, beverages, and publications. We are assuming that these are the products of Battle Creek Food Co. Of special interest are: Cooked bran. Fig bran cookies. Gluten flour. Gluten bread (baked). Gluten bread (canned). Gluten products. Malted nuts. Protose and Savita. Psylla. Psylla wafer. Psyllium seed. Savita yeast tablets. Soy acidophilus milk. Soy beans. Soy beans (green). Vegetable gelatin. Whole wheat flour. Whole wheat rusk. Address: Battle Creek, Michigan.

850. KLIX, Inc. 1937? Natural questions and astounding answers about the soy bean, Nature's alkaline food (Leaflet). Los Angeles, California. 4 panels each side. Each panel: 22 x 10 cm. Undated.

• ***Summary:*** Printed with orange and brown ink on light tan paper. The first four panels, titled "An enlightening digest of U.S. agricultural and health bulletins and conclusions of eminent dietary authorities concerning the soy bean," contain a series of questions and answers. The last three, titled "Food development of the Soy Bean over a period of years," state:

"With the advantages of the Soy bean as presented on the preceding pages, it is easy to see the improved nutrition that results from using the Soy bean in the normal diet.

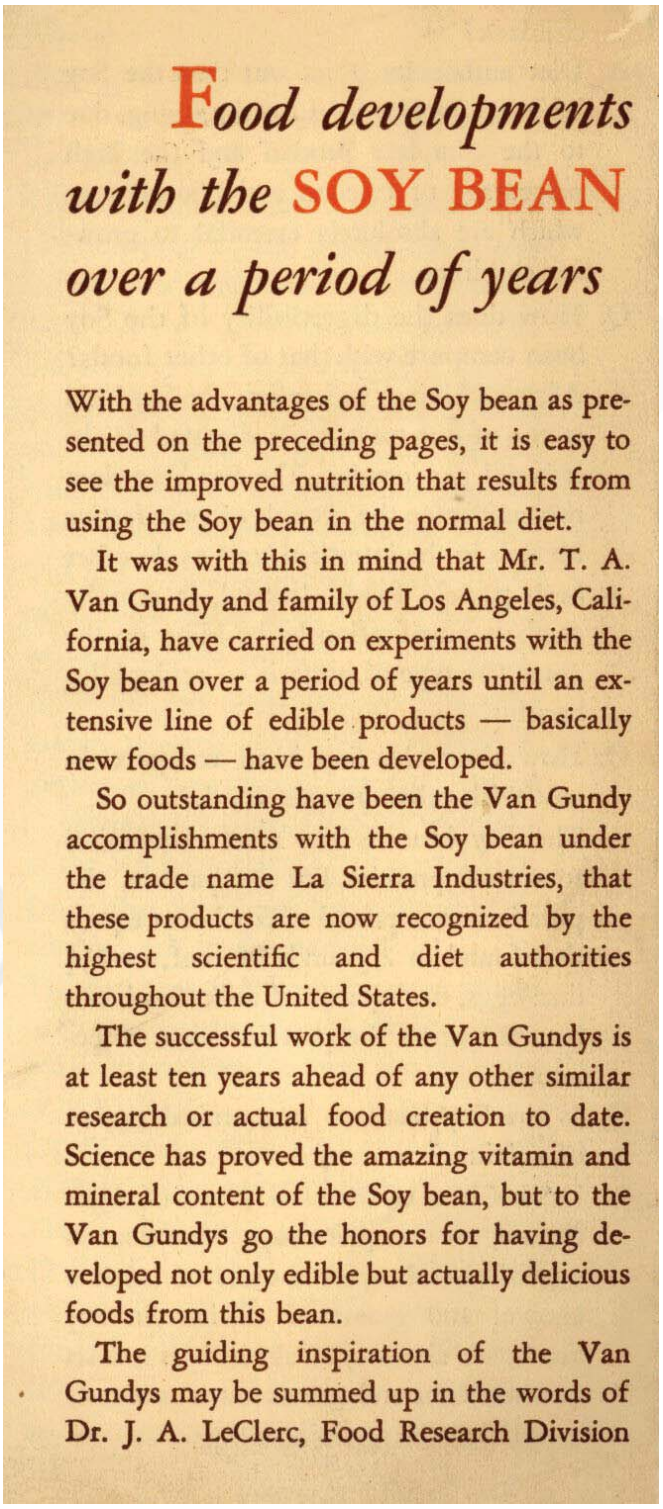
"It was with this in mind that Mr. T.A. Van Gundy and family of Los Angeles, California, have carried on experiments with the Soy bean over a period of years until an extensive line of edible products–basically new foods–have been developed.

"So outstanding have been the Van Gundy accomplishments with the Soy bean under the trade name La Sierra Industries, that these products are now recognized by the highest scientific and diet authorities throughout the United States.

"The successful work of the Van Gundys is at least ten years ahead of any other similar research or actual food creation to date. Science has proved the amazing vitamin and mineral content of the Soy bean, but to the Van Gundys go the honors for having developed not only edible but actually delicious foods from this bean.

"The guiding inspiration of the Van Gundys may be summed up in the words of Dr. J.A. LeClerc, Food Research Division of Chemistry and Soils, U.S. Dept. of Agriculture: 'The Soy bean (which, of course, means the Soy bean and all of its products) contains a greater concentration of food elements, so necessary for human nutrition, than any other common food.'

"D.H. Garrison, M.D., of Clarksville, Georgia, addressing the Habersham County Medical Association, said: 'The Soy bean in America is bound to skyrocket its way into our homes, where at present seventy per cent of the food



Food developments with the SOY BEAN *over a period of years*

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consumed is deficient or poor in mineral and vitamin content. With the addition of the Soy bean in its various forms, the protein will be more complete and of a better type; there will be a better quantity of fat containing Lecithin and Cephalin; the mineral part of the diet will be much higher, especially from a Calcium and Phosphorous standpoint; vitamins will be increased materially and the diet will be changed from the

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usual acid-ash diet to one of alkaline-ash.'

"Out of the enthusiasm of government authorities and the Van Gundy pioneering has been organized a company to greatly broaden the Van Gundy work. For the first time the American public will soon be presented with Soy bean foods of such generally liked character and flavor as to assure wide and enthusiastic acceptance.

"Organized by men of vision and broad national experience in the manufacturing, selling, merchandising and advertising of foods, KLIX, Inc., knows that in its hands is the basis of a new giant industry that will of necessity change (according to authorities) the dietary habits of our nation, if not a larger part of the world.

"KLIX, Inc., having taken over the entire Van Gundy laboratory, plant, formulas and goodwill, is not unmindful of its responsibility. That the Van Gundy family will continue research and development on a larger scale than ever before is assurance of the sincerity of purpose of the KLIX corporation.

"Already, KLIX, Inc., has perfected and will shortly market several food items of notable deliciousness. They are remarkable for their content of every nutritive element the human body needs *every day;* almost unbelievable in diet value when compared with generally similar foods that are sold in such enormous quantities to the American public.

"Packaged samples of these new KLIX products are now available at the company's offices. They will be offered to those who, after reading the informative digest on preceding pages, may be impressed with the vast manufacturing and sales possibilities of the Soy bean as a food–*The first basically new food in twenty-five years!*

"'Perfect food–that magical substance which renews strength and replenishes blood, bone and muscle.'" Address: Higgins Building, 108 West 2nd St., Los Angeles, California.

851. Deverall, Richard L.G. 1938. Life on the Madison campus. *Commonweal.* Jan. 6. *
• ***Summary:*** The author wrote this article following a visit to the Madison college campus. Address: Prof., Villanova College, Villanova, Pennsylvania.

852. Stegman, Henry M. 1938. Lessons from the quintuplets. *Good Health* (*Battle Creek, Michigan*) 73(2):57. Feb.
• ***Summary:*** "No other children, not even of royalty, have excited so much attention as the little Dionnes of Callander, Ontario. There are recorded sixty other instances of quintuplet births but in none of these did all the infants survive." They speak French.

"The quintuplets have been taking soy acidophilus milk since their fourth month, when they were attacked by a very severe form of bowel trouble, to which they were highly susceptible. Because they were not being breast-fed by their mother, they had never received the protective germ which infants normally receive in the act of nursing. They had been fed with mother's milk from their fourth day, but mother's milk does not contain the protective germ. This is derived from the outer surface of the breast in the act of nursing."

853. Lager, Mildred. 1938. The House of Better Living Catalog: Finer natural foods. Los Angeles, California: Published by the author. 36 p. March. 23 x 10 cm.
• ***Summary:*** The single most important document showing the creative development of commercial soyfoods in California in the late 1930s. This catalog contains a large section on Diabetic Foods, consisting mostly of soyfoods, and an even larger section titled "Soy Bean Products."

The Foreword (p. 1) begins: "The House of Better living is as unusual as its name. Its aim is to teach better living, and has made possible Mildred Lager's free educational program by radio and class work. Become a member of our ever-growing family. Secure one of our creed cards–Realize life can be a game and not a battle, and if you give to the world the best you have, the best will come back to you.

"The House of Better Living has grown in four years from what was called a brain storm to an institution. It is outstanding, unique, and built on the ideals of sincerity and service. It is teaching the ounce of prevention–the health insurance that pays dividends in years of health and happiness. It carries for you, Finer Natural Foods, selected by Mildred Lager."

A full page of delivery and order information (p. 2) shows that Mildred was shipping foods (such as California nuts and fruits, fresh and dried) all over the United States.

This catalog contains a total of 42 soyfood products, including 26 such products not found in the 1936 catalog. Soy (and other interesting) products are listed as follows (prices and weights are given for each): Beverages–Coffee substitutes: Radcliff's soy bean, Soy-Co. Other beverages: Dr. Fearn's Proteinized Cocoa, Radcliff's Malted Soya Milk, Radcliff's Soya Bean Cocolette, Soy-Malt (plain or chocolate). Sugars and syrups: Radcliff's Golden Soya Honey Spread (4-oz. glass). Natural sweets–Candies: Carque's health candies, bar, 5¢, Halvah bars, Sesame brittle, Soya candy sticks, 1¢ each, Soy milk "chocolate" bars, in Bavarian, cocoanut, mint, cherry, pineapple, and creme de mint flavors, Soy milk "chocolates," ½-lb. box or 1-lb. box, Soy chocolate, 1¢ square, ½-lb, 1 lb, 60¢, or bulk.

Desserts: Agar–Parfait mix, Agar–Hain Vege-Jell, Agar–Sanitarium vegetable gelatin. Diabetic foods: Gluten flour, Soy bean flour, 10¢ lb, Soy Bean Pancake and Waffle Flour (Bill Baker's Prepared; 2-lb. pkg. 30¢), Dr. Fearn's Soya Cereal, Dietetic Soyrina Cereal, Dr. Fearn's Soya-Date Breakfast Food, Battle Creek Dietetic Bran, Battle Creek toasted gluten bran flakes, Soy breakfast food, Cubbison's soy-gluten crackers, Soy-gluten wafers, Loma Linda soy bean wafers, Bill Baker's 100% soy-fruit slices, Bill Baker's soy bean bread, Olson's soy bread, Soy bean macaroni, spaghetti and noodles, Soy beans–imported, Soy

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beans–cracked, Soy beans–red, Soy beverages (without sweetening), Bill Baker's soy melba toast, Cubbison's soy melba toast.

Nut butters: Almond butter, Almond meal, Cashew butter, Peanut butter (dextrinized or raw), Pecan butter, Soy bean butter (lb or 8-oz. can). Whole grain flours, meals, etc.: Lima bean flour, Soy bean flour (1 lb, 3 lbs, or 10 lb), Soy bean pancake and waffle flour (Bill Baker's prepared), Soy bean pancake and waffle flour (Mrs. Hauser's), Whole wheat flour, wheat germ. Breakfast cereals (to be cooked): Mildred Lager's quick cooking cracked soybeans, Dr. Fearn's soya cereal, Dietetic Soyrina Cereal. Breakfast cereals (ready to eat): Battle Creek Zo, Dr. Fearn's soya-date breakfast food, Soya breakfast food, Bill Baker's 10% soya cereal. Melba toast, crackers, cookies: Cubbison's soy toast, Bill Baker's soy toast, Cubbison's Soy-Gluten crackers, Soy-gluten crackers, Loma Linda soy bean wafers, Cookies: Cubbison's soy cookies, Bill Baker's 100% soy fruit slices. Bread: Olson's soy bean bread (sliced loaf), Bill Baker's soy bean bread (unsliced loaf 16¢). Macaroni noodles: Soy bean macaroni, spaghetti and noodles. Legumes: Soy beans–imported, Soy beans–cracked, Soy beans–red. Meat substitutes: Nuteena (7 oz. can 15¢), Nut Meat, Nuttose (Battle Creek), Proteena, Protose, Soy bean butter (30¢ lb.), Soy mince sandwich spread, Soy bean spread, Soy bean ravioli (12¢ and 20¢ can).

Soy bean products (40 products; those mentioned above may be omitted here): Loma Linda soy beans (plain or tomato flavored, No. 1 can), Loma Linda soy beans with Proteena (No. 1 can), Dry soy beans (quick cooking red), Soy bean spread, Soya bean honey spread, Loma Linda soy mince sandwich spread, Soy bean sauce (5 oz for 18¢ or 2 oz bottle for 10¢), Soy bean oil (45¢ pint bottle), Soyco (Soy coffee), Soya bean milk powder, Milk of soya bean (6 oz or 12 oz can), Soy-Malt, Proteinized cocoa, Radcliff's 100% soya bean beverage (1 lb package), Cubbison's soy bean cookies, Cubbison soy-gluten crackers, La Sierra Soy breakfast cereal, Diamel Soyarina cereal, Diamel breakfast cereal. Salad dressings: Imitation Worcestershire sauce (Carque's, 5 oz bottle for 25¢). Powdered dry vegetables: Dulse, Dulse leaf, Irish moss, Kelp, Kelp–fancy, Sea lettuce (leaf or powdered), Soy-banana powder. Laxative foods: Agar, Psyllium, Swiss Kriss, Sym, Tam (laxative jam). Natural aids: Savita yeast tablets, Sesame seeds, Theradophilus (4 oz bottle 75¢, 8 oz bottle $1.25). Electric appliances: Electric juicers are not yet on the market. Index (p. 36).

There are ads for the following: Battle Creek Sanitarium Foods (p. 5; ask for literature). Ficgo coffee substitute (display ad, p. 6). Racliffe's Soya Products (p. 9, 21). Mildred Lager's quick cooking family (incl. cracked soy beans), Bill Baker's soy and lima bean products (photo display, p. 16). Therapy, Ltd.–Foods for Better Living (Theradophilus, soy bean milk, p. 19, 29).

A photo (p. 1) shows Mildred Lager.

Note. This is the earliest English-language document seen (Aug. 2013) that contains the term "soya bean beverage," which probably refers to powdered soya milk. Address: 1207 West Sixth St., Los Angeles, California.

854. *Madison Health Messenger* (*Madison, Tennessee*). 1938-1949. Serial/periodical. Madison, Tennessee: Madison Foods. Vol. 1, No. 1. Spring 1938. Frequency: Irregular.
• ***Summary:*** This interesting periodical began publication in the spring of 1938, with Edwin M. Bisalski as editor. Above the title is written: "Devoted to the protection of your health." Near the top left is a marble statue of a Greek discus thrower, and next to it a triangle on whose sides are written the words "Strength. Beauty. Efficiency." This is the best source of information on and photos of soyfoods at Madison from 1938 on. It also contained general information on diet and health. Unfortunately most issues are not dated. Vol. 2, No. 3 was published after March 1940–probably shortly after. Camp Meeting '41 was published after 31 May 1941. Campmeeting '42 was probably published after 31 May 1942. Vol. 7, No. 1 was published after 15 Aug. 1945. Vol. 49-3, which was probably published in 1949, is the last issue we have seen. Most issues contained 4-6 pages, each 8½ by 11 inches, and were filled with information about and photos of canned vegetarian foods (mostly soyfoods) made and sold by Madison Foods.

Andrews University (Berrien Springs, Michigan) has the following: v.2 (1939) 1. v.4 [1941] 2, 3, camp meeting. v.5 [1942] 2.

855. Kellogg, John Harvey. 1938. The constipation problem solved. *Good Health* (*Battle Creek, Michigan*) 73(5):138-39. May.
• ***Summary:*** "Constipation is a disorder of the colon. It is a disease little known among savages and wild animals, but very common among civilized people and domestic animals. The great number of remedies offered and the constant appearance of new ones are evidence of the baffling nature of the disorder and the eager search for better means of relief. No progress was made until the X-ray began to throw light upon the colon functions through the researches of Prof. Cannon of Harvard University [Massachusetts] on animals, Hurst of London, and the observations of Holzknecht of Vienna and Dr. James T. Case of the Battle Creek Sanitarium (Michigan)."

Scientists now know that the Nature intends for the colon to be cleared of its wastes every 24 hours. Thus after a meal today, the contents of the same meal from the previous day are evacuated.

It is "important to make a distinction between bulkage and roughage. It is essential that there should be a sufficient amount of indigestible and non-absorbable material to properly distend the intestine and to stimulate its muscles

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to activity, but it is not essential that this material should be coarse or capable of causing irritation."

To avoid constipation: Avoid hasty eating of meals. Chew your food well. Get adequate vitamin A. Get rid of parasitic bacteria which, by producing putrefaction, paralyze the colon by ingesting *Lactobacillus acidophilus.* Get adequate exercise accompanied by deep breathing. Keep good posture, especially when sitting. Avoid worry, fear, and depression. Address: M.D.

856. **Product Name:** Kreme O'Soy Crisps (Ready-to-Eat Breakfast Cereal. Renamed Wheatasoy in Jan. 1940).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1938 May.
Ingredients: Whole soy bean flour, whole wheat, malt.
Wt/Vol., Packaging, Price: 9 oz box.
How Stored: Shelf stable.
New Product–Documentation: Madison Health Messenger. 1938. Spring. Page 4. "Kreme O'Soy Crisps is a high quality breakfast cereal, ready to eat. The combination of whole soy bean flour, whole wheat, and malt presents a rich assortment of choice nutritional elements. A special malting and baking process makes it easy of digestion, which together with its being alkaline makes it a protective balanced breakfast food. 13 cents per package." A photo shows a young boy at the breakfast table (dressed in a white shirt and bow tie) eating "Breakfast Crisps."

Ad in *Nature's Path* (USA). 1939. Sept. p. 337. "Alkaline breakfast food: Kreme O'Soy Crisps." Madison Foods: "Devoted to the protection of your health."

Ad in *Nature's Path* (USA). 1940. Jan. p. 19. "Alkaline breakfast food: Wheatasoy (Formerly Kreme O'Soy Crisps)." "Malted-Dextrinized. Combines the nourishment of whole wheat, soybeans and malt." Madison Foods.

Taylor. 1944. Soy Cook Book. p. 201.

857. *Madison Health Messenger* (*Madison, Tennessee*). 1938. Soy bean milk, coffee, meat, and cereal. 1(1):1, 4, 6. Spring.
• ***Summary:*** "More versatile than any other food is the soy bean. Previously used as stock feed, it has gradually won its way into many wholesome foods that are distinctly different, yet palatable and reasonable.

"Madison Foods, in conjunction with Madison College, has spent years in experimental research developing soy bean foods. Dr. Philip S. Chen, Professor of Chemistry at Madison College, a native of China who received his doctorate degree in chemistry at Michigan State College, together with Dr. Frances L. Dittes, Professor of Nutrition at Madison College, whose doctorate degree is also in the field of Chemistry and Nutrition, have successfully exploited the ancient bean, discovering its versatility as is evidenced by the possibilities

of its use as milk, coffee substitute, meat substitute, breakfast cereal, flour, etc."

Kreme O'Soy Milk is the only homogenized soy bean milk on the market to date; it is made of soy beans, added soy bean oil, dextrose, and organic calcium. Zoy-Koff is an alkaline coffee substitute made from soy beans and grains. Kreme O'Soy Crisps is Madison's new ready-to-eat alkaline breakfast cereal. It is made of whole soy bean flour, whole wheat, and malt.

Foods made by Madison Foods that contain soy as an ingredient, described in this first issue are: Soy-Koff (with photo of front of package in front of Mr. Hubert Henken, assistant production manager of Madison Foods, from Albia, Iowa, and a "strict vegetarian"). Thin Things (a new soy wafer). Date-Stix (a natural sweet, with Kreme O' Soy Flour). Fruit Stix (a soy flour biscuit). Breakfast Crisps / Kreme O'Soy Crisps (with photo of front of package). Soyburger Loaf. Soy Beans (in 5 oz, 14 oz and 30 oz cans, with tomato sauce or plain). Soy Cheese [Tofu]. Vigorost ("Madison's finest protein food representing the 'steak' of its variety." A photo shows Vigorost sliced and ready to serve on a platter). Kreme O'Soy Flour. Kreme O'Soy Milk.

Note: This is the earliest document seen (Jan. 2013) that contains the word "Soyburger" (spelled as one word, regardless of capitalization) or the term "Soyburger Loaf."

858. Melick, Weldon. 1938. Self-supporting college. *Reader's Digest.* May. p. 105-08.
• ***Summary:*** About Madison College in Tennessee. "In 1904 the Nashville Agricultural Normal Institute at Madison, Tennessee, consisted of 11 students and some dilapidated

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farm buildings on 400 acres of worn land purchased with the last cent of its founders–Dr. E.A. Sutherland and four other teachers. In addition, however, it had one invaluable asset: Dr. Sutherland's idea that a college education should be made available to any boy or girl willing to work for it."

Today "Madison's curriculum includes 27 campus industries, run by the students to support the college and themselves... 15 years of research in food chemistry have resulted in new food products too useful to confine to campus menus.

"Hence, Madison Foods–an industry that is largely responsible for making the soy bean appetizing to Americans. The school's food chemists, experimenting with 200 varieties of soy beans, eliminated objectionable taste and produced savory breakfast foods, bread, coffee substitute, condensed milk, and meat substitutes which look and taste like beef but are even more nutritious and digestible. Vigorost, made from soy loaf after the milk is extracted [i.e. okara], is featured by a cafeteria chain in New York City. More than $60,000 worth of Madison's packaged and canned foods was sold in 27 states last year, and the Institute runs its own health-food cafeterias in Nashville and Louisville.

"Madison Foods have developed soy milk until it is now not only cheaper than cow's milk but, on the authority of the American Medical Association, better for babies. Observers have come from Africa, India, and other countries where milch cows are scarce, to study the methods of Madison's soy bean 'dairy.'...

"With twice as many applicants as can be provided for, Madison as a rule accepts only those who could not otherwise arrange for a college education."

Note 1. As a result of this article, the school received nearly 5,000 inquiries concerning the school plus a flood of student applications. The next year was the highest in the history of the College with a total of 450 college students enrolled.

Note 2. This is the earliest article on soy seen (Aug. 2002) in *Reader's Digest* magazine.

859. Stegman, Henry M. 1938. Bread of soybean and wheat. *Good Health* (*Battle Creek, Michigan*) 73(5):137. May.
• ***Summary:*** Dr. G. Douglas Gray, a Scotch physician, argued recently in the *British Medical Journal* that British bread should be made from 20% soybean flour and 80% whole wheat flour. The mixture contains 60% more protein than ordinary bread. "The ash of the soybean is alkaline, which that of cereals is acid. The ash is also rich in phosphorus, calcium, and magnesium. This alkaline value aids in combating the fatigue of muscular exertion, and herein lies the ability of the Oriental to do a long day's work at small cost."

"The soybean flour commonly sold in England is made in accordance with the formula of Professor Berczeller, of Vienna [Austria]. In this process the objectionable flavor of the bean is removed by chemical solvents. This is objectionable for the reason that chemical solvents are likely to impair the nutrient qualities of the bean by removing useful elements. Processes devised and used in this country are not open to this objection, the use of chemical products being avoided."

860. Nelson, G.A. 1938. Re: Request to use Dr. Fearn's name on Vitona product labels. Letter to Dr. Charles E. Fearn, 355 West Ontario Street, Chicago, Illinois, June 11. 2 p. Typed, with signature on letterhead.
• ***Summary:*** "Since writing you yesterday, your letter of June 6 addressed to the Giloma Research Laboratories has been turned over to me, inasmuch as I have the general management and control co-jointly with Doctor Proctor of the Vitona Health Products Incorporated. Your letters are always interesting for it is plainly evident that you are thinking along parallel lines with us. We have gone over the products you have sent us with a great deal of interest. We are quite convinced that you are manufacturing something of outstanding merit..." Vitona plans to work closely with the Medical profession and to establish a foundation–the Charitable Clinical Institution.

"A short time ago, Dr. [Keller] Beeson of the American Soy Bean Association recommended to us that we employ Miss Dorothea Van Gundy to take charge of our Dietetic Department under the direction of our President, Dr. F. Earle Brown. Although Miss Van Gundy was employed as a Dietitian for the largest Health Food Restaurant in California, she has resigned from that position as of the 25th, this month, and is joining our organization at that time. Miss Van Gundy brings with her all that we could expect, in addition to having the happy faculty and ability of being able to lecture–to write–and to handle radio programs."

Mr. Nelson then suggests to Dr. Fearn that Vitona would like, "out of respect for the work you have heretofore done, to incorporate your name on the products which are of your manufacture. The name of our product will be overprinted on the label." Vitona has decided to change the name of its bread to "Vitona Soy" from "Ches-Nu-Soy" thereby side stepping "coined" names.

"In the case of your products, taking the infant food as an example, or the cereal, we would simply overprint on your label, in the space for the name of the item–'Dr. Charles E. Fearn's Infant Food,' or in the case of the 'Soy-O,' 'Dr. Charles E. Fearn's Soybean Cereal,'"... or "on the back of the package state something along the order of: 'This cereal is specially prepared for Vitona Health Products Incorporated by Doctor Charles E. Fearn." Address: Vitona Health Food Products Inc. of California, 527 West 7th, Los Angeles. Phone: Tucker 1317.

861. *Buffalo Times* (*Buffalo, New York*). 1938. Learning to live (Photo caption). June 19.

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• ***Summary:*** A photo shows two young ladies at Madison College in Tennessee, each milking a cow, indoors, and seated on a wooden stool while she looks at a book balanced on her left knee and thigh. The caption reads: "Collegiate milkmaids, hard pressed for time, are memorizing poetry to the rhythm of milking cows before class time. Graduates of Madison College are encouraged to move to needy communities, there teach better ways of living, administer medical, health and cultural service in the way they learned at school."

There may also be a portrait photo of E.A. Sutherland, president of Madison College. He doesn't believe in debts, endowments, or "drives" for money.

862. *New York Times.* 1938. Self-help school: Madison College grows from its students' labor. June 19. p. 128.

• ***Summary:*** Madison is a self-help college, where students divide their time each day between 5 hours each of study and labor. There are 20 industries on campus. Each student is expected to earn at least half his expenses, which are calculated at $25/month for room, board, tuition, and laundry. In 1932 it attained recognition as a "senior college" and it presently has a student body of almost 350, from 40 states and 5 foreign countries. There are 4 large photos. One shows a student from Arkansas roasting soybeans in front of a large oven. This is "an industry in which the school has done pioneering work. Its chemists developed methods of using soybeans is a variety of food products." The stone science hall which was "designed and built entirely by students under the skilled supervision of their instructors, as were all of the more than 100 buildings on the college properties. A large part of the material was produced locally and even the roof tiles are of student manufacture."

863. *Good Health* (*Battle Creek, Michigan*). 1938. A special milk for bottle-fed babies. 73(6):179-80. June.

• ***Summary:*** This special milk is prepared from the soybean, which the Chinese call "the honorable bean" and which has "for thousands of years been found a perfect substitute for breast milk [sic] in the feeding of babies deprived of their natural food supply. Soybean milk looks like cow's milk, and tastes much like it, and is more easily digestible and richer in lime and iron, though in other respects much like dairy milk. The great virtue of soy milk is that it encourages the growth of the wonderful protective germ acidophilus with which every nursling is inoculated by contact with its mother's breast."

"Many foods discourage the growth of the acidophilus, especially greasy and fried foods, hamburger steak and sausage, as do also alcohol, tobacco and laxative drugs. Bread and milk, breakfast foods, bananas and fresh fruits and vegetables of all sorts encourage the growth of friendly germs, which differ from ordinary buttermilk germs chiefly in the fact that they are able to grow in the colon, whereas the buttermilk germs die at the level of the stomach because they cannot survive without oxygen, while acidophilus can obtain its oxygen from sugar of milk, dextrin and some other carbohydrates.

"One to three glassfuls of soy acidophilus milk taken daily will keep the colon free from offensive gases and foul odors, clear the skin and the tongue, sweeten the breath and promote better appetite and a sense of fitness to a remarkable and almost unbelievable degree. Every bottle-fed baby should receive a teaspoonful of soy acidophilus milk at each feeding as an almost certain protection against the bowel troubles of bottle-fed infants."

864. Sanford's Cafeteria. 1938. "World's most unique cafeteria!" ... Say previewers and you'll agree! (Ad). *Los Angeles Times.* July 26. p. 4.

• ***Summary:*** This big ad announces the grand opening of a healthy cafeteria on Tuesday, July 26. "Fully air-conditioned. We acknowledge with gratitude the co-operation of the firms listed below: Acidofilac–Radiance Products Co. Bragg Meal & California Mint Tea–Live Food Products Co. (Paul Bragg). Cocoanut Milk Powder & Cocolette–Radcliffe Products. Cottage cheese & buttermilk–Knudsen Creamery Co. Healthful Candies–Hassey Candy Co. KAL–The calcium phosphorus food–Makers of KAL. Mal-Ba-Nuts & vegetable juices–Hain Pure Food Co. Nuteena, Syl-Dex & Savorex–Loma Linda Food Co. Papaya & guava juice–Milo Frank. Soy milk powder–Viana (Malcolm McBride). Soy waffle flour & soy macaroni–Mrs. Hauser's Food Products Co. Swiss Kriss, Vitana, Staf & Juicex [electric juicer]–Modern Health Products Co. (Gayelord Hauser). Soyolate, The soy chocolate–Theo. Hollie Co. Theradophilus & Theradiet–Therapy, Ltd. Unsulphured figs & jumbo prunes–F.E. Hadley & Sons. Virgin olive, peanut & soy bean oils–Solar Food Products Co.

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Keep fit by eating right. Modern cooking insures digestibility ("Either whole wheat and soy bean flours, vegetable shortening in baked goods–no cheap artificial substitutes Whatever!"). "Outstanding features to help you keep fit:" Cafeteria, Dietetic food store, bakery (using "whole wheat and soy bean flours"), health bar ("An exclusive feature of Sanfords. Fresh fruit and vegetable juices squeezed right before your eyes and concocted into tantalizing non-alcoholic cocktails that will send you along with a new spring in your step and sparkle in your eye"). "All employees required to pass a physical examination. Open every day of the year, 7 a.m. to 8 p.m." "Cooking that's kind to your stomach."

Photos show: (1) The inside of the cafeteria with white tablecloths. (2) Thirteen waitresses in uniform. (3) Bar stools around the health bar. (4) The dietetic food store.

Note: This is the earliest document seen (June 2006) that mentions the Juicex, an early electric juicer. Address: 720 South Hill St. [Los Angeles, California].

865. Chen, Philip S. 1938. The aristocrat among foods: The soybean. *Health* (*Mountain View, California*) 5(7):14-16. July. [4 ref]
Address: Ph.D.

866. Stegman, Henry M. 1938. Germany turns to the soybean. *Good Health* (*Battle Creek, Michigan*) 73(8):252. Aug.

867. *Good Health* (*Battle Creek, Michigan*). 1938. Colonic irrigation found beneficial. 73(9):280. Sept.
• ***Summary:*** In autointoxication of intestinal origin, colonic irrigation is far more effective than the ordinary enema. Patients with this disorder require a strictly antitoxic diet; that is, the avoidance of meats of all sorts. The food should be chewed carefully. "Acidophilus cultures, especially soy acidophilus, and Lacto-Dextrin should be used in sufficient quantities to change the intestinal flora; that is, to arrest putrefaction and produce non-odorous stools, with the absence of intestinal gas."

Note: This is the earliest English-language document seen (June 2003) that uses the term "colonic irrigation" to refer to a method for changing the intestinal flora.

868. Roosevelt, Eleanor. 1938. My day. *Syndicated Column.* Oct. 6.
• ***Summary:*** An article about Madison College in Tennessee, based on an interview with Dr. Floyd Bralliar. She stated that U.S. Secretary of State Cordell Hull had especially requested her to have the interview and to report on it. Since Dr. Bralliar had spent most of his life and labor on the Madison project, he was well able to impart to her its spirit, which she reflected in her praise. The article was syndicated in many newspapers nationwide by United Features Syndicate, Inc. It is reprinted near the back of the 1989 edition of *Madison–God's Beautiful Farm.*

A small portrait photo shows Eleanor Roosevelt.

869. **Product Name:** Soya Beans in Tomato (In glass jar. Canned by June 1940. Renamed The Versatile Soyabean in Tomato Sauce by 1953).
Manufacturer's Name: Roberts (F.G.) Health Food Products.
Manufacturer's Address: 40 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia.
Date of Introduction: 1938 October.
Ingredients: Incl. soya beans, tomatoes.
Wt/Vol., Packaging, Price: 12 oz jar. Canned by June 1940.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Ad in *Nature's Path to Health* (*Melbourne, Australia*). 1938. Oct. Half-page ad. "For your health's sake, eat Soya Beans in Tomato. The Protein food with the high Vitamin content, prepared under Hygienic conditions, hermetically sealed by F.G.R. Health Food Products (Registered), 40 Chapel Street, St. Kilda. Directions for use. Place jar in water and heat. To open, lever lid with coin. Obtainable from Roberts Health Centre, 284 Post Office Place, Melbourne, C.1. Phone: Central 3394." A photo shows the jar and label. At the bottom of the label is written: "Manufactured at 40a Chapel St., St. Kilda."

Ad in *Nature's Path to Health.* 1940. June. p. 26 "Just what you've waited for! Better health foods." An illustration (line drawing) shows the four canned products, with the Soy Bean & Tomato in the smallest can. Ad in NPH. 1940. July. p. 8. "Roberts' Better Nut Foods." An illustration (line drawing) shows the four canned products, with the Soy Bean & Tomato in the smallest can. Small ad in Aug. 1940 issue, p. 5. "Roberts' Soy Bean in Tomato." "Packed in a new style in tin in convenient sizes and sold at all Roberts' Health Food Shops throughout Australia."

Ad in *Nature's Path to Health.* 1940. Nov/Dec. p. 30. "Roberts' Soy Nut Recipes." Same line drawing as in July issue. "Supplies always available at the Roberts Health Food Shops Throughout Australia."

Letter (fax) from Paul Smith of Soy Products of Australia. 1995. March 14. From 1940 to 1954 these soybeans were contract canned outside the Roberts' plant. From 1954 to 1974 they were canned in house. The product had to be discontinued in 1974 due to falling sales, its high labor cost and low profitability, and the lack of capital to further automate the process. Long before 1954 the Sanitarium (Adventist) retail shops sold this product under the Roberts brand name. Sanitarium studied the product then introduced their own version of it as a logical extension of their extensive range of canned vegetarian "meat analog" type products. They had economies of scale which Soy Products of Australia lacked. As Sanitarium Sales increased, ours declined. Beans in Tomato were processed continuously

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from 1940 to 1974 by SPA and previously under the F.G. Roberts brand.

870. **Product Name:** Roberts' Soy Nut Roast.
Manufacturer's Name: Roberts (F.G.) Health Food Products.
Manufacturer's Address: 40 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia.
Date of Introduction: 1938 October.
Wt/Vol., Packaging, Price: Tin-plated steel can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Ad in *Nature's Path to Health* (*Melbourne, Australia*). 1938. Oct. Rear cover (p. 50). A photo shows the label: "The ideal meat substitute. 10 ozs. Nett. Another Roberts 100% protective health food."

Note: The same page shows that Roberts also made a coconut ice cream named Robert's Cocoanut; it was apparently a non-dairy product.

871. Roberts, F.G. 1938. Naturopathy: Nature cure. *Nature's Path to Health* (*Melbourne, Australia*). Nov. 1. p. 12.
• ***Summary:*** A portrait photo shows F.G. Roberts, smiling and dressed in a bow tie. "Life is all law... All life, spiritual, mental and physical is as scientific and exact as chemistry and mathematics. Harmony through obedience is the key-note of all. When that is maintained on each plane of our being, gladly, faithfully maintained, then life is truly a song, one with the melodies of nature, one with the life of the birds, of the trees, of the grass and rain. All nature sings because it is obedient to the law within and in harmony with it. All law is alive..." Address: N.D., D.O., Australia.

872. *Post-Dispatch* (*St. Louis, Missouri*). 1938. Pictures. Nov. 6. *
• ***Summary:*** Photos show: (1) Aerial view of "Madison College, Tennessee. Its campus covers 700 acres." (2) "At one wing of the Madison College hospital, a student nurse wheels a patient past a pre-medical student, delivering a tray."

873. Hastings, Milo. 1938. A college that feeds itself. *Physical Culture*. Nov.
• ***Summary:*** About Madison College near Nashville, Tennessee. About 500 people now live on the campus, of which 300-350 are students. About 90% of the vegetables (including soybeans) consumed by all these people are grown by student labor. The college has its own mills for whole-grain products and its own bakery, "which also serves whole-wheat and soy-bean bread to over one hundred retail stores in the nearby city of Nashville."

"The address Madison College, Tennessee, has become familiar to patrons of health food stores as the place of origin of a distinctive line of products made from soy-beans." The reason for that grew out of an interesting combination of circumstances. First, the college was founded upon the idea that the "students should by their own labor produce as nearly as possible all their own food supply for a completely nourishing diet. Second: Madison College and Sanitarium are strictly vegetarian, and, as at the Battle Creek Sanitarium, the vegetarianism has been worked out as part of the school dietary as well as the sanitarium dietary. To students and patients alike the importance of proper food for the body is emphasized.

"Third: one phase of the work at Madison College has to do with the training of medical missionaries. That has not only brought to the teaching staff people who have had experience in the Orient, but has also brought students from those countries. (At present there are six Japanese and ten Chinese students.)

"Out of these circumstances came the development of a new line of foods which we may call the Americanization of the second most important food material in the Eastern world and the greatest of all vegetarian sources of protein–the soy-bean."

To Madison College, with its interest in perfecting a vegetarian diet, came Perry A. Webber, as professor of chemistry. He had taken his doctor's degree at Michigan State College after a fourteen years' residence in Japan. It was a happy combination of circumstances, and the American chemist, with his Japanese experience, set to work to Americanize the soy-bean as a source of human food.

"It also happened that one of Dr. Webber's Chinese friends, Philip S. Chen, was a fellow student of chemistry at Michigan State College, having come to America to study science. When he had completed his chemical work for a doctor's degree at Michigan, he entered Madison College as a special student to take up practice teaching in the Department of Chemistry under Dr. Webber. The two men, each with a knowledge of soy-beans as used in the Orient, now worked together as chemists in the American college.

"After two years of this cooperation Dr. Webber was called back to Japan to become the head of a school there. Dr. Chen then became the professor of Chemistry at Madison College and continued to work on soy-bean products."

Though Dr. Chen says soy-bean milk has been used in China for 3,000 years, the type made at Madison "is new because it is different and superior to the older forms of the Oriental product." It has been made "more acceptable to American tastes and to the more exacting demands of present-day nutritional science. This also applies to the substitutes for meat and the cheese products made from soy-beans, and to the use of soy-bean flour as an ingredient in bakery and cereal products. Today all this is of special interest to vegetarians and to those who follow the latest forms of health foods. These advances in food science will later become of far greater significance."

Dr. Frances L. Dittes, head of the Department of Nutrition, specializes in soybeans, "both in nutritional

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research and menu applications. Thus, the new food products developed from soy-beans, along of course with other vegetarian dishes, were worked out and tried out in the students' dining hall and also in the Madison Sanitarium. Patients cured at the sanitarium naturally wished to continue the use of the food products after returning home. This gave the nucleus of a health food manufacturing business.

"This, in turn, provided another campus industry for the work-your-way college, giving occupation for the students in which they could take an especial interest and pride, since the business grew out of the research work of the college and was closely tied in with both their agricultural and their health work."

Note: This article is reprinted near the back of the 1989 edition of *Madison–God's Beautiful Farm.*

874. *Post-Dispatch* (*St. Louis, Missouri*). 1938. A college supported by its own industry: Madison College, Tennessee–the country's most unusual educational institution. Dec. 7. Rotogravure section. p. 10-11. *

• ***Summary:*** This 2-page center spread is about Madison College in Tennessee, to which it brought much favorable publicity. Photos by Jack Schutz show: (1) Five women students with many Madison Foods packages. (2) Soy milk being made in the food plant. "Soy milk may be substituted for cow's milk by those who require a strictly vegetarian diet" [i.e., a vegan diet].

875. *Madison Health Messenger* (*Madison, Tennessee*). 1938. New variety soy beans. 1(3):1. Fall-winter.
• ***Summary:*** "A new variety of soy beans has been developed. They are much larger in size and quite irresistible as a vegetable food. Unlike other legumes, the soy bean contains practically no starch... Therefore it has proved to be a desirable food for diabetics."

"This new variety is available under the registered trade name of Kreme O'Soys, manufactured exclusively by Madison Foods. They are packed in the natural soy bean sauce [the cooking liquid] in hermetically sealed tins–ready to eat. 14 oz. can 15¢."

Note: These are large-seeded vegetable type soybeans.

876. *Madison Health Messenger* (*Madison, Tennessee*). 1938. Madison College stresses health. 1(3):1, 3, 5. Fall-winter. [5 ref]
• ***Summary:*** Cites and discusses the many nationwide publications in which the story of Madison College has been told. For example: *"Reader's Digest* published an article in the May issue entitled 'Self-Supporting College.'"

"Early in June the *New York Times* sent a photographer to Madison College to take pictures for their rotogravure section. These pictures appeared in the June 19 issue of the *New York Times.*

"Mahatma Gandhi reprinted the entire *Reader's Digest* article in his official organ the *Harijan,* in India."

"From the very beginning nearly 35 years ago, the importance of correct eating and health habits was emphasized... A vegetarian bill-of-fare was adopted and is adhered to strictly today."

877. *Madison Health Messenger* (*Madison, Tennessee*). 1938. Price list. 1(3):6. Fall-winter.

PRICE LIST

BREAKFAST CEREALS		
Minute Wheat	12 oz.	15c
*Kreme O'Soy Crisps	9 oz.	13c
BEVERAGES		
*Soy-Koff (No Caffein)	12 oz.	20c
*Kreme O'Soy Milk plain, liquid	15 oz.	15c
*Kreme O'Soy Milk plain, liquid	29 oz.	25c
*Kreme O'Soy Milk chocolate, liquid	15 oz.	15c
*Kreme O'Soy Milk chocolate, liquid	29 oz.	25c
CRACKERS		
*Thin-Things	5 oz.	12½
Whole Wheat Wafers	5 oz.	12½
Bran Wafers	6½ oz.	12½
*Fruit Stix	6½ oz.	15c
*Date Stix	6½ oz.	15c
CANNED PROTEIN FOODS (used in the place of meat)		
*Soyburger Loaf	14 oz.	20c
*Soyburger Loaf	30 oz.	40c
Nut-Meat	5 oz.	10c
Nut-Meat	14 oz.	25c
Nut-Meat	30 oz.	50c
*Vigorost	5 oz.	12c
*Vigorost	14 oz.	30c
*Vigorost	30 oz.	60c
*Soy Cheese seasoned	5 oz.	10c
*Soy Cheese seasoned	14 oz.	25c
*Soy Cheese seasoned	30 oz.	50c
*Soy Beans with Tomato	5 oz.	7c
*Soy Beans with Tomato	14 oz.	15c
*Soy Beans with Tomato	30 oz.	30c
*Kreme O'Soys	14 oz.	15c
FLOUR		
*Kreme O'Soy Flour	2 lbs.	35c
*Kreme O'Soy Flour	5 lbs.	85c

*(Soy Bean Foods.)

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• ***Summary:*** See next page. This is the earliest known list of foods made by Madison Foods. The name of each food that contains soy as an ingredient is preceded by an asterisk (*). The foods are divided into categories and the flavor, size and price of each size are given.

The categories are: Breakfast cereals. Beverages. Crackers. Canned protein foods. Flour.

The foods containing soy as an ingredient are: Kreme O'Soy Crisps. Soy-Koff. Kreme O'Soy Milk (plain and chocolate). Thin-Things. Fruit Stix. Date Stix. Soyburger Loaf. Vigorost (3 sizes of cans). Soy Cheese seasoned (3 sizes of cans). Soy Beans with Tomato (3 sizes of cans). Kreme O'Soys [whole soybeans]. Kreme O'Soy Flour.

878. **Product Name:** Soymilk.
Manufacturer's Name: Canton Mission School.
Manufacturer's Address: Canton, China.
Date of Introduction: 1938.

879. **Product Name:** Loma Linda Gluten Burger (with Soy Flour).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1938.
Ingredients: Incl. soy flour.
Wt/Vol., Packaging, Price: 14 oz, 28 oz, and 30 oz can (1971).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Note: This is the second earliest known vegetarian "burger" (with the word "Burger" or "Burgers" in the product name) made in the United States. It is also the earliest known product made by Loma Linda Foods that contains wheat gluten. Loma Linda Food Co. Price list. 1938.

Patricia H. Black and Ruth L. Carey. 1971. *Vegetarian Cookery.* 5 vols. This set of vegetarian cookbooks contains numerous recipes calling for "gluten burger" which is sold in 14 oz, 28 oz, and 30 oz cans.

880. **Product Name:** Soymilk, Tofu-Pimiento Spread, Okara Spread, and Gluten Cutlets.
Manufacturer's Name: Miller's Soy Foods.
Manufacturer's Address: Utica, New York. Washington, DC.
Date of Introduction: 1938.
Wt/Vol., Packaging, Price: Soymik: Bottled. Gluten products: Canned.
New Product–Documentation: Herbert P. Ford. 1958. *The Life Story of Dr. Harry W. Miller.* p. 131. "In 1939 Dr. Miller returned to the United States having been so thoroughly convinced of soy milk being destined to have world-wide acceptance... His son, Harry Willis Miller, Jr. had returned preceding his father and had started a small soy milk plant in Utica, New York, where he made and bottled soy milk and also made and canned some of the protein foods out of wheat gluten for which they had developed recipes. This plant was later moved to Mt. Vernon, Ohio, after they started the soybean plant at Mt. Vernon."

Interview with Willis Miller. 1981. After he returned to the USA from Shanghai, Willis started this company, named Miller's Soy Foods, in Utica, New York, in 1938. Later that year he moved it to Washington, D.C. and was successfully making and marketing canned soymilk, tofu used in a tofu-pimiento spread, okara spreads, and gluten cutlets. When Dr. Miller returned to the U.S. he suggested that he and his son go into business together. Willis liked the idea.

881. American Soy Bean Association. 1938. 16th annual meeting (leaflet). 1 p. Single sided. Undated.
• ***Summary:*** This leaflet indicates the location and menu for the 16th annual meeting of the American Soy Bean Association. The meeting was held in the Crystal Ballroom of Hotel Montrose, Cedar Rapids, Iowa. The menu included: "Salted soy nuts, cream of tomato soup, fruit cocktail, beef tenderloin steak, browned potatoes, string beans, soy Parkerhouse rolls, butter, apple, celery and egg salad, Vi-Tone ice cream, cake." The leaflet also lists the stores from which the soy products were purchased: "La Sierra Industries, Ontario, California; Madison Foods, Madison College, Tennessee; Petersen Bakery, Cedar Rapids, Iowa; Milqo Limited, Vi-Tone Company, Hamilton, Ontario, Canada; Hutchinson Ice Cream Company, Cedar Rapids, Iowa."

Note: The Vi-Tone Company of Canada made soymilk in malted and chocolate flavors. Ice cream was probably made from that soymilk for this occasion. We have no evidence that Vi-Tone ever made a commercial ice cream from their soymilk.

882. Anderson, Hans Steele. 1938. Science of food and cookery. 7th ed. Mountain View, California, Portland, Oregon, Cristobal, Canal Zone, and Omaha, Nebraska: Pacific Press Publishing Assoc. 297 p. Illust. 23 cm. [7 ref]
• ***Summary:*** Soybeans are discussed, with recipes, on pages 157-60. A recipe for making soy bean milk is given on p. 282; the remaining pulp is called "soy bean cake."

A 5th edition (same publisher, number of pages, and size) was published in 1929, and a 6th edition in 1932.

883. Cooper, Lenna Frances; Mitchell, Helen Swift. 1938. Nutrition in health and disease. Philadelphia, Montreal, etc.: J.B. Lippincott Co. xvi + 712 p. Illust. 21 cm. "7th edition unit plan." *
• ***Summary:*** "First published in 1928 under the title: *Nutrition in Health and Disease for Nurses."* Address: 1. Food Director, Univ. of Michigan; formerly Dean of Home Economics, Battle Creek College; formerly, Head Dietitian, Battle Creek Sanitarium; and later, Supervising Dietitian,

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United States Army 1918-1919.

884. Klein, Ida. 1938. Neuzeitliche Kueche: Fleischlose Gerichte fuer alle Verhaeltnisse [Modern cookery: Meatless dishes for all occasions]. Hamburg, Germany: Advent-Verlag. 144 p. 8 color plates. 20 cm. [Ger]*
• ***Summary:*** This book was issued by the Deutscher Verein für Gesundheitspflege e.v. [evangelisch], Hamburg. It was reprinted in 1941 by Vollmer & Bentlin, Hamburg.

885. White, Ellen G. 1938. Counsels on diet and foods: A compilation from the writing of Ellen G. White by the Board of E.G. White Trustees. Takoma Park, DC: Review and Herald Publishing Assoc. 511 p. Index. 17 cm.
• ***Summary:*** The Foreword states: "Early in 1926 there was issued by the Loma Linda college press, a paper-bound volume entitled 'Testimony studies on diet and foods.' This was compiled by Dr. H.M. Walton from the writings of Mrs. E.G. White for use in the College of Medical Evangelists... The continued call for the book... justifies the issuance of this new and enlarged edition."

Quotations from previous writings by a founder of the Seventh-day Adventist faith are arranged by the following subjects: Reasons for reform. Diet and spirituality: The relation of diet to morals. Health reform and the third angel's message. The proper dietary: The original diet, the simple diet, the adequate diet, diet in various countries. Physiology of digestion. Improper eating a cause of disease. Overeating. Control of appetite. Regularity in eating: Number of meals, eating between meals. Fasting. Extremes in diet. Diet during pregnancy. Diet in childhood. Healthful cookery. Health foods and hygienic restaurants. Sanitarium dietary. Diet a rational remedy. Fruits, cereals, and vegetables: Fruits, grains, bread, vegetables. Desserts: Sugar, milk and sugar, pie, cake, pastry, puddings. Condiments, etc.: Spices and condiments, soda and baking powder, salt, pickles and vinegar. Fats: Butter, lard and grease, milk and cream, olives and olive oil. Proteins: Nuts and nut foods, eggs, cheese. Flesh meats (proteins continued): Progressive dietetic reform in Seventh-day Adventist institutions. Beverages: Water drinking, tea and coffee, cereal substitutes for tea and coffee, cider, fruit juice. Teaching health principles: Instruction to be given on health topics, how to present the principles of health reform, cooking schools. Appendix: Personal experience of Ellen G. White as a health reformer, a statement by James White relating to the teaching of health reform. General subject index.

Concerning the consumption of milk, dairy products, and eggs, Ellen G. White stated (year of quotation, number in book): "Fruits, grains, and vegetables, prepared in a simple way, free from spice and grease of all kinds, make, with milk or cream, the most healthful diet. They impart nourishment to the body, and give a power of endurance and a vigor of intellect that are not produced by a stimulating diet" (1890, #601).

"Some, in abstaining from milk, eggs, and butter, have failed to supply the system with proper nourishment, and as a consequence have become weak and unable to work. Thus health reform is brought into disrepute... The time will come when we may have to discard some of the articles of diet we now use, such as milk and cream and eggs; but it is not necessary to bring upon ourselves perplexity by premature and extreme restrictions. Wait until the circumstances demand it, and the Lord prepares the way for it" (1909, #602).

"Milk, eggs, and butter should not be classed with flesh meat. In some cases the use of eggs is beneficial. The time has not come to say that the use of milk and eggs should be wholly discarded. These are poor families whose diet consists largely of bread and milk...

"Let the diet reform be progressive. Let the people be taught how to prepare food without the use of milk or butter. Tell them that the time will soon come when there will be no safety in using eggs, milk, cream, or butter, because of wickedness among men" (1902, #603).

"If milk is to be used, it should be thoroughly sterilized; with this precaution, there is less danger of contracting disease from it" (1905, #607).

"We place no butter on our table. Our vegetables are generally cooked with milk or cream and made very palatable... We think a moderate amount of milk from a healthy cow is not objectionable" (1870, #611).

Concerning the idea that the strictest diet is not the best, especially for the poor, see White's letter of 1901, #612. She feels that all people should stop consuming flesh meats, tea and coffee, but that the subject of giving up milk, eggs, cream, and butter needs to be handled carefully, especially by poor families. "No extremes in health reform are to be advocated. The question of using milk and butter and eggs will work out its own problem."

"The health food business is in need of means and of the active cooperation of our people, that it may accomplish the work it ought to do. Its purpose is to supply the people with food which will take the place of flesh meat, and also milk and butter, which, on account of the diseases of cattle, are becoming more and more objectionable" (1900, #583).

"Large quantities of milk and sugar eaten together are injurious. They impart impurities to the system. Animals from which milk is obtained are not always healthy. They may be diseased... Could we know that animals were in perfect health, I would recommend that people eat flesh meats sooner than large quantities of milk and sugar" (1870, #533). Large amounts of milk and sugar "clog the system, irritate the digestive organs, and affect the brain" (1870, #534). "Especially harmful are the custards and puddings in which milk, eggs, and sugar are the chief ingredients" (1905, #536).

Concerning cheese (made by fermentation): "Cheese is

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still more objectionable [than butter]; it is wholly unfit for food" (1905, #633).

Other entries: Why use secondhand food? "The diet of the animals is vegetables and grains. Must the vegetables be animalized, must they be incorporated into the system of animals, before we get them? Must we obtain our vegetable diet by eating the flesh of dead creatures?" (1896, #703). Note: A revised edition was published in 1946.

886. Battle Creek Food Co. 1938? Overcoming intestinal poisons with soy acidophilus milk. Battle Creek, Michigan. 8 panels. Undated. 16 x 6 cm each. Front and back.

• ***Summary:*** Contents: Soy acidophilus milk changes the flora when other means fail. When the protective flora is lost. Why soy acidophilus succeeds. How to change the flora. Simple rules for changing the flora. Who should use soy acidophilus.

"The soy bean is rich in vitamin A, the growth-promoting vitamin which cereals lack, as do ordinary beans, and also the fertility vitamin E.

"Von Noorden, Neumann, and other eminent European physicians, highly recommend soy products in diabetes, as did the late Professor Dujardin-Beaumetz.

"Soy acidophilus milk contains only about one-third as much fat as does cow's milk, and its fat (lecithin) does not fatten [sic]. Soy acidophilus is thus especially valuable in cases of obesity. It may be freely used without increasing weight. This has been proven by experiments upon both animals and human beings. Rats do not gain in weight on a soy milk diet. On soy milk they reproduce freely, showing the presence of the fertility vitamin (Daniels and Hutton). On cow's milk they seldom reproduce and their young rarely survive.

"Soy acidophilus is especially recommended for persons who have failed in their efforts to change their flora by acidophilus milk, Lacto-Dextrin, or other means. The combined use of soy acidophilus and Lacto-Dextrin will, we believe, change the flora in every case in which they are faithfully and persistently used." Address: Battle Creek, Michigan.

887. Photographs of Madison College in Madison, Tennessee. 1938? Undated.

• ***Summary:*** See next two pages. These black-and-white prints were sent to Soyfoods Center in 1983 by Ed Bisalski. Most are pasted onto heavy brown cardstock paper in a 3-ring scrapbook, which has a neat, handwritten description of each photo in black ink.

The photos are: (a) A display of Madison Foods featuring Soy-Koff ("coffee flavor without coffee effects, alkaline," 20 cents for 25 cups), Kreme O'Soy Milk ("a pure tasty vegetable milk," plain or chocolate, homogenized, 15 cents or 25 cents) and Kreme'O-Soy Crisps (ready-to-eat, malted soy crumbles, 13 cents or 2 for 25 cents).

(b) "Madison Foods college industry. Bread molding. specializing in the manufacture of soy bean foods–bread, crackers, cereals, flour, cheese, milk, coffee substitute, canned soy beans, meat substitutes. Sold in 48 states–Health Food Stores, Department stores, Specialty Grocers, etc."

(c) Madison Foods plant.

(d) The 400-acre farm provides for the stock [animals], for the college kitchen, sanitarium kitchen, and campus store. A female student in the "Soy bean patch."

888. Stegman, Henry M. 1939. The soybean a blessing to mankind. *Good Health* (*Battle Creek, Michigan*) 74(1):11. Jan. [1 ref]

• ***Summary:*** "A promising field in this country is the employment of soybean milk for medicinal purposes. In the stomach this gives a very fine, flocculent precipitate instead of the large, tough curds of cow's milk. The period of stay in the stomach is thus made much shorter, and the peristaltic motion of the stomach is less and more coordinated. It also curdles at a lower acidity...

"The deficiency of the soybean ash in sodium and the large excess of potassium makes the food an important alkalinizing agent... The standard which gives milk an alkalinity of 0.5, places that of the soybean at 12...

"The soy acidophilus milk which the Dionne quintuplets take today is given them to prevent the recurrence of the severe bowel trouble infection which they suffered when

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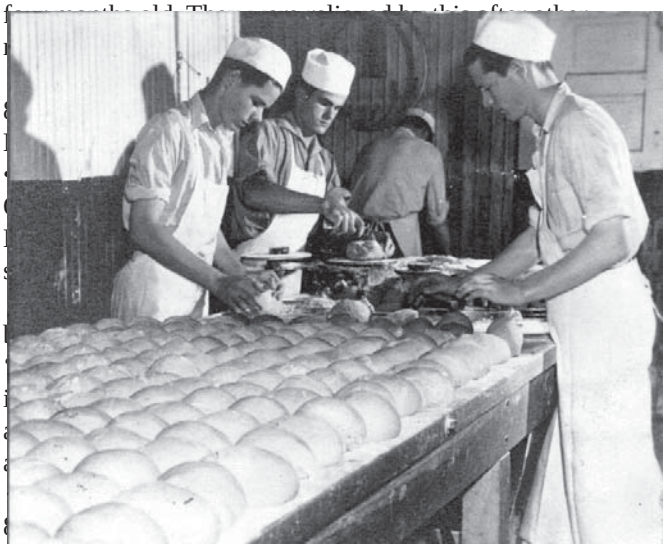

College and Sanitarium. 21(8):29-30. April 19.
• ***Summary:*** This article, appeared in *The Old Hickory News* (15 Dec. 1938), published in the city across the Cumberland River. It features the leading institutions and business concerns at Madison, and begins with some early history of "The Ferguson Farm, old and worn, stretching along the west bank of the Cumberland River at the neck of Neely's Bend, across from and some 12 miles distant from The Hermitage, renowned home of the great Tennessee President of the United States [Andrew Jackson], and ten miles from the heart of Nashville, was nothing more or less than another homestead that had been handed down from father to son for a century–nothing more until it fell into the hands of a group of educators... In 1904 the institution was chartered as Nashville Agricultural Normal Institute." Today it has an enrollment of 350 to 400 students.

"The commercial world probably knows the institution [Madison College] best through the department designated as Madison Foods whose products are handled by health food stores, the health food sections of department stores, specialty grocery stores, delicatessens and restaurants scattered the country over, including such firms as Gimbel Brothers, Milwaukee [Wisconsin]; Cobb, Bates and Yerxa, Boston [Massachusetts]; Martindale's, Philadelphia [Pennsylvania]; and similar well known firms from Michigan to Miami.

"The exploitation of the soybean, a unique health food enterprise, has given wide publicity both foreign and domestic, that without a question places Madison Foods as the outstanding pioneer in the United States in the development of the soybean. Articles concerning this industry have appeared in the *Chicago Journal of Commerce, Food Industries, The Reader's Digest, New York Times, The Los Angeles Herald and Examiner* (*California*), *The Globe and Mail* (*Toronto*), *Physical Culture Magazine,* and many others.

"A concrete fireproof addition to Madison Foods plant is part of the 1939 development plan which is consistent with the growth of the business which has shown an increase of 500 percent in five years. Among the early pledges of Madison Foods, dating back nearly 30 years, was its slogan, 'Devoted to the protection of your health,' symbol of the ideals of the founders."

Madison Sanitarium and Hospital is a 100-bed medical institution having six resident physicians.

891. Loma Linda Foods. 1939. Ruskets and Fruit Cereal (Ad). *Los Angeles Times.* April 28. p. B21.
• ***Summary:*** This small display ad shows photos of the packages of both breakfast cereals: Ruskets are crisp flaked wheat biscuits, and Fruit Cereal is crunchy.

The adjacent ad is for Vegex, which began on the Pacific Coast in 1923. "It has a tasty meatlike flavor but is meat free." Vegex makes an instant bouillon high in B vitamins. Address: [California].

892. *Good Health* (*Battle Creek, Michigan*). 1939. About the use of the soybean. 74(6):178. June. [1 ref]

893. *Good Health* (*Battle Creek, Michigan*). 1939. Diet for duodenal ulcer. 74(7):216. July. [1 ref]
• ***Summary:*** "The dietary faults which produced the ulcer must be carefully avoided. Most important of all is thorough daily cleansing of the colon and suppression of putrefaction in the intestinal tract... The cure of the infection which gives rise to the ulcer is greatly facilitated by the use of cultures of the *Lactobacillus acidophilus.* Soy acidophilus culture is especially to be recommended because the protective organism grows with much greater vigor in milk prepared from the soybean than in ordinary dairy milk. For this reason it is a wise plan for a person who has once suffered from ulcer to discard meats of all kinds and make free use of the soybean."

894. *Good Health* (*Battle Creek, Michigan*). 1939. Green soybeans growing in favor. 74(7):219. July. [1 ref]
• ***Summary:*** Originally the soybean varieties planted in the United States "were best adapted for forage and for industrial uses, but the Federal authorities have been distributing seed for raising edible types. Tests of eighteen kinds of soybeans have been made at the University of Illinois Agricultural Experiment Station." Through the cooperation of many people, a large body of practical information has been gathered.

"To cook the green beans, add a cup of boiling water and three-quarters of a teaspoon of salt. Cover and cook for 10 minutes after boiling starts. Drain or season with butter or as desired.

"*The Vegetarian Messenger and Health Review* reports that the consumption of the soybean is increasing in Great Britain; the importation amounted to 98,916 tons in 1937...

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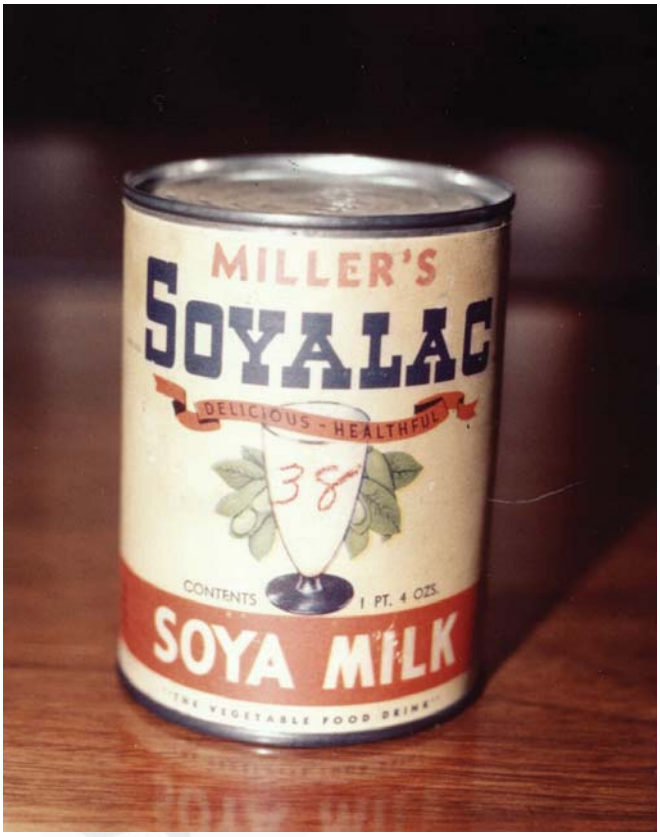
Germany, being highly scientific, has recognized very clearly the qualities of this crop and imported 591,376 tons in 1937... Russia has a soy institute in which the beans are converted into milk and milk products."

895. Loma Linda Foods. 1939. Start your day with Kris-Bits (Ad). *Health News* (*Hollywood, California*). Aug. 11. p. 8-9. • ***Summary:*** Crunchy. Combines corn, oats, and figs. Address: Arlington, Riverside [California].

896. **Product Name:** Miller's Soya Lac (Canned Liquid Soymilk Fortified with Vitamins and Minerals). Renamed SoyaLac by 1941.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: 13246 Wooster Rd., Mt. Vernon, Ohio.
Date of Introduction: 1939 September.
Wt/Vol., Packaging, Price: Canned liquid.
How Stored: Shelf stable; refrigerate after opening.



New Product–Documentation: International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. 1. Miller's Soya Lac: A liquid milk packed in 13 oz. and 30 oz cans. It is available in both natural and chocolate flavors.

Ad in *Soybean Digest.* 1941. Sept. p. 17. "New items for the table: Soy products by Miller." "SOYALAC: Spray-dried Infant Food–the perfect formula for the new-born infant–especially fine for malnutrition and allergic conditions."

USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. International Nutrition Laboratory / Miller's Soya Foods makes SoyaLac, Chocolate SoyaLac. "Distribution scattered throughout the United States by Health Stores."

Ad in *Soybean Digest.* 1944. Sept. p. 61. "Meet the Vegetable Cow." International Nutrition Laboratory now makes (1) Miller's Soyalac (powdered milk), plain, malted, or chocolate; and (2) Miller's Soyalac (soya milk), liquid, natural, or chocolate.

Ad in *Soybean Digest.* 1949. Sept. p. 89. Photos shows cans of Miller's Soyalac Soya Milk (All Purpose and Malt Flavor) and Infant Food.

Soyfoods Center. 1980. Sept. Tofu shops and soy dairies in the West (2 pages, typeset). Gives the company's name and address. Zip: 43050. Phone: 614-397-7077. Contact: Glen Blix & Charles D. Howes.

Shurtleff. 1981. Sept. Dr. Harry W. Miller: History of his work with soyfoods. Unpublished manuscript. "Dr. Miller's new plant at Mt. Vernon was completed in the fall of 1939 and the first products, canned liquid soymilk (made in a pressure cooker and fortified with vitamins and minerals) and malted soymilk (Soy-A-Malt) were available late that year. Pressure from the powerful U.S. dairy industry and the USDA convinced Miller not to call his product 'soymilk,' so he latinized the name to Soya Lac. This term was first used in late 1939 for Miller's first American soymilk; the spelling had been changed to the present one-word Soyalac by Sept. 1941. Powdered Soya Lac was first produced in 1940."

Shurtleff. 1981. Soyfoods. Winter. p. 31. "This liquid soymilk was generally considered to be better tasting and less prone to clog nipples than the various soy flour based products, although at least one series of tests showed it to have a significantly lower protein quality as measured by PER (Gyorgy 1962)."

Talk with Lillian Miller, wife of Clarence Miller, Dr. Miller's eldest son. 1994. March 28. The first soymilk Dr. Miller made in Ohio was a canned liquid soymilk for adults. He had to do additional detailed scientific experiments and get permission from the American Medical Association before he could start to make and sell an infant formula.

897. **Product Name:** Malto-Soy Drink (Tea or Coffee Substitute).
Manufacturer's Name: Roberts (F.G.) Health Food Products.
Manufacturer's Address: 40 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia.
Date of Introduction: 1939 September.
Ingredients: Incl. roasted and ground soybeans, chicory.
New Product–Documentation: Ad in *Nature's Path to Health* (*Melbourne, Australia*). 1939. Sept. p. 20 and Oct.

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p. 13. "Malto-Soy Drink. The improved natural drink. Replace your tea and coffee with Malto-Soy Drink, the 100% Protective Drink. There is no better drink for your morning cup than Malto-Soy Drink. Ladies enjoy it for their afternoon refresher drink. Combine Malto-Soy Drink with wholemeal bread, Glumatose and cream. You will be delighted with the result.–Never be without Malto-Soy Drink. Obtainable at all F.G. Roberts' Health Food Stores."

Ad in *Nature's Path to Health.* 1940. Feb. p. 44. This ad for Malto-Soy Drink now uses the illustration formerly used with Soy-Bev. An illustration (line drawing) shows a man and woman seated in chairs by their fireplace each enjoying a cup of Malto-Soy Drink. Below this is a steaming cup of Malto-Soy Drink.

898. **Product Name:** Soy Milk Compound (Renamed Soy Compound in 1981).
Manufacturer's Name: Roberts (F.G.) Health Food Products.
Manufacturer's Address: 40 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia.
Date of Introduction: 1939 September.
Ingredients: Incl. soybeans, lactose.
Wt/Vol., Packaging, Price: Tin-plated steel can.
New Product–Documentation: Ad in *Nature's Path to Health* (*Melbourne, Australia*). 1939. Sept. p. 27 and Oct. p. 13. "Soy Milk Compound. Contains natural lecithin and amino acids. This milk compound is a hormone building food and therefore can be used by children and adults with most beneficial results. Soy-Milk Compound is highly recommended for infant feeding. For those who cannot use cow's milk Soy-Milk Compound proves eminently satisfactory. Use Soy-Milk Compound daily either with hot or cold milk. Drink Soy-Milk Compound and strengthen the brain by Lecithin contained in this Defensive Food. Obtainable at all F.G. Roberts' Health Food Stores. Addresses, Page 47." Same ad in the following 1940 issues: Feb. p. 38, March p. 30, April p. 16.

Information brochure sent by Paul Smith of Soy Products of Australia. 1995. March 10. "Soy Products of Australia Pty. Ltd. evolved from F.G. Roberts' interest in using soy as an alternative to milk in treating allergy problems, particularly in children. The soy component of Soy Compound [soy flour] was imported between the 1930s and 1950s. Since 1954 Roberts' soy flours and grits have been manufactured in Australia from Australian grow soybeans... Soy Compound was formulated in the early 1930s as a result of F.G. Roberts' combined interest in the work of Dr. Harry Willis Miller with soy milk and children in China, during the 1920s and 1930s, and in treating cow's milk allergy problems–eczema, colic, mucus and related infection problems–particularly in children... Lactose is used in Soy Compound because it is a valuable, naturally occurring, complex carbohydrate present in the milks of all suckling mammals from human beings to whales and dolphins."

Note from Paul Smith of Soy Products of Australia (Pte.) Ltd. 1995. March 14. Paul thinks Soy Milk Compound was first introduced in about 1933-34.

899. *Good Health* (*Battle Creek, Michigan*). 1939. An error corrected–Soybean hulls not poisonous. 74(10):318. Oct. [1 ref]
• ***Summary:*** Mr. Herbert M. Purdy has called attention to an erroneous statement that appeared in the June number of *Good Health*, on page 178. Soybean meal or flour does not develop a toxic poison during grinding. Nor is there any problem with the use of soybeans with the hulls on.

"The Battle Creek Food Company report that although they have been making use of the soybean in the preparation of various foods, both with and without hulls, they have never encountered the slightest evidence that the hulls possess any injurious properties whatever. They simply consist of practically pure cellulose like the hulls of our common beans."

Note: This is the earliest English-language document seen (June 2013) that uses the term "soybean hulls" to refer to the hulls of soybeans.

900. *Health News* (*Hollywood, California*). 1939. Madison foods feast. 7(22):8. Nov. 24.
• ***Summary:*** "*Los Angeles*–E.M. Bisalski of Madison Foods [Tennessee] sponsored a big dinner for local dealers at Sanfords, November 14, featuring his company's products.

"The purpose was to introduce Milo Frank as California distributor of their foods.

"The turnout, large, enthusiastic, included about 100 dealers. The meal was delicious. Barney Edelman, Sanfords manager, was chairman.

"Bisalski praised local and national dealers' organizations, urged scientific food study, praised Edelman's cooperative attitude. Clarke Irvine, *Health News* publisher, and Mildred Lager, local dealers' president, also voiced optimism for progress through cooperation."

901. Ralphs Grocery Co. 1939. Ideas... and ideals! (Ad). *Los Angeles Times.* Dec. 16. p. 4.
• ***Summary:*** This full-page ad states across the top: "For 66 years Ralphs stores have been first to provide patrons with every worthwhile new idea, every advance in food merchandising, and for 66 years they have preserved the ideals of quality, service, and 'sells-for-less' prices!"

Part of the ad is for "Loma Linda Foods. Ovensweet Ruskets, 12-oz. pkg.–12½¢. Ovensweet Kris-bits, 13-oz. pkg.–14¢." Address: [California].

902. **Product Name:** Cheze-O-Soy (Seasoned Tofu. Sometimes Advertised as Soy Cheese, or spelled Chez-O-

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Soy or Ches-O-Zoy after 1953).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1939.
Ingredients: Coagulated soybean proteins, seasonings.
Wt/Vol., Packaging, Price: No. 2 can. 20 oz.
How Stored: Shelf stable.
Nutrition: Protein 26.7%, fat 10.8%, carbohydrates 0.12%, ash 0.71%, calories 204/100 gm.
New Product–Documentation: Ad in House of Better Living. 1940. May. p. 4. "Soy Cheese." Madison Health Messenger. V. 49-2. p. 5.

William C. Sandborn. 1953. The History of Madison College (PhD thesis, George Peabody College for Teachers, Tennessee). p. 124 states that Ches-O-Zoy is made at the Madison food factory.

Soybean Blue Book. 1954. p. 106. Spelled Chez-O-Soy from 1954 on. Address: Madison College, Tennessee. Also listed in 1965, but business name is now Nutrition International Corp, Box 415, Madison, TN 37115. Last listing was 1972. Letter from Sam Yoshimura. 1981. Feb. 20. Contained 26.7% protein.

Note: This is the earliest known seasoned or flavored tofu product sold in the Western world.

903. **Product Name:** Not-Meat (Smooth-Textured Loaf for Meatless Entrees or Sandwiches or Salads).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1939.
Ingredients: Whole peanut meal, soy flour, seasonings.
Wt/Vol., Packaging, Price: No. 2 can. 20 oz.
How Stored: Shelf stable.
Nutrition: Protein 13.4%, fat 19.2%, carbohydrates 5.4%, ash 2.1%, calories 248/100 gm.
New Product–Documentation: Madison Health Messenger. V. 49-2. p. 5.

Mildred Lager. 1940. Madison Health Messenger (Madison, Tennessee) 2(3):1-4. "Foods for summer health." Not-Meat is made with unroasted peanut meal and seasoning.

Ad (2¼ by 3 inches) in *Nature's Path* (USA). 1941. July. p. 273. "A treat without meat." Not-Meat is one of five basic food products made and sold by Madison Foods.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. Lists the ingredients in "Not-Meat (Nutrition International Corporation)." They are: Peanuts, processed soybeans, yeast extract, salt, hydrolyzed vegetable protein. Note: By 1971 Nutrition International Corp. had become part of Worthington Foods. The plant at Madison had been closed in Aug. 1970.

904. **Product Name:** Stake-Lets (Meatless Meat Loaf in a Rich Meatlike Sauce) [Sliced, or Bite-Size].
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1939.
Ingredients: Gluten, soybeans, soy sauce, seasonings. In 1960 the ingredients were gluten, whole wheat, soy flour.
Wt/Vol., Packaging, Price: No. 2 can. 20 oz.
How Stored: Shelf stable.
Nutrition: Protein 18.2%, fat 4.3%, carbohydrates 2.1%, ash 0.5%, calories 120/100 gm.
New Product–Documentation: Ad (2¼ by 3 inches) in *Nature's Path* (USA). 1941. July. p. 273. "A treat without meat." Stake-Lets is one of five basic food products made and sold by Madison Foods.

Madison Health Messenger. V. 49-2. p. 5. Taylor. 1944. The Soy Cook Book. p. 201.

905. **Product Name:** Proast (Meatless Gluten-Based Meatloaf).
Manufacturer's Name: Special Foods, Inc. Renamed Worthington Foods, Inc. in Dec. 1945.
Manufacturer's Address: Worthington, Ohio.
Date of Introduction: 1939.
Wt/Vol., Packaging, Price: 8 oz, 17 oz, and 30 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Wholesale price list. 1941. Oct. 1. 8 oz retails for $0.20 and 30 oz for $0.55. This dark gluten-based meatloaf analogue, made with wheat gluten, peanuts, and a little defatted soy grits or flakes, resembled Battle Creek's Protose.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Proast contains 25.40% protein, 8.88% fat, and 9.28% carbohydrate. *Chopletter* (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods." April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include Proast.

Note: This is the earliest known food product made by Special Foods, Inc. It is also their earliest known products that uses wheat gluten as a major ingredient or soy (soy flour) as a minor ingredient.

906. Early photographs related to the Quincy Soybean Products Co. in Quincy, Illinois (Overview). 1939. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** These photographs were sent to Soyfoods Center in Oct. 2005 by the Hal Jackson of Quincy, Illinois, and Adrienne Sinaiko (wife of Norman Rosen, of California).

(1) Aerial view of the 5-story Battle Creek Breakfast Food Co. and surrounding buildings (7 x 5 inches). The 7 cars parked on the street date the photo to the mid-1930s. No

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name is visible on the front of the building. Three railroad cars stand on tracks between the street and the building.

(2) Another aerial view in about 1946 after several towering concrete grain silos and an elevator have been constructed near the Quincy Soybean plant. (3-6) Pipes and machinery inside the Quincy Soybean plant. (7) Norman Rosen at work at a desk in the Quincy Soybean office at 111 South Front Street. A woman is also at work at another desk in the office.

907. Klein, Kurt. 1939. Die fleischlose Kueche fuer Gesunde und Kranke. 8. Auflage [Meatless cookery for the healthy and the sick. 8th ed.]. Hamburg, Germany: Vollmer & Bentlin. 266 p. Color plates. 21 cm. No index. Herausgeber: Deutscher Verein fuer Gesundheitspflege Hamburg. [Ger]
• ***Summary:*** There are many ads in the back for vegetarian food products made by DE-VAU-GE (Hamburg 26), including Granovita (corn), Granola (wheat), Granutose (oats), and Gerstola (barley).

Note: This is the earliest document seen (Oct. 2004) concerning DE-VAU-GE. Address: Kuechenmeister.

908. Kloss, Jethro. 1939. Back to Eden: A book on herbal remedies for disease, and other natural methods of healing. 1st ed. [Washington, DC]: Published by the author. vii + 667 + [25] p. Illust. Portrait. Index. 21 cm.
• ***Summary:*** This treasury of herbal lore and vegan cookbook (it uses no dairy products or eggs, replacing them with soy products) is one of the most creative and original sources of early soyfoods recipes. Contents: Foreword. 1. Personal experiences. 2. Soil. 3. History of medicine. 4. Fresh air and exercise. 5. Fasting. 6. Effects of devitaminized, adulterated foods on the body. 7. Fruit diet. 8. Meat-eating. 9. Foods. 10. Diet. 11. Aluminum utensils. 12. Cooking under steam pressure. 13. Disease of animals. 14. History of water cure. 15. Water. 16. Water-effects and treatment. 17. Water-its effect in sickness. 18. Baths. 19. Compresses and fomentations. 20. Massage. 21. High enemas. 22. Nursing. 23. Fruits. 24. The eliminating diet. 25. Minerals found in the body. 26. Herbs. 27. Medical trees. 28. Tonics. 29. Herbs (Their description and use in treating disease). 30. Definitions of medicinal properties of herbs. 31. Herbs indicated for specific diseases. 32. Directions for use of non-poisonous herbs. 33. Treatment of disease. 34. Food preparations of various kinds. 35. Oranges. 36. Potatoes; gathering and preserving of herbs.

The Foreword states: “This book contains tried, safe, and inexpensive remedies for the prevention of disease and sickness, remedies which are the result of my own practical experience of nearly forty years.” “No matter how many germs get into the body, if the blood stream is clean and the blood corpuscles are in a healthy condition, you will be safe. Everyone comes in contact with many kinds of germ, but these organisms will not harm you or cause you sickness and death unless they have a place in which to propagate themselves.” Sickness and illness are “caused by violating the laws of nature and health. “If then they would resort to simple means and follow the basic laws of health that they have been neglecting–proper diet, use of pure water, fresh air, sunshine, rest, and nature’s remedies, herbs, etc., nature would restore the body to its original health.” “God has provided a remedy for every disease that might afflict us.” “The fundamental principle of true healing consists of a return to natural habits of living.”

Virtually all of the information on soybeans and soyfoods is in chapter 34, “Food Preparations of Various Kinds” (p. 582-633). First come two sections of text: “The nutritional value of the soybean” (p. 582-84; “Taken from an address delivered by Dr. J.A. LeClerc, before the annual meeting of the American Soybean Association. Sept. 15, 1936”). “Uses of the soybean for industrial purposes” (p. 585).

Then comes an introduction soy-related recipes (p. 585-87): “The knowledge of the value of the soybean here in America is one of the greatest things that was ever launched in the food line in the history of the nation, and at this time of great poverty [the Great Depression], want, and disease, it is the most important thing that could be given the people.” “Soybean milk can be made from soybeans at home for less than two cents a quart.” Soybean milk “is not only a good food, but a real medicine.” It is easily digested and highly alkaline. “I have experimented with soybeans for fifteen years [since about 1924] and have produced a fine, acceptable soybean milk as well as many other soybean products.” “I use soybeans in more than fifty dishes.”

Then come recipes (p. 587+): Soybean cheese (fermented soybean milk, peanut butter, and tomato puree, p. 587). Soybean cream cheese (from fermented soybean milk, p. 588). Nut cheese no. 1 (fermented soybean milk, peanut butter, and soybean butter {see p. 613}, p. 588). Nut cheese no. 2 (raw peanut butter, ground oatmeal flour, water and salt [no soy], p. 589). Nut milk (made with raw peanut butter and cow’s milk [no soy], p. 590). Canned soybeans (p. 592). Soybeans and rice (with sprouted soybeans). Baked beans with tomato sauce (incl. soybeans, p. 593; “Soybeans are, no doubt, the best of all beans, but the flavor is not as pleasant. This can be overcome by using various seasonings, such as tomato sauce, a little onion, and celery). Vegetable protein (wheat gluten seasoned with soy sauce, p. 597). Nut loaf (seasoned with soy sauce). Kloss’ granola (with soybean milk and soybean mash [okara], p. 599). Baked rice (natural brown rice baked in soybean milk, p. 600). Soybean coffee plus 2 recipes for Cereal coffee based on rye or wheat bran [real coffee with caffeine is not included]. Soybean broth (with soybean milk and oatmeal, p. 604-05). Oatmeal broth (with soybean milk). Soybean buttermilk (fermented, p. 605-06; “Buttermilk is an excellent article of diet for everyday use, but is especially beneficial in malnutrition, tuberculosis,

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toxic conditions, and intestinal infections. Soybean buttermilk has the advantage of producing an alkaline effect and is more nourishing than ordinary buttermilk. It is rich in minerals and very palatable. More nourishing than yogurt buttermilk used under various names."). Soybean cheese (fermented soybean milk, raw peanut butter, and tomato puree). Soybean cottage cheese (fermented soybean milk, p. 608). Soybeans and rice (with sprouted soybeans, p. 608-09). To sprout soybeans, lentils, or grains (p. 609). Soy patties (with soybean pulp [probably ground soybeans, not okara] and soy sauce). Gluten patties (seasoned with soy sauce, p. 610). Soybean loaf. Soybean cottage cheese loaf. Soybean milk. Soybean milk no. 2 (made from "soy meal, p. 611). How to curd [soybean] milk (p. 612). Soybean jelly (soybean milk jelled with agar-agar flakes and sweetened with malt sugar). Soybean butter (made with 1 cup water, 2 tablespoons soybean flour, and 2 cups soybean oil, p. 613). Soybean cream (blend rich soybean milk and soybean oil). Soybean ice cream (made with 2 quarts rich soybean milk, 2 lbs. malt sugar, ½ pint soybean butter or soybean mayonnaise, and 1 tbsp. agar-agar). The yolk of an egg (made with soybean flour, p. 614). Pancakes (with cornmeal and soybean mash [okara]). Tomato soup (with soybean flour, soybean flour, soymilk, and/or soy sauce, Savita, or Vegex, p. 618). Cream of tomato soup (with soybean milk, p. 620). Cream of celery soup. Cream of lentil soup. Vegetable oyster soup (with rich soy milk, p. 622). Eggplant soup (with soybean milk). Cream of spinach soup. Potato soup. Soybean gravy. French toast (made with soybean bread soaked in soybean milk, p. 624). Soy oil mayonnaise (with soy oil and finely ground soy flour, p. 628). Vanilla sauce (with soybean cream, p. 632). Vegetable gelatin (with agar-agar and soybean cream dressing, p. 632). Orange jelly (with soybean cream). Strawberry jelly (with soybean cream). Rice pudding (cooked in soy cream, p. 633). Cream tapioca (with soy cream and soybean milk). Soybean bread no. 1 (with whole wheat flour, soybean mash or soybean flour, p. 648). Soybean bread no. 2. Soybean buns or cinnamon rolls (with soybean meal, p. 650). Cornmeal gems (with soybean milk, p. 651). Oatmeal or soybean gems (with soybean meal). Soybean gems (with soybean mash [okara] out of which soybean milk has been washed, p. 652). Pones (with soybean milk). Beaten biscuit (with soybean milk). Unleavened pie crust (with soybean flour or mash, p. 655). Raised pie crust (p. 656). Soybean pumpkin pie (p. 656). Fig marmalade pie (with soybean milk, p. 657). Mashed potatoes (with rich soybean milk, p. 666).

This book does not call for the use of dairy milk or eggs. Concerning cow's milk, Kloss states (p. 75): "Cow's milk is not suited for human consumption. Half the invalids in the world suffer from dyspepsia, and milk should not be taken. Milk causes constipation, biliousness, coated tongue, headache, and these are the symptoms of intestinal auto-intoxication. Soybean milk and nut milks are excellent substitutes, and have practically the same analysis, and the danger of disease is removed." A recipe on page 614 uses a mixture of soybean flour and soya bean oil as a substitute for the yolk of an egg.

This book contains the same detailed information on the possible dangers of aluminum cooking utensils found in the 1935 edition.

Ads on unnumbered pages in the rear include: (1) Dominion Herbal College, Vancouver, BC, Canada. (2) "Horta" Pure Vegetable Extract. "Of strong aromatic meat flavor, though made from leguminous materials only." F. Behrend, Inc., New York, NY. Established 1886. (3) Old-fashioned Quaker mill. No. 4 Quaker City Mill. Ad: Enterprise No. 69, Hand Mill. A.W. Straub Co., Philadelphia, Pennsylvania. (4) Nature's Original Food Co., Falmouth, Virginia. "Nuts, grains, fruits and vegetables are Nature's original foods for men. Animal flesh has been substituted. If you want health, don't use it. "Try our [canned vegetarian] meats–see the difference." Meatose. Vegetose. To-Meta.

Note 1. This latter company was almost certainly founded and is owned by Jethro Kloss.

According to Doris Gardiner (Oct. 1990), the original book (of which she and her aunt each have copies) has a green hard cover. The first printing was probably done by a Mr. Brunck, who worked for the College Print Shop in Takoma Park, Maryland. She thinks Jethro self-published the book. He paid for the printing and sold the books himself. Jethro and his wife moved to Coalmont, Tennessee. There they lived with the Hiatt family, and Mr. Hyatt, owner of Longview Press (renamed The Message Press by 1964) became the book's first legitimate publisher. His wife died in 1944. Jethro died in 1946 at age 83. The page numbers from the 1939 edition are unchanged in later editions.

Note 2. This is the earliest English-language document seen (Oct. 2013) that uses the term "Soybean cream cheese" to refer to soy cream cheese.

Note 3. This is the earliest English-language document seen (June 2013) that uses the term "soybean mash" to refer to okara.

Note 4. This is the earliest English-language document seen (Oct. 2013) that contains the term "Soybean cottage cheese" or that has a recipe for it. Address: Washington, DC.

909. Kloss, Jethro. 1939. Constipation (Document part). In: Jethro Kloss. 1939. Back to Eden. Takoma Park, Maryland: Published by the author. 692 p. See p. 396, 604.
• ***Summary:*** "Constipation: Nearly the entire race is afflicted with constipation. Waste matter is left entirely too long in the human body.

"Causes: Wrong diet is the main cause. Eating foods that do not contain enough roughage or bulk and also foods which are devitalized; lack of muscular tone in the bowels; improper mastication of foods; meat diet; too many varieties of food at one meal; eating food that is too concentrated;

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using coffee, tea, and liquor of all kinds; irregular habits of attending to the calls of nature; sedentary life; and lack of exercise are other contributing factors to this almost universal ailment."

"Treatment: Regulate the diet." Take high enemas. Eat your food as dry as possible. Do not drink with meals; do your drinking one hour before or two hours after eating. Take plenty of exercise. The bowels should move 3 or 4 times a day. If food "stays too long in the colon, it kills the peristaltic action. Take Bran Water and Oatmeal Water (p. 604). Take herbal laxatives.

"Bran water: To two cups of bran, add one quart of water, let it stand overnight. In the morning strain through a fine sieve or cheese cloth. [This water is] To be used in any kind of soup stock, stew, or any breads in place of ordinary water." Address: Takoma Park, Maryland.

910. Matagrin, Am. 1939. Le soja et les industries du soja: Produits alimentaires, huile de soja, lécithine végétale, caséine végétale [Soya and soya industries: Food products, soy oil, vegetable lecithin, and vegetable casein (Continued–Document part II]. Paris: Gauthier-Villars. x + 390 p. 18 cm. [300 ref. Fre]

• ***Summary:*** Continued. The agricultural experiment stations and the scientific labs have played an important role in the U.S., also the farm equipment manufacturers.

The experiment stations in many states have helped the farmers to clarify cultural questions which greatly influence yields, preparation of the soil, type and proportion of fertilizer use, dates and methods of planting, how many seeds per acre, choice of varieties according to the climate and soil, role of the soybean in mixed cultures and in crop rotation, etc.

In this book, Matagrin always says "fèves de soja."

1936 listing of soyfoods firms (p. 27): Fearn Soya Foods Co., Chicago, Illinois. Soybean Health Prods Co. Oakland, California (tofu). Soyex Co. Nutley, New Jersey. La Sierra Industries, Ontario, California (soymilk). American Lecithin Co., Atlanta, Georgia. Ten soy flour companies (p. 29).

American Lecithin Co. in 1936 was in Atlanta, Georgia. From when to when was it in Illinois?

Soy in France (p. 36): Prof. Beille of Bordeaux published a good work on soy but it is no longer available. Also the books of Prof. Jumelle of Marseille on colonial crops and vegetable oils. Prof. R. Lepine of Lyon in 1919 in *Revue Scientifique,* wrote about soy culture in Algeria and the preparation of soymilk.

Mr. Rouest perfected again the selections of yellow or green varieties that he had undertaken from 1907, with success. Using American seeds, others who experimented were Messrs. Brioux at Rouen, Carle of Carbonniere in le Tarn, and Semichon at Carcassonne; he likewise cultivated it at l'Aude from 1918. A list of 42 of Rouest's varieties (chosen from 2,000 others) were given in Rouest's book *Le Soja Francaise* showing that he was more qualified than anyone to write a book of this tile. He pursued his cultures and selections in France from 1921-30, in the Caucasus from 1930 to 1935, and thus fulfilled the efforts started by the Society for Acclimatization and its successors. He worked with another apostle, Henry de Guerpel, and agronomist and mayor of Percy-en-Auge (Calvados), who developed and perfected during 5 years the culture of the best varieties of soybeans in the regions surrounding his country house at Plainville, near Mézidon. He did not only collaborate on the book with Rouest, but also published interesting articles in several reviews in France and the colonies. Also Mr. Denaiffe of Carignan (Ardennes), author of the esteemed book *Les Haricots,* did important culture work and provided information.

Today production of soybeans in France is no more than several thousand hectoliters of beans = several 100,000 liters. For forage, the crop / culture has developed only in North Africa. It was encouraged by Rouest and de Guerpel.

Caseo Sojaine's products were excellent but expensive.

The products of Heudebert (probably diabetic products made with soyflour?), were well known in England as in France (p. 39).

Since 1913 the oil mills of Marseille, France, have started to use soy oil (mainly for hydrogenation) and those of the north (mainly for manufacture of soft soaps).

Recently the foundation (at Chateauroux) of a Society of Friends, Producers and Technicians of Soja has been announced by M. Druel.

In England the fine botanist J.L. North tested with success 13 Manchurian soybean seeds in 1913 and in the third harvest expanded these to 12,000 seeds, which he sent in 1917 to a farm at Uxbridge in Middlesex and to the Ogilvie Farm in Essex. There was a remarkable harvest in 1921, followed by good development of the enterprise. It advanced thanks to Piper and Morse's 1923 book *The Soybean* which to told of American successes. North succeeded in 1928 in getting 20-80 pods per stalk. In 1921 North's work drew the attention of the Ford establishment in Boreham which was not able to obtain good yields with American soybeans but succeeded with North's. Today England cultivates soybeans on about 15 hectares and yields are 1,400 to 2,500 liters per ha.

In England. Lever Bros. are big users of soy oil in soap. The main oil mills using soybeans are J. Bibby and Sons in Liverpool, three others in Hull, one in Erith and one refinery on the outskirts of London. Huge amounts of soy oil and meal are imported by a subsidiary of Lever Bros.

Germany: The recent agreement between Germany and Japan foreseeing an exchange of arms, explosives, etc. in exchange for soybeans which can furnish explosives (for nitroglycerine, naturally) is a barter / swap (of cannons for soybeans) analogous to that with Manchuria in 1934. What is certain is that the agents of I.G. Farbenindustrie A.G.

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under the patronage of the Economic Federation of Central Europe has been enforcing for 3 years soybeans culture in the Balkans which trade voluntarily with Germany.

Spain was rich in other oil sources (mainly olive oil). so not pay much attention to soy.

Italy: In 1918 a trial by Prof. Borzi, on a parcel of 2.5 acres at the Colonial Garden in Palerme / Palermo gave a yield of 20 liters/ha. In 1918-20 at the Institute Bonafous in Turin, a scientific research center, did research on yellow soybeans. Then trials were done in Liguria, Lombardia and Capo d'Istria, and Palerme about 1920s–a total of a dozen localities. Retaking in 1922 these tests of 1884 in Piedmont, Prof. Tito Poggi seeded 8 parcels in Monferrat, then helped to popularize soybeans in Italy. By the mid-1920s soy flour was widely used in baking. In March 1926 a "Bread for ammunition = pagnotto di munizione" containing 10% soy flour was heartily welcomed by the garrison in Rome. Already an official tasting by Mussolini (of the bread by him?) has been commented upon by the Italian press. The success of the campaign to promote use of wheat limited, after that, the outlets for soy in human foods, but the oil remained widely used by industry and the cake for production of milk.

Bulgaria and Rumania were influenced by the example of the Ukraine = Podolie?

The grandeur and decadence of soja in Russia: The book by L. Rouest, who was director of the Soy Laboratory in the North Caucasus from 1930 to 1935, brings together, but in a somewhat dispersed way, a very instructive documentation on soya in Russia. He described the grandeur and decadence. Soya was cultivated, it seems, since the victory of the Tcherkesses? (p. 48) and the incursions in east Turkestan, about 1860, then introduced into the Ukraine and Bessarabia, either from the Caucasus or from Hungary in the following years. Finally better known when the construction of the Transsiberian railroad connected (*conduisit*) Russia and Manchuria (1896-1900) But the soybean could not fail to interest the higher government officials. Before the universal success of the soybean after World War I, it was seen not only as an interior resource but also as an export crop. However in 1931, of the 5,970,000 ha in Russia used to grow oilseeds, less than 1,100 were used to grow soybeans versus 5.2 million used for sunflowers, 300,000 for castor oil, 140,000 for sesame, 30,000 for peanuts, and 350,000 for others such as rapeseed. But the industry began to demand soybeans. A large furniture factory in Oklanskaia made glues of vegetable proteins. The oil was studied for use in soaps and paints. The famine which menaced the working population because the moujiks [muzhiks, mujiks], resisted the exploitation of the lands into collectives, was able to be prevented or delayed by the progress in the culture of soybeans. Also the 5-year plan foresaw the extension of this crop onto 3-5 million ha with harvests of at least 1,500 kg per ha. To guide the farmers and perfect management techniques, specialists were recruited and concessions were granted to Germany in diverse regions. For how would the USSR itself have harvested the 1935 crop of about one million quintals = 100,000 MT. The number is enormous by comparison with the rest of Europe. (Did the Soviets see themselves as pioneers of a revolutionary new crop?)

Here, according to the agronomist Rouest, are the causes of the Russian setback. 1. Negligence and ignorance of the Russian peasant. 2. Disadvantages of the communist regime, 3. The general ideological method, always little reconcilable with the needs of the changes and hazards of agriculture (e.g., research to find varieties permitting the use of large harvesters). 4. Poorly chosen cultural methods. 5. Use of most of the harvest for food. The best literature concerns the moujik [muzhik, mujik] peasants, and one long study of 1911, of which we have a copy, written by a Russian doctor,... Sowed in the black earth of the Caucasus and the Ukraine, these soybeans, said Rouest, evidently saved the lives of thousands of people... We have been told that the Russians are disgusted at the compulsory use of soybeans, result of unskilled cooks...? Address: France.

911. Ralphs Grocery Co. 1940. Nationally known products displayed in Ralphs mammoth free food show (Ad). *Los Angeles Times*. Jan. 26. p. B17.
• ***Summary:*** This full-page ad states across the top: "The following nationally known food products and manufacturers will be represented in the food show and demonstrations to be staged as a feature of the opening of Ralphs newest store at the corner of Exposition and Crenshaw Blvds..."

Includes: Battle Creek Health Foods... Cubbison's Cracker Co. Products... Ficgo [coffee substitute] Hollywood Cup Coffee... Loma Linda Foods Co. Address: [California].

912. Lager, Mildred. 1940. Healthful philosophy. *House of Better Living* (*Newsletter, Los Angeles*) 11(49):2. Jan.
• ***Summary:*** New items include "Canned Soy Cheese. Soyburger. Full line of Madison Foods."

"We carry liquefiers at four different prices: $29.95, $19.95, $14.95 and "13.95." Contains a recipe for Carrot soy milk. Ingredients: 1 cup carrot juice, add 1 tbsp. soy flour or milk powder, 1 tsp honey or plain Joyana.

"Liquefied foods have become popular with the new electric mixers. They are fine and a boon to the person with poor assimilation and digestion..." A number of combinations are given, all starting with fruit juice. "Soy flour or soy milk powder may be added to juice or broth for soy milk drinks." A portrait photo shows Mildred Lager.

Note 1. A section titled "Soyburgers" on p. 4 explains that the Soyburger and Canned Soy Cheese mentioned above are both made by Madison Foods of Tennessee. Separately, soy chocolate is mentioned.

Note 2. A small ad on p. 3 is for waffles: Soy wheat-wheat germ. Soy corn (contains no wheat). Address: 1207

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West Sixth St., Los Angeles, California. Phone: MUtual 2085.

913. **Product Name:** Wheatasoy (Ready-to-Eat Breakfast Cereal). Formerly Kreme O'Soy Crisps.
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1940 January.
Ingredients: Incl. whole wheat, soybeans, malt.
How Stored: Shelf stable.
New Product–Documentation: Ad in *Nature's Path* (USA). 1940. Jan. p. 19. "Alkaline breakfast food: Wheatasoy (Formerly Kreme O'Soy Crisps)." "Malted-Dextrinized. Combines the nourishment of whole wheat, soybeans and malt." "Madison Foods. Madison College, Tennessee. Devoted to the protection of your health."

914. Madison Foods. 1940. Free! $1,000.00 in valuable prizes (Ad). *Madison Health Messenger* (*Madison, Tennessee*) 2(3A):2. Undated.
• ***Summary:*** This ½-page ad contains a photo that shows the front panel of each of 13 products made by Madison College; a brief description of each food is also given.

The text above the ad reads: "Contest closes at 12 midnight, February 15, 1940–and here are the famous Madison Health Foods approved by he Madison Messenger."

Those not mentioned in the previous issue are Wheatasoy (a breakfast cereal). Soyburger (new name for Soyburger Loaf). Stake-Lets (a gluten-soy loaf).

A price list, similar to but expanded from that in the last issue, appears on page 6. Address: Dept. HMH-1, Madison College, Tennessee.

915. Madison Foods. 1940. Valuable prizes: 3 Veg-O-Mat juice extractors. Retail price $99.50 each (Ad). *Madison*

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Health Messenger (*Madison, Tennessee*) 2(3A):3. Undated.
• ***Summary:*** This is a ¼-page ad for an early electric juicer. "No more laborious hand-grinding–no more dribbles of juice and waste of good fruit and vegetables. The Veg-O-Mat puts an end to the unsanitary, wasteful, and tedious old methods of juice extraction by hand. The Veg-O-Mat, a midget in size but a giant in power, comes in one compact unit which is easy to clean and economical to use. It employs the most advanced process of juice extraction, it thoroughly triturates every cell and fibre of the vegetable, and then subjects the pulp to a pressure of many tons. This insures that the juice will contain the most valuable minerals and vitamins, those found only in the interior of the fibre.

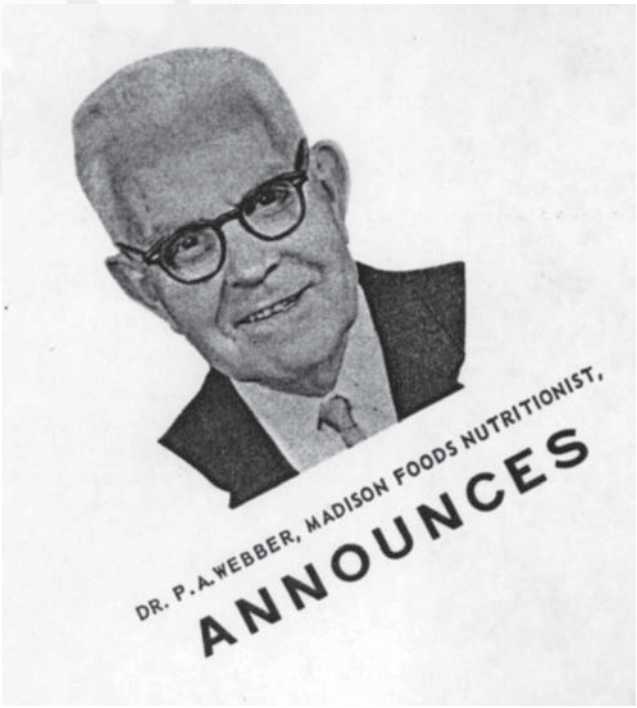
"Guaranteed for one year; 8 inches by 14 inches; has a capacity of sixteen to twenty pints per hour."

A photo shows a lady using the juicer in a kitchen. Address: Dept. HMH-1, Madison College, Tennessee.

916. **Product Name:** Soya Choc-Malt (Later Renamed Soya-Choc).
Manufacturer's Name: Roberts (F.G.) Health Food Products.
Manufacturer's Address: 40 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia.
Date of Introduction: 1940 January.
Ingredients: Incl. water, soybeans.
Wt/Vol., Packaging, Price: Tin-plated steel can.
New Product–Documentation: Ad in *Nature's Path to Health* (*Melbourne, Australia*). 1940. Jan. p. 46. "Fresh from the Factory Soya Choc-Malt comes to you charged with Phosphorus, Calcium, Magnesium, Potassium, Iron. No better Food Drink has yet been made. Give it to your children and use it in the sick room and on your breakfast table regularly. Made from carefully selected ingredients this new Food Drink may be used by all persons of every age and position in life. Purchase your supplies at the Roberts Health Food Shops. Branches in every state." This same ad was published during 1940 in the following issues: Feb. p. 32, May p. 40, June p. 40.

917. Webber, P.A. 1940. Are soy beans a good food? *Madison Health Messenger* (*Madison, Tennessee*) 2(3A):1, 4. Undated.
• ***Summary:*** "There is probably no legume which has been more universally used, and justly so, than the soy bean. In the earliest Oriental records that go back to the beginning of the Historical Period its use is frequently mentioned. Today after thousands of years, in hundreds of recipes, it is finding its way into the daily dietary of upwards of half the population of The world.

"Only within the last few years has this interesting food received any emphasis in the Occident, but now it is at last receiving at least a part of the attention that it so much deserves. Methods for its use are daily being perfected and



presented to the people of Europe and America. United States government agencies and State Experiment stations are spending much time and money to bring this unique legume and its use to the attention of the people of the United States.

"Considerable research with experimental animals and humans has shown beyond a doubt its high value as

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a food. Its impressive chemical analysis 20% fat, 40% protein, 5% minerals, with its cheapness makes it one of the most economical and best sources of fat, protein, and mineral elements that can be found in any food. Combined daily in its various forms in the diet with plentiful supplies of vegetables, fruits, and grains, it contributes to a well-balanced ration providing adequate protein, fat, carbohydrate, minerals, and vitamins.

"Despite the above mentioned facts proven by many thousands of years of human experience and corroborated by the experimental evidence of scores of research laboratories, recently most adverse but unfortunate criticism has been published concerning the soy bean, attempting to lead the public to an unfavorable attitude toward this most useful food by cleverly covering the facts.

"Even the warmest enthusiast for this food would hardly think of it in terms of supplying all the needs of the human dietary. An All-Wise Providence has provided a great variety of foods, and nature indicates a generous and liberal intake from this bountiful supply. Far be it from those who know the nutritional values of the soy bean best, and are most vocal in its praise to divert attention in any way from any other worth-while food.

"We have been cited to the use of soy beans when fed to test animals, producing high blood pressure, indigestible wastes in the intestines, and albumin and casts appearing in the urine, showing kidney degeneration. It is unfortunate that along with this statement covering soy beans, it was not told the reader that excessive protein of whatever source in the diet, animal or vegetable in origin, will produce like results. This has been proven conclusively by Dr. Newburg of the University of Michigan Hospital and others. It would seem fair, to say the least, that the quantity of protein fed to these test animals would have been reported also, that the reader may know that the experiment was conducted to show what an 'excess' of soy bean protein would produce. In apprehension of this unscientific attempt calculated to mislead the reader, your attention is called to the word 'excess' which is the key to the whole situation. When too many soy beans are used over a long period of time these conditions may develop. This is true also of any of the rich protein foods such as meat, eggs, cheese, etc. Here as in other things the rule of moderation can be well taken. As yet soy beans are not being used extensively enough in the United States to be considered a cause for the alarming growth of high blood pressure, kidney degeneration, etc., so it is hardly fair to lay the blame of these prevalent conditions in Americans today on the humble soy bean. It is plain to even the unscientific mind that these conditions are being brought on, at least to some extent, by the excessive use of other high protein foods and habits that bring about general health degeneration.

"A clear statement of truth on this subject instead of a half truth would have given the reader the proper impression; but half truths seem to be in vogue today; nevertheless such methods of deception are most reprehensible, and call forth a statement of the whole truth as recognized scientists report it. In spite of what has been written to the contrary, briefly the following facts still remain:

"1. The soy bean has been used successfully for thousands of years in the dietary of hundreds of millions of human beings.

"2. It is a high protein food and along with other high protein foods should be eaten in moderation.

"3. It is one of the cheapest and best sources of complete protein, fat, minerals, and vitamin B-1.

"4. Its proper use is being encouraged by Federal and State Agencies.

"5. Scientific, experimental and clinical evidence show that when eaten in proper combination with other foods it provides a most valuable adjunct to the diet.

"6. Scientifically trained dietitians and other medical experts are increasing their use of the soy bean in diet therapy. For twenty-five years the famous Battle Creek Sanitarium has been serving soy bean foods in many ways.

"7. Many manufacturers of soy bean foods are properly representing their foods to the public and are producing fine tasty foods.

"8. The public need not 'beware' of soy beans any more than they would beware of an excess of any other kind of protein food provided for our nourishment.

"In conclusion I wish to assure the reader that my acquaintance with soy beans covers many years, sixteen of which were spent in the Orient where I had a first-hand opportunity to observe soy beans as they were used in the diets of hundreds of millions of people and certainly if soy beans were such a dangerous food there would be little of the population of China and Japan left, considering that they have been using soy beans for thousands of years; however, instead today they are growing in numbers faster than Americans. I have been using soy bean foods for nearly twenty-five years and none of the symptoms which were so misleadingly presented to the reader are present in my body.

"The reader's attention is cited [called] to thousands of pages of scientific literature found in any large public or other library, in corroboration of the above stated facts."

Note: two different issues of this periodical are shown to be Volume 2, No. 3. the earlier of these two, which we have decided to call 2(3A) was published after Sept. 1939 (see last page) and before 15 Feb. 1940. We have estimated the publication date to be Jan. 1940. the second of these two, which we have decided to call 2(3B) was published after March 1940 (see 1st page). We have estimated the publication date to be April. 1940–3 months later. Address: PhD, Head of Chemistry Dep., Madison College.

918. Hastings, Milo. 1940. Modern acceptance comes to an ancient food. *Health News Reporter* Winter. *

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• ***Summary:*** "The most advanced work of actually introducing soy beans to the American consumer has been pioneered by our own group of health food manufacturers. Among the outstanding developments in this field has been the work done at Madison College, Tennessee."

919. *Madison Survey* (*Madison, Tennessee*). 1940. Rapid growth of Madison health food production and consumption. 22(5):17-19. March 13.
• ***Summary:*** "When, the last of November in the year just past, a carload of health foods started for the Pacific Coast–the first shipment of that size–it seemed that a decided step had been taken in the advancement of the health food industry. Milo Frank, Los Angeles, is jobber distributor for the South Pacific. He services 250 health stores in California. The North Pacific region, Western Canada, and Alaska are served by Western Natural Foods, Seattle [Washington].

"Coming east, we find Health Food Jobbers, Chicago [Illinois], serving metropolitan Chicago; Sherman Foods, serving metropolitan New York; and Modern Foods, Wollaston, Massachusetts, serving metropolitan Boston."

Madison Foods' products mentioned in this issue are: Nutmeat, Soy Beans, Soyburger, Soy Cheese, Soy-Koff, Vigorost, Wheatasoy.

Periodicals mentioned include: (1) *Health News Reporter,* winter issue, 1939-1940. (2) *Health Foods Retailing* (Chicago), edited and published by Lelord Kordel; it is a bi-monthly trade journal for the health food industry.

920. *Madison Survey* (*Madison, Tennessee*). 1940. Making a vegetarian dietary attractive. 22(5):18-19. March 13.
• ***Summary:*** Thirteen years ago, H.L. Nunn, President of Ninn-Bush Shoe Company, Milwaukee, was converted to vegetarianism after hearing a radio sermon which stated that "Bernard Shaw is a vegetarian because he dislikes the idea of killing creatures to live. Mr. Nunn to disliked the idea of taking life and decided to discard the use of flesh food. After a trial of six weeks, he began to search the libraries for literature on the subject," and found that he was in good company.

"Visiting guests often told Mr. Nunn that if anywhere they could get such food as he served in his own home, they, too, would become vegetarians." So he started a fine restaurant at the center of Milwaukee, Wisconsin, named Ambrosia House. "Miss Carolina Sweeney, Mr. Nunn's niece, a college graduate and a student of dietetics at Battle Creek College, is the manager... who is responsible for the famous foods of Ambrosia House."

"The food is of a home-cooked style, served in generous portions by young women of refinement."

921. *Madison Survey* (*Madison, Tennessee*). 1940. Madison Foods offers a dealer's contest. 22(5):19-20. March 13.

922. *Madison Survey* (*Madison, Tennessee*). 1940. $1,000 prize contest. 22(5):20. March 13.

923. Webber, P.A. 1940. Are soy beans good food? *Bean-Bag* (*The*) (*Lansing, Michigan*) 22(7-10):9-10. March.
• ***Summary:*** From Madison Health Messenger (Madison College, Tennessee): "There is probably no legume that has been more universally used, and justly so, than the soy bean. In the earliest oriental records that go back to the beginning of the historical period, its use is frequently mentioned. Today after thousands of years in hundreds of recipes, it is finding its way into the daily dietary of upwards of half the population of the world.

"Only within the last few years has this interesting food received any emphasis in the occident but now it is at last receiving at least a part of the attention that it so much deserves. Methods for its use are daily being perfected and presented to the people of Europe and America. United States government agencies and state experiment stations are spending much time and money to bring this unique legume and its use to the attention of the people of the United States."

Consider the following facts: "1. The soy bean has been used successfully for thousands of years in the dietary of hundreds of millions of human beings.

"2. It is a high protein food and along with other high protein foods should be eaten in moderation.

"3. It is one of the cheapest and best sources of complete protein, fat, minerals, and vitamin B.

"4. Its proper use is being encouraged by federal and state agencies.

"5. Scientific experimental and clinical evidence show that when eaten in proper combination with other foods it provides a most valuable adjunct to the diet.

"6. Scientifically trained dietitians and other medical experts are increasing their use of the soy in diet therapy. For 25 years the famous Battle Creek sanitarium has been serving soy bean food in many ways.

"7. Many manufacturers of soy bean foods are properly representing their foods to the public and are producing fine tasty foods.

"8. The public need not 'beware' of soybeans any more than they would beware of an excess of any other kind of protein food provided for nourishment." Address: PhD, Head of Chemistry Dep., Madison College, Tennessee.

924. DeWeese, C.W. 1940. The "vegetable cow." *Madison Health Messenger* (*Madison, Tennessee*) 2(3B):1-3. Undated.
• ***Summary:*** Reprint of an article with the same author and title published in March 1940 in the *National Food Distributors' Journal* 14(4):5-6. Note: The author's name was spelled "De Weese" in the original article.

925. Lager, Mildred. 1940. Summer foods for health.

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Madison Health Messenger (*Madison, Tennessee*) 2(3B):1-4. Undated.

• ***Summary:*** A large photo shows Miss Lager, next to a KFAC microphone. For 6½ years she has been broadcasting over the radio four times a week on station KFAC is Los Angeles. "She is the founder of the House of Better Living, and a tireless worker for better living. Her weekly free classes draw hundreds of people for instruction in healthful cookery and healthful living."

She writes that now is a good time "to cut down on rich foods and the acid-forming foods, using instead the alkaline-forming foods and the bulk foods for the natural eliminative effects... With a liberal intake of the alkaline-forming foods, one may be assured of the natural alkalizers which neutralize body acids and in this way assist in the protection of health... Acid wastes produce fatigue; alkaline-forming foods neutralize the acid wastes to restore the normal body tone and stamina.

"The summer diet must necessarily contain adequate complete proteins, for protein foods are necessary for cell repair and growth... A lack of protein may cause retarded growth, lack of vigor, and poor appetite... The vegetable proteins are nuts, soy beans, legumes, and in general they are found in all vegetables. The proteins of nuts and soy beans are classed as complete proteins and are therefore especially desirable. The animal proteins are acid-forming, whereas the vegetable proteins are alkaline-forming. Animal proteins are also more putrefactive than vegetable proteins. The soy bean and nuts can be used in a great many tasty ways."

Among the many recipes for summer the following include soyfoods: Cocktails–Soy milk and carrot ("Soy milk is a fine, alkaline, soft food. Excellent for those with sore conditions of the digestive tube)." Protein salads–Soy bean salad. Soy cheese [tofu] tomato salad. Mock shrimp salad (with Zoyburger). Entrees–Soy cheese cutlets. Zoyburger and mushroom sauce. Mock turkey legs (with Vigorost as the main ingredient). Broiled Vigorost with ripe olive sauce. Platter of cold cuts (Vigorost and Zoyburger). Hot Zoyburger sandwich. Stake-Lets (canned) for picnic dinner. Alkaline breakfast food–Wheatasoy. Alkaline beverage–Zoy-Koff (coffee substitute). Soy bean milk (Kreme O'Soy). Complete protein foods: Zoyburger, Vigorost, Stake-Lets, Not-Meat (made with unroasted peanut meal and seasoning), Soy Cheese, and Soy Beans. A brief description, nutritional analysis, and price is given for each product. "None of the Madison Foods contain animal products." A portrait photo shows Mildred Lager next to a KFAC radio microphone. The caption states that for 6½ years Miss Lager been broadcasting over the radio in Los Angeles. "She is the founder of the House for Better Living, and a tireless worker for better living. Her weekly free classes draw hundreds of people for instruction in healthful cookery and healthful living. Miss Lager is the author of *Food Facts.*"

Note 1. This is the earliest document seen (June 2007) that mentions or gives a recipe for a soy-based meatless turkey. Vigorost, a meatless / vegetarian roast introduced by Madison Foods in 1932, used wheat gluten and tofu as its two main ingredients.

Note 2. This is the earliest English-language document seen (Jan. 2007) that contains the word "Zoyburger," an early, popular vegetarian burger in the United States.

Although this issue is not dated, it contains the reprint a current article published in March 1940.

926. **Product Name:** Kreme O'Soys [Plain].
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1940 April.
Wt/Vol., Packaging, Price: 14 oz can. Retails (by mail order) for $0.15.
New Product–Documentation: Madison Health Messenger. 1940. 2(3):5. "Large jumbo hand-packed soy beans, a new variety in a special soy sauce, await your trail in Kreme O'Soys. So completely different are these extra-large delicious soy beans that you will be surprised with this new flavor and another new food."

927. *Madison Health Messenger* (*Madison, Tennessee*). 1940. Price list [of products made by Madison Foods] (Ad). 2(3B):5. Undated.

• ***Summary:*** Breakfast cereal: Wheatasoy (9 oz).

Beverages: Zoy-Koff (No caffein [caffeine]; 12 oz.). Kreme O'Soy Milk (plain, liquid, 15 oz and 29 oz; chocolate, liquid, 29 oz). Crackers: Thin-Things ** (5 oz). Whole wheat wafers ** (5 oz). Bran wafers ** (6½ oz).

Canned protein foods (used in place of meat): Zoyburger (14 oz, 30 oz). Stake-Lets (14 oz, 30 oz). Not-Meat (5 oz, 14 oz, 30 oz). Vigorost (5 oz, 14 oz, 30 oz). Soy cheese [tofu] seasoned (5 oz, 14 oz, 30 oz). Soy Beans with Tomato (5 oz, 14 oz, 30 oz). Kreme O'Soys, plain (14 oz).

Flour: Kreme O'Soy Flour (2 lbs, 5 lbs).

Note: Asterisks in the printed list indicate that all products except Whole wheat wafers, bran wafers, and Not-Meat are "Soy Bean Foods." ** = Wheat germ added.

Although this issue is not dated, it contains the reprint of a current article published in March 1940.

928. Webber, P.A. 1940. A vegetarian college. *Madison Health Messenger* (*Madison, Tennessee*) 2(3B):1, 3. Undated.

• ***Summary:*** "For more than 35 years, Madison College, near Nashville, Tennessee, has been carrying on what might be called a 'long-time human experiment' in vegetarianism. From the very earliest days of the founding of the College to the present day, the diet has been strictly non-flesh with the use of a reasonable amount of milk and eggs. At present there are 450 students who largely work their way through

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school. The more than eighty buildings of the College and Sanitarium have been built through the years by students fed on a vegetarian diet." The 100 faculty members and administrative officers, and the 100 patients in the hospital "are, and have been for these many years, but human 'guinea pigs,' proving most conclusively the desirability of a flesh-less diet." Address: PhD, Prof. of Chemistry, Madison College.

929. Madison Foods. 1940. Satisfying meatless entrees (Ad). *House of Better Living* (*Newsletter, Los Angeles*) 11(53):4. May.
• ***Summary:*** "Soyburger. Stake-lets. Vigorost. Not-meat. Soy cheese [tofu]. These foods have been designed by a group of experts in the field of nutrition to adequately take the place of meat.

"Get a free copy of the *Madison Health Messenger,* for complete list of foods and recipes." Address: Madison College, Tennessee.

930. **Product Name:** Roberts' Soy Nut Brawn, Soy Nut Cheese.
Manufacturer's Name: Roberts (F.G.) Health Food Products.
Manufacturer's Address: 40 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia.
Date of Introduction: 1940 May.
Wt/Vol., Packaging, Price: Tin-plated steel can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Article in *Nature's Path to Health* (*Melbourne, Australia*). 1940. May. Article in *Nature's Path to Health* (*Melbourne, Australia*). 1940. June. "Just what you have waited for! Better health foods." A large illustration (line drawing) shows the four canned products, with the Soy Nut Roast in the largest can (1 pound) and the Soy Bean & Tomato in the smallest. "Among the more recent additions to the many lines of food produced by F.G. Roberts is a line of Better Nut foods. Very shortly now this line of health foods will be available for the purchasers of Nut Foods in all the Roberts Health Food Shops, and later in other wide awake grocer shops."

Ad in *Nature's Path to Health.* 1940. July. p. 8. "Roberts' Better Nut Foods." The same line drawing described above is shown. The cheese, brawn, and roast are described briefly in non-specific terms. "Packed in three sizes: 16 oz., 8 oz., 4 oz." Ad in Aug. 1940 issue, p. 6. "Roberts' Better Nut Foods." A photo shows the cans. The same photo and a similar ad appeared in the May/June 1943 issue, p. 26, and the Oct/Nov. 1946 issue, p. 24. However in these last two issues, only Soy Nut Roast and Soy Nut Cheese are described in the ad text.

Ad in *Nature's Path to Health.* 1940. Nov/Dec. p. 30. "Roberts' Soy Nut Recipes." The same line drawing described above is shown. The following recipes are given: Quick cutlets (made with Soy Nut Roast). Tomato stew (made with Soy Nut Roast). Nutmeat mince (made with Soy Nut Roast). Roast soya nut cheese (made with Soya Nut Cheese, which is sold in ½-lb or 1-lb tins). "Supplies always available at the Roberts Health Food Shops Throughout Australia."

931. **Product Name:** Nut Bars–Chocolate Covered.
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1940 June.
New Product–Documentation: Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 18. "Battle Creek Health Products: Confections–Nut Bars–Chocolate Covered. $0.10."

932. **Product Name:** Bran Gluten Flakes, Gluten Biscuit (40%), Gluten Biscuit (Pure), Gluten Bread.
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1940 June.
New Product–Documentation: Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 18. "Battle Creek Health Products: Diabetic and Reducing Foods–Bran Gluten Flakes. $0.40. Gluten Biscuit (40%) $0.35. Gluten Biscuit (Pure) $0.45. Gluten Bread, 8 oz tin. $0.35."

933. **Product Name:** Lima Bean Flakes.
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1940 June.
New Product–Documentation: Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 18. "Battle Creek Health Products: Diabetic and Reducing Foods–Lima Bean Flakes, 8 oz. $0.30."

934. Battle Creek Sanitarium. 1940. Battle Creek Sanitarium biologic regimen: Supper menu. Battle Creek, Michigan. 1 p. Front and back.
• ***Summary:*** A remarkable menu, decades ahead of its time. At the top of each printed menu is a space for the "Guest's name" and the dietitian. The date "Tuesday, June 25, 1940" is printed near the top of the menu, which is in the form of a table with 4 columns. Col. 1 are the menu items divided into main types: Relishes, soups, entrees, vegetables, salads, desserts, fruits, beverages, breads, miscellaneous. Col. 2 gives, for each menu item, the total calories per specified serving weight and the calories from protein, fat, and carbohydrates. Col. 3 gives the weight of 4 food minerals (calcium, phosphorus, iron, copper) per serving. Col 4. gives the units of vitamins (A, B, C, D, G) per serving.

Only vegetarian foods are offered. These include soy acidophilus [cultured soymilk], Soykee [soy coffee], Soy

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bean bread, Soy gluten wafers, and Whole wheat toast melba.

The back is titled "Special features of The Battle Creek Sanitarium bill of fare." It was the "first to place upon its tables a bill of fare showing the energy values of each article of food served." "Dietetic supervision: Skilled dietitians cooperate with the physician in arranging the patient's bill of fare for each meal." Taboos: Tea and coffee. Wine, beer and all intoxicants. The cigar and cigarette; smoking on the premises is not permitted. Irritating condiments. An illustration shows the San. At the bottom: "Save your menus. Take them home for reference." Address: Battle Creek, Michigan.

935. **Product Name:** Soy Beans with Tomato.
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1940 June.
New Product–Documentation: Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 52. "Loma Linda Foods: Soy Products–Soy Beans, with Tomato. $0.11. $0.08."

936. **Product Name:** Soy Beans with Proteena.
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1940 June.
New Product–Documentation: Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 52. "Loma Linda Foods: Soy Products–Soy Beans, with Proteena. $0.14."

937. **Product Name:** Fruities, Fruit Wafers, Date Sandwiches.
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1940 June.
New Product–Documentation: Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 52. "Loma Linda Foods: Soy Products–Fruities. $0.10. $0.15. Fruit Wafers. $0.10. $0.21. Date Sandwiches. $0.15." Note: It is not clear what soy ingredient is used in these products.

938. **Product Name:** Proteena [Smoked Flavor, or Mushrooms].
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1940 June.
New Product–Documentation: Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 52. "Loma Linda Foods: Vegetarian Meats. Proteena (Smoked Flavor). $0.15. $0.25. Proteena (Mushrooms). $0.17. $0.30."

939. **Product Name:** Gluten Steaks.
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1940 June.
New Product–Documentation: Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 52. "Loma Linda Foods: Vegetarian Meats. Gluten Steaks. $0.15. $0.35."

940. Rosenberg's Original Health Food Store and Whole Wheat Bakery. 1940. Catalog of health foods and manual of valuable health information. San Francisco, California. 76 p. Undated. Illust. 17 cm. Index
• ***Summary:*** Cover title: "Health from foods." Also on title page: "Eat to get well. Eat to keep well." "Where good health originates." "No branch stores." Contents: About your health, by Morris Rosenberg, president. Shop by mail. Parcel post scale. Eat to get well–Eat to keep well (rules and guidelines, p. 4). Vitamin chart (for each: Functions, results of deficiency, most reliable sources, p. 5-8). Biological chemistry of foods–Minerals (p. 9-10). List of products available, by product type, with weight and price. Incl. Soy bean bread, Soy toast, Soy bean wafers, Soy cookies (p. 12). Natural brown rice. Sun-dried, unsulphured California fruits. Salted nut meats (almonds, peanuts, cashews, pecans, p. 16), Nut butters (unroasted and unsalted: Almond butter, Nut cream butter {Carque}, Peanut butter, Cocoanut butter, Smucker's apple butter, Peanut oil (2 brands). Parkelp (minerals of the sea). Salt substitutes.

List of products available, by manufacturer or source, with weight and price. Incl. Battle Creek Health Products [Michigan] (p. 18-19): Beverages (SoyKee, Kaffir Tea), Gluten biscuit, Vegetable meats (Protose), Savita yeast, Psyllium seed. Cellu Dietetic Products: Canned vegetables (Soy bean oil, Soy bean spread, Soy flakes, Soy grits). Dia-Mel (dietetic food products): Gluten crackers, Soy-Rina cereal (to be cooked). Alberty Food Products: Cero-Fig coffee substitute. Modern Diet Products [Gayelord Hauser], incl. Juicex (electric juicing machine), and Fletcherizer (juicers). Radiance Health Products (Los Angeles, p. 30-31). Tam Products (Joyana, the remarkable soybean health drink, plain or chocolate flavor). McCollum Laboratory Products (Soy-A Granules–Soy breakfast food). Penna Soya Products (soy foods): Tenderized whole soybeans, Toasted soy flakes, Toasted soy nut butter (8 or 16 oz), Soy malt–chocolate flavor, Creamee Soy Best (soy milk powder). Mrs. Hauser's Soya Products: Hot cake and waffle mix, Pancake and muffin mix, Soya cereal. Hain's Products (Hain Pure Food Co.): Nature's Best Foods: Assorted candy bars, Fruit juices (6 types), Vegetable juices (7), Hollywood Foods (Meat substitutes: Protone-Soytone-Nutone, SoyBean with Tomato Sauce, SoyBeans T.S. & Protone, Soya sandwich spread), Nut butters (raw–Almond, cashew, pecan). Nut butters (roasted–Almond, cashew), Olive oil (California virgin). Hain's vitamins. Alvita Products. Live Food Products

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(Paul C. Bragg). Books by Paul C. Bragg (*Paul C. Bragg's Personal Health Food Cook Book. Building Health and Youthfulness Nature's Way. Awaken Health and Happiness. The Art of Feminine Loveliness. Health Cocktails, The New Way to Health, Beauty and Youthfulness. The Chart of Scientific Diet.* Note: The first 4 books cost $1.00 each. The last two cost $0.25 and $0.10, respectively). Loma Linda Foods (Tasty, wholesome, nutritious): Cereals (5), Soy products (Soy beans–plain, Soy beans with tomato, Soy beans with Proteena, Soy milk, Soy mince sandwich spread, Soy milk, Soy mince sandwich spread, Soy weet wafers, Fruities, Fruit wafers, date sandwiches), Vegetarian meats (Proteena {plain, smoked flavor, or mushrooms}), Nuteena, Gluten steaks), Other choice foods (Garbanzos, Savory lentils, Wheat kernels, Savorex). Radcliffe's Famous Soya Products: Diabetic soya bars (flavors–maple, mocca, dark), Soya bon bons (light or dark), Soya candy bars, Soy milk powder, Soy milk powder–Cello, Cocoanut milk powder (8 or 16 oz), Soya malt (8 or 16 oz, 5 lb; Flavors–Nut, mocca, banana, plain chocolateen), Soya beverage–coffee, Malvitose beverage (8 or 20 oz), Soya paste [pasta?] (7 or 14 oz), Soya ravioli, spaghetti, macaroni (7 or 15 oz, 2 lb), Unsweetened soya bean chocolate. Cubbison's whole wheat products. Bill Baker's flour: Lima and pancake flour, Soya and wheat flour, Lima bean cookies, Soy bean cookies. Figco instead of coffee. Carque's natural foods. Carque natural brands. Books by Carque. Therapy, Ltd. (Pasadena): Theradophilus (a pure condensed acidophilus culture in soy bean milk). Health publications (22).

Health recipes (p. 68-71): Soya cup cookies. Soya loaf with rice. Soya cup custard. Soy bean goulash. Soy bean bread. Soy flour applesauce cake. Soy bean vegetable soup. Soy macaroni, noodles, or spaghetti. Baked soy bean croquettes.

Key to calories. The four types of foods: Regulatory, body-building, energizing, heating. Index.

On the rear cover is an ad for the Juicex ("makes fresh, pure, undiluted vegetable juices"–$49.50. A photo shows this modern-looking electric juicer. Fruits and vegetables as pushed–using a wooden pusher–into a small hopper on top. The juice runs out of a spigot into a glass) and Fletcherizer [electric blender] ("The new 1940 model has all the latest improvements in construction and appearance. It liquidizes, whips, mixes, and chops..." $14.95). Across bottom of ad: "See these products demonstrated at our store."

Note: This 1940 date, plus other internal evidence, gives us a good estimate for the date of this undated catalog. Address: 1120 Market St., San Francisco, California. Phone: MArket 3033.

941. Madison Foods. 1940. Satisfying meatless entrees (Ad). *Madison Health Messenger* (*Madison, Tennessee*) 3(1):3. Undated.
• ***Summary:*** See next pafe. A full-page ad. Note: On page 5 of this issue are many "Requested recipes" that call for Madison Foods. Address: Madison College, Madison, Tennessee.

942. LeClerc, J.A. 1940. Re: Manufacture of soy sauce. Letter to Dr. Harry W. Miller, International Nutrition Laboratory, P.O. Box 326, Mt. Vernon, Ohio, Aug. 19–in reply to inquiry. 2 p. Typed, without signature. [16 ref. Eng]
• ***Summary:*** "I was very glad to get your letter of August 12, and to learn that it will be possible to see you at Mount Vernon on the 23rd. I hope, of course, to see you also in Detroit at the meeting of the Soybean Convention."

In answer to Dr. Miller's request for information regarding the manufacture of soy sauce and its supplementation with "sodium glutamate," Dr. LeClerc encloses one bulletin from the Philippines, and cites 9 scientific articles, 15 U.S. patent numbers, and one British patent number.

The following are all interested in the manufacture of sodium glutamate: (1) Dr. W.O. Snelling, 110 South 13th Street, Allentown, Pennsylvania; (2) R.W. Greef, 10 Rockefeller Center, New York City; (3) Huron Milling Co., Harbor Beach, Michigan; and (4) Amino Products Company, Rossford, Ohio. Address: Senior Chemist, Food Research Unit, Agricultural Chemical Research Div., USDA Bureau of Chemistry and Soils, Washington, DC.

943. *Health News* (*Hollywood, California*). 1940. Stickler for health food. 8(16):9. Aug. 23.
• ***Summary:*** "Los Angeles–Successful operation for 16 years is the proud record of Stickler's, 3615 S. Vermont, opened in 'pioneer days' by a woman of vision, Elizabeth Stickler. Her slogan, 'Eat to live, not live to eat,' is now used throughout the U.S. to promote health foods.

"Mrs. Stickler learned food values when making a 'miraculous comeback' from terrible suffering diagnosed as cancer, pernicious anemia and complications. She has held certificates from nutrition schools for 10 years, seven years from Battle Creek [Michigan].

"Mr. Stickler has long shared the work at the store. Their motto, 'Quality Rightly Priced,' holds customers perennially."

944. *Health News* (*Hollywood, California*). 1940. Loma Linda soy dinner (Ad). Aug. p. 7. *

945. **Product Name:** Miller's Green Soya Beans (Green Vegetable Soybeans). Renamed Miller's Giant Green Soya Beans, then Miller's Giant Green Shelled Soya Beans by Sept. 1944, Canned Green Soybeans by 1944.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: P.O. Box 388, Mt. Vernon, Ohio.
Date of Introduction: 1940 August.
Wt/Vol., Packaging, Price: Can.

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Satisfying MEATLESS ENTREES

A Madison FOOD

SO outstanding has been the development of Madison College and Madison Foods that *Reader's Digest*, the New York *Times*, Chicago *Journal of Commerce, Coronet, Physical Culture, Food Industries, Printers' Ink*, in all more than 400 newspapers and magazines in 37 countries, have published articles and pictures concerning the college and its products. In search of complete protein foods to take the place of meat, Madison College chemists sought to develop these foods from soy beans, peanuts, wheat gluten, and various vegetables. Thus the formulas of Zoyburger, Not-Meat, Vigorost, and Stake-lets have been designed by a group of experts in the field of nutrition to adequately take the place of meat.

Try This New Food

STAKE-LETS are the newest development of Madison Foods laboratories. Extensive experiments show that the combination of gluten and soy with a special meatlike sauce, an exclusive Madison formula, is superior in both flavor and texture to gluten itself. Already sliced in the can for your convenience with sauce. Dip in egg batter and crumb to serve as a Stake-let.

ZOYBURGER STEAK
with onions

Place half-inch slices of Zoyburger on well-greased pan, with desired amount of onions. Prepare to a medium brown on both sides. Salt to taste. Serve with onions as the meat portion of a dinner. Zoyburger Steak may be served without onions or by substituting mushroom sauce, Creole sauce, tomato sauce, gravy, etc. If a sauce is used, prepare it separately and place on top of Zoyburger Steak when served.

BROILED VIGOROST
with mushroom sauce

Cut Vigorost through center lengthwise, then crosswise, into half-inch slices. Arrange in greased baking pan. Put melted butter on top of each piece and broil until brown. When finished, arrange on serving platter, overlapping the slices. Garnish the edges with sliced tomatoes and crisp lettuce, and pour over the Broiled Vigorost a hot mushroom sauce. Serve with baked potatoes and garden peas. Zoyburger, Not-Meat, or Stake-lets may be used in this recipe in the place of Vigorost.

Fourteen - ounce can serves 5 with 2 pieces. 30-oz. can serves 8 with 2 large pieces.

BREADED CUTLETS — Dip half-inch slices of Not-Meat into beaten egg and crumb. Place a small chip of butter on each slice and salt. Prepare on top of stove or in oven in well-greased pan until brown. Serve with parsley garnish as the meat portion. Vigorost, Zoyburger, or Stake-lets may be used in the place of Not-Meat. Fourteen-ounce can makes 5 medium cutlets; 30-oz. can makes 8 large cutlets. Large cutlets may be sliced in two.

"Devoted to the protection of your HEALTH"

Madison Foods are available throughout the United States in stores specializing in natural foods.

MADISON FOODS —

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How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: *Ohio Farmer.* 1940. Nov. 30. p. 10. "Now it's soybean milk!" "During the past summer this plant [in Mt. Vernon, Ohio] also packed a quantity of edible soybeans. These were canned, both as green beans, and dried beans, with tomato sauce added."

International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. 9. Miller's Green Soya Beans: These delicious canned green beans "are an abundant source of Vitamins A, B, and G, and a splendid source of calcium, phosphorus and iron... rich in protein, they can be served just as they come from the can. They make a splendid addition to a vegetable salad. They combine well with many of the vegetables in cooking. Surprise your family and friends by serving this new food." "It is indeed unfortunate that so little interest has been aroused here in America in the culture of the so-called vegetable or edible type of soy beans... The International Nutrition Laboratory uses only these edible beans for canning and food manufacture."

Ad in *Soybean Digest.* 1941. Sept. p. 17. "New items for the table: Soy products by Miller." "Canned Green Soybeans: Delicious creamed, buttered, or in soups and salads." Ad in *Soybean Digest.* 1942. Sept. p. 16. "Miller's Soya Products." Also ad in leaflet "Optimal Nutrition in Infant Feeding." In 20 oz. and No. 10 cans.

USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. International Nutrition Laboratory / Miller's Soya Foods sells Green Soya Beans. "Distribution scattered throughout the United States by Health Stores."

Ad in *Soybean Digest.* 1944. Sept. p. 61. "Meet the Vegetable Cow." International Nutrition Laboratory now sells Miller's Giant Green Shelled Soya Beans.

Taylor. 1944. The Soy Cook Book. p. 201. "Canned Green Soybeans." Soya Blue Book. 1947. p. 69.

Shurtleff. 1981. Sept. Dr. Harry W. Miller: History of his work with soyfoods. Unpublished manuscript. Contrary to Dr. Miller's expectations, the American public was simply not ready for soymilk. "He decided that, in order for his business to survive, he would have to develop new products... With his typical boundless energy, Dr. Miller, now age 61, started by setting up a plant near the soy dairy to can fresh green soybeans of the tasty, large-seeded or vegetable type, which were grown on his farm. Partially because of the mushrooming growth of interest in soyfoods during World War II (due in part to rationing and high prices of meat, milk, eggs, and cheese), these found a ready market and became his most profitable product. By 1943 some 40,000 cases a year were being sold at supermarkets and health food stores around the Midwest."

Talk with Raymond C. Kraft. 1989. Oct. 24. He worked for Dr. Miller from Jan. to Sept. 1941. When he started, the company was canning green soybeans.

946. Miller, Harry W. 1940. The role of the soybean in human nutrition. *Proceedings of the American Soybean Association* p. 64-71. 20th annual meeting. Held 18-20 Aug. at Dearborn, Michigan.
• ***Summary:*** "The interest in the soybean in America has largely centered around its industrial uses and animal feeding. Comparatively little interest has been manifest in its utilization in human nutrition. Whereas, in the Orient, where I have had opportunity to observe the various uses made of the soybean, at least 90 per cent of the local consumption is in human nutrition. The remainder is exported out of the country... I must admit that I feel that the soybean has suffered a setback by tremendously exaggerated statements made in its behalf that are misleading, and by the fact that the specimens of foods offered have so often been insipid, and poorly processed...

"There is one food that is utilized everywhere in China, and that is the soybean, for they have learned that they must have it in their diet to give them strength, and in order to promote growth. They have not understood its alkalinizing action, nor its biological value as a food, nor its mineral contents, nor its many other scientific and physiological values. However, they do know that when they are tired and need fatigue relief the soybean is the food. They realize that they soon tire on a rice, wheat or corn diet, and cannot maintain their daily round of duties unless they get a portion of soybean... The Chinese people also produce a record to the world on their great endurance during strenuous labor, as is seen in Coolie and agricultural workers...

"Paying the market prices for soya milk and also for other infant foods, in Shanghai, we made a comparative cost of food for a baby for its first five months, making an average of the cost per month. To provide the requisite amount of nutrition, if these babies were fed on fresh cow's milk bought on the Shanghai market the cost was $20.00 per month, Shanghai currency. If fed on canned milk, $16.50. If fed on the cheaper class of Shanghai dairy milk, $14.75. If fed on a milk that came from Holland, called Oster Milk, $12.00. If fed on S.M.A. or Lactogen, American prepared baby foods, the cost was $26.00 a month. Whereas these same babies could be cared for equally well on soy bean milk, at a cost of $5.00 a month." Address: M.D., International Nutrition Lab. [Mt. Vernon, Ohio].

947. *Good Health* (*Battle Creek, Michigan*). 1940. Food and the war. 75(9):125. Sept.
• ***Summary:*** "The soybean has come to have a prominent place in the military dietetics of Germany."

In the *British Medical Journal* "Dr. Josiah Oldfield (of England) urges the British to learn from Hitler and Mussolini about diet. In Germany the populace has been put on two or three meatless days a week. Italy has decreed that the

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wealthy shall live two or three days a week on the peasant diet of corn, oil, chestnuts, raisins, macaroni, maize porridge, milk and cheese." "The Indian armies in the World War [I] surprised Lord Roberts when they marched and fought better on vegetable foods than the English Tommies on a heavy meat ration."

948. *Ohio Farmer.* 1940. Now its soybean milk! This and other foods produced by new Ohio plant. 186(11):10. Nov. 30. Whole No. 4606.
• ***Summary:*** About the work of Dr. Harry W. Miller (of Ohio and China) with soymilk. Today, because of the Japanese invasion of Shanghai, there now stands in Mt. Vernon, Ohio, a plant producing soybean milk, powder, and a number of products from the edible soybean. The head of this company, International Nutrition Laboratory, is Dr. H.W. Miller, who was born in Miami County, Ohio, and educated as a surgeon. For many years he was head surgeon in an American mission hospital in China. During this time he saw the need for milk and other dairy products in China; they were unavailable to most people due to the high cost and short supply. So he and his associates started a plant in Shanghai for the production of soybean milk. In 1937, at the time of the Japanese invasion, they had 15 delivery boys going out each day on bicycles to deliver the soybean milk to thousands of customers.

When Japanese bombs destroyed the plant in 1937, Dr. Miller decided to relocate near Mt. Vernon, in Knox County, Ohio. He and his sons built the plant, and also designed and built much of the equipment in it. According to Dr. Miller, soybean milk "is more quickly assimilated by the body than animal milk, it gives a quick recovery from exhaustion and fatigue, and is especially desirable as a food for infants and invalids. The liquid and powdered soybean milk produced in this plant is sold to doctors and hospitals all over the United States..." The steps in the process are described. They also make Mien Jing, based on wheat gluten, to which are added fresh vegetables and soya sauce to make a nutritious food with a meat-like flavor.

"During the past summer this plant also packed a quantity of edible soybeans. These were canned, both as green beans, and dried beans with tomato sauce added. Another product is a soybean flour..."

Some of the edible soybeans used in this plant were grown on the farm run by Dr. Miller near Mt. Vernon and by farmers in the neighborhood. However it has been necessary to import a large portion of the soybeans from other states.

Dr. Miller's organization is presently establishing another plant for the production of soybean milk in the Philippines. Moreover, 2,000 pounds of powdered soybean milk were recently shipped to China from Mt. Vernon.

Photos show: (1) Dr. Harry Miller, seated at a desk in a coat and tie, examining samples of edible varieties of soybeans. (2) The plant of the International Nutrition Laboratory near Mt. Vernon, Ohio. (3) A worker inspecting a can of edible soybeans, which are packed in cans and labeled, ready to ship to all parts of the USA.

949. **Product Name:** Miller's Mien Jing. Renamed Savory Vegetable Cutlets. Renamed Miller's Vegetarian Cutlets by Sept. 1946, then Miller's Vegetarian Cutlets (Mien Jing) by Jan. 1946, and Miller's Vegetarian Gluten Cutlets by 1948.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1940 November.
Ingredients: Incl. wheat gluten and probably soy sauce.
Wt/Vol., Packaging, Price: Canned, No. 10, 30 oz. or 20 oz.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: *Ohio Farmer.* 1940. Nov. 30. p. 10. "Now it's soybean milk!" At their plant in Mt. Vernon, Ohio, Dr. Miller and his sons make Mien Jing, based on the "gluten of wheat flour, to which is added fresh vegetables and soya sauce, making a nutritious food with a meat-like flavor."

International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. 4. Miller's Mien Jing: Wheat "gluten, or cereal protein, is the basic food element in Miller's Mien Jing. Mien Jing is the Oriental name meaning processed gluten. A high protein wheat flour is washed free of starch, and small slices of the remaining gluten are processed with fresh vegetables and soya sauce, making a highly nutritious food, quite meat-like in taste. This gluten food was first introduced into this country by us, and our Mien Jing, or gluten cutlets, has the genuine flavors that have popularized this food in the Orient... It requires only a little cooking to make Mien Jing into many savory dishes, such as stews, croquettes, entrees, and also Oriental dishes such as Chow Mien and Chop Suey."

Ad in *Soybean Digest.* 1942. Sept. p. 16. "Miller's Soya Products." Ad in *Soybean Digest.* 1944. Sept. p. 61. "Meet the Vegetable Cow." International Nutrition Laboratory now sells Miller's Vegetarian Cutlets in uniform slices or diced form. This popular product has a high protein value.

Ad in *Soybean Digest.* 1946. Sept. p. 79. "No meat?–Try Cutlets." A large photo shows the can of "Miller's Vegetarian Cutlets (*Mien Jing*). The front panel states: "Delicious when grilled or broiled. Protein food for meat pies, grills, chop suey." The ad text reads: "You may be one of those many folk who will consider Vegetarian Cutlets as a more satisfactory article of diet than fish, fowl, or meat. This tender meat-protein substitute is manufactured from a selected portion of the wheat [gluten], healthfully prepared and tastily flavored, providing a highly nutritious and tempting food for any meal. Cutlets are very low in starch, high in body building qualities, resemble meat in taste.

"Miller's Cutlets may be prepared and served in many ways–lightly grilled as they come from the can–dipped in

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egg and rolled in cracker crumbs, corn meal, or potato flour and browned–used in stews, pot pies, and chop suey. With these delicious cutlets a quick meal, balanced in protein, can readily be prepared.

"Miller's tenderized cutlets are packed in three sizes: No. 10, 30 ounce, 20 ounce. If your dealer does not have Miller's Cutlets, write for information."

Note: The Chinese name on the label probably indicates that Dr. Miller learned about this gluten-based product during his years as a physician in China, and that he was marketing it to Chinese-Americans (as well as Caucasians) in the USA.

Soybean Blue Book. 1948. p. 84.

Talk with Clarence Miller. 1986. The best seller at Mt. Vernon was Miller's Vegetarian Cutlets, a canned gluten entree, but they were not so profitable since they cost so much to make. 100 lb of flour yielded only 30 lb of gluten and 70 lb of starch. The latter was sold for wallpaper glue.

950. Lager, Mildred. 1940. Healthful philosophy. *House of Better Living* (*Newsletter, Los Angeles*) 12(59):2. Nov.
• ***Summary:*** "Try our new soy noodle, artichoke noodles, soy noodle quick soup..." "If you cannot tolerate milk, why not try soy milk? It comes in cans and can be used as regular milk. The Madison soy milk is homogenized, thick and creamy, with lots of food value. Comes plain or chocolate flavor." A portrait photo shows Mildred Lager.

Across the bottom of the page: "We serve fruit and vegetable juices–5¢ and 10¢ a glass. Try carrot and cocoanut."

Note: With this issue, the House of Better Living has a new address (3477 West Sixth St., Los Angeles) and phone number (EXposition 8144). It is still owned and operated by Mildred Lager. Address: 3477 West Sixth St., Los Angeles, California. Phone: EXposition 8144.

951. **Product Name:** Yum (Bologna-Like Canned Meatless Loaf with Tofu).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1940 November.
Ingredients: Soybeans, gluten, soy cheese [tofu], whole peanut meal, seasonings.
Wt/Vol., Packaging, Price: No. 2 can. 20 oz.
How Stored: Shelf stable.
Nutrition: Protein 19.1%, fat 11.1%, carbohydrates 11.5%, ash 2.5%, calories 221/100 gm.
New Product–Documentation: Ad (2¼ by 3 inches) in *Nature's Path* (USA). 1940. Nov. p. 428. "Yum, a new food." "For years Madison Laboratories have been experimenting with this new food to make it very tasty and yet being ever careful not to season it to the point of limiting its appeal to those who like the very spicy foods... Compounded from wheat gluten, soy beans, nut meal and vegetable seasonings, this new food... is right on the front row of body-building protein foods." Gives two recipes: Yum meatless balls. Breaded Yum cutlet. "Free: the *Madison Health Messenger* with new health news, soy bean information, new recipes, charts, etc. Obtain from your health food store or write to: Madison Foods, Madison College, Tennessee."

Madison Health Messenger. V. 49-2. p. 5. Can be used hot or cold. Taylor. 1944. The Soy Cook Book. p. 201.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Yum contains 16.00% protein, 5.20% fat, and 11.26% carbohydrate. Not listed in the 1965 *Diet Manual.*

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Yum (Madison)." The ingredients are now: Wheat protein [wheat gluten], processed soybean, peanuts, soya flour, rolled oats, soy sauce, vegetable oil, tomato puree, onions, yeast extract, salt, garlic, MSG, hydrolyzed vegetable protein, sage.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned product resembling cold cuts, made from wheat [protein] soy, and peanuts. It can also be used in salads or sandwiches. Now made by Worthington Foods.

952. **Product Name:** Soy Gluten Wafers (42% Soya).
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1940.
Wt/Vol., Packaging, Price: 3.5 oz.
How Stored: Shelf stable.
New Product–Documentation: Battle Creek Food Co. Price List. 1940. 3.5 oz. 42% soy. Distributed through health food stores.

USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. The company sells Soy Gluten Wafers, containing 42% soya (probably in the form of soy flour). Distributed through health food stores.

Taylor. 1944. Soy Cook Book. p. 200. "Savory crackers made with soy flour, low starch content." Soybean Blue Book. 1947. p. 70.

953. **Product Name:** Soy Kee or Soykee (100% Soybean Roasted Coffee Substitute).
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1940.
New Product–Documentation: Price List. 1940. 16 oz.; Rosenberg's Original Health Food Store. 1940. Catalog of Health Foods... p. 18. "Battle Creek Health Products: Beverages–SoyKee $0.35." Miller. 1943. Distributed through health food stores.

USDA War Food Administration, Food Distribution

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Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. The company sells Soykee, made of 100% soya. Distributed through health food stores.

Taylor. 1944. Soy Cook Book. p. 200.

954. **Product Name:** Soy Spread.
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1940.
Wt/Vol., Packaging, Price: 8 oz can.
New Product–Documentation: Price List. 1940. 8 oz. can.

955. Battle Creek Food Company. 1940. Authorized dealer price list. Battle Creek, Michigan. 1 p. *
• ***Summary:*** Dr. John Harvey Kellogg was particularly interested in the nutritional use of the soybean in dietetic diets. In his 1940 price list, the following soy products are listed: Soy Beans, Cooked (10 oz cans). Soy Beans, Green (1 lb, 3 oz can). Soy Gluten Wafers (3½ oz). Soy Flour (1 lb or 4 lb). Soy Gluten Bread (in tin). Soy Kee (16 oz). Soy Milk, Condensed (10 oz tin). Soy Spread (8 oz). Address: Battle Creek, Michigan.

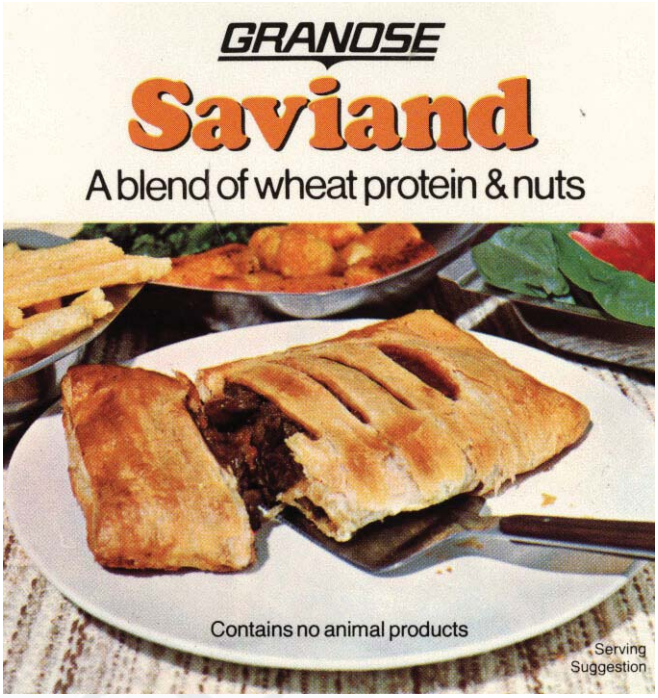
956. **Product Name:** Granose Protose (Formerly named Nutmeat).
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1940.
Ingredients: Wheat protein, cashew nuts, peanuts, wheat flour, soya flour, yeast, salt, hydrolised vegetable protein.
New Product–Documentation: Manufacturer's catalog. 1980. April.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1940. It has been discontinued.

957. **Product Name:** Granose Saviand (A Meatless Savoury).
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1940.
Ingredients: Wheat protein, cashew nuts, soya flour, yeast, salt, hydrolised vegetable protein, onion, caramel.
Wt/Vol., Packaging, Price: 284 gm (10 oz) can.
New Product–Documentation: *The British Vegetarian.* 1960. Sept/Oct. p. 249. Granose produces Saviand, containing wheat gluten, ground nuts, yeast extract, onion, and caramel.

Manufacturer's catalog. 1980. April. "A product similar to Protose but with the addition of onion flavouring."

Form filled out and Label sent by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose,



was introduced in 1940. Label. 1990. 8.5 by 3.75 inches. Orange, black, and yellow on white. Two color illustrations of a Savoury (like a U.S. turnover, with a crust) on a plate with a spatula underneath it. "A blend of wheat protein and nuts. Contains no animal products. Saviand is a delicious savoury which is ready to serve either cold with salads or hot in pies, hot pots, etc. Slice or dice it. Ingredients: Wheat protein, water, peanuts, soya flour, yeast, salt, hydrolysed vegetable protein, onion powder, caramel. Dietary analysis upon request." This canned product is similar to Spam or Nuttolene. It is not sold in the pastry crust.

958. **Product Name:** Miller's Soya Loaf (Meat Substitute).
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1940.
Ingredients: Incl. soy pulp [okara], gluten, and seasonings.
New Product–Documentation: International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. 6. Miller's Soya Loaf: "Made from especially selected high protein edible soya beans, low in fat and carbohydrates. This food will be found to be a very pleasing entree that can be served as it comes from the can, or made into appetizing roasts, pot-pies, sandwiches, and other meat substitute dishes."

Ad in *Soybean Digest.* 1942. Sept. p. 16. "Miller's Soya Products."

USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. International Nutrition Laboratory / Miller's Soya Foods makes Soya Loaf. "Distribution scattered throughout the United States by

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Health Stores."

Taylor. 1944. The Soy Cook Book. p. 201.

959. **Product Name:** Miller's Soya Spread. Renamed Miller's Sandwich Spread. Also called SoyaSpread. for Bread, etc.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1940.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. 7. Miller's Soya Spread: This canned product can facilitate the making of tasty and nutritious sandwiches.

Ad in *Soybean Digest.* 1942. Sept. p. 16. "Miller's Soya Products." Ad in Leaflet titled "Optimal Nutrition in Infant Feeding." Undated. "Delicious sandwich filler... Reduces need for butter. Gives variety. 16 oz. jars."

USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. International Nutrition Laboratory / Miller's Soya Foods makes Soya Spread. "Distribution scattered throughout the United States by Health Stores."

Ad in *Soybean Digest.* 1944. Sept. p. 61. "Meet the Vegetable Cow." A photo shows a 14 oz glass jar of Miller's Soya Spread, with some of it being spread on two slices of bread. It is a butter substitute and sandwich filling.

Taylor. 1944. The Soy Cook Book. p. 201.

Talk with Raymond C. Kraft. 1989. Oct. 24. He worked for Dr. Miller from Jan. to Sept. 1941. When he started, the company was making this soybean sandwich spread. A main ingredient was the pulp left over after making soymilk.

960. **Product Name:** Miller's Soya Curd. Renamed Miller's Soya Cheese.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1940.
New Product–Documentation: International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. "3. Miller's Soya Curd: This delicate protein food is made by coagulating Miller's Soya Lac with lactic acid and then blending this soft curd with tomato puree, pimento and Soya Sauce. It is a pleasing protein addition to salads, or for spreading crackers and sandwiches."

Note. This is the earliest English-language document seen (April 2013) that uses the term "Soya Curd" to refer to tofu.

Ad in *Soybean Digest.* 1942. Sept. p. 16. "Miller's Soya Products."

961. **Product Name:** Miller's Soyalac Soya Milk [Spray-Dried, All-Purpose Flavor; Liquid, All-Purpose, or Chocolate].
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1940.
Ingredients: Water, sugar, soya oil, salt, vitamin D, calcium, soya beans.
Wt/Vol., Packaging, Price: 1 pint 4 oz can.
How Stored: Shelf stable.
Nutrition: 3.4% protein, 3% fats, 5.2% carbohydrates. 20 calories per liquid ounce.
New Product–Documentation: Label, 4.5 by 11 inches. Contents: 1 pt. 4 oz. "The Vegetable Food Drink." 3.4% protein.

USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. International Nutrition Laboratory / Miller's Soya Foods makes SoyaLac, Chocolate SoyaLac, and Soy-A-Malt. "Distribution scattered throughout the United States by Health Stores."

Ad in *Soybean Digest.* 1945. Sept. p. 40. Shows 3 large bottles of "Soyalac: A spray-dried infant food." A photo of an infant appears on the front of each bottle.

Soybean Blue Book. 1947. p. 72; 1948. p. 84. "Soyalac. Soybean milk, powdered and liquid." Also listed in 1960, 1965.

962. **Product Name:** Miller's Soya Beans with Tomato Sauce.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: P.O. Box 388, Mt. Vernon, Ohio.
Date of Introduction: 1940.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. 11. Miller's Soya Beans with Tomato Sauce: Edible soy beans are canned with tomato puree and malt. "This is truly a treat for the picnic lunch."

Ad in Leaflet titled "Optimal Nutrition in Infant Feeding." Undated. In 16 oz. jars.

USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. International Nutrition Laboratory / Miller's Soya Foods sells Soya Beans with Tomato Sauce. "Distribution scattered throughout the United States by Health Stores."

Soybean Blue Book. 1948. p. 82. "Soyabeans in tomato sauce." 1957. p. 95. Home office in Arlington, California. "Pack dry soybeans in tomato sauce."

963. **Product Name:** Miller's Whole Soya Bean Flour.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1940.

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New Product–Documentation: International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. 8. Miller's Whole Soya Bean Flour: This flour "is not made from oil extracted 'bean cake,' but fresh selected edible soya beans are ground to produce this rich golden flour. Wheat flour is classed among the acid foods while soya bean flour is strongly alkaline... One part of Soya Flour will neutralize the acidity of four parts of wheat flour."

USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. International Nutrition Laboratory / Miller's Soya Foods sells Whole Soybean Flour. "Distribution scattered throughout the United States by Health Stores."

Ad in leaflet titled "The Story of Milk from the Soya Bean," by Harry W. Miller. 1944.

964. **Product Name:** Miller's Giant Soya Beans. Renamed Miller's Giant Select Soyabeans by 1948.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: P.O. Box 388, Mt. Vernon, Ohio.
Date of Introduction: 1940.
New Product–Documentation: International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. 10. Miller's Giant Soya Beans: These soy beans are high in protein (43.18%) and low in fat (18.7%). "Miller's soy beans are processed so that the nutlike flavor is brought out and they are rendered entirely digestible. The eating of the soy bean creates an alkaline reserve so necessary for the healthful functioning of the body."

Soybean Blue Book. 1948. p. 82. Not clear whether these are whole dry or green soybeans.

965. **Product Name:** Miller's Soy-A-Malt [Spray Dried: Natural Malt, or Chocolate flavors].
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1940.
Wt/Vol., Packaging, Price: 1 lb can.
How Stored: Shelf stable.
New Product–Documentation: International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. 2. Miller's Soy-A-Malt: A spray-dried powder available in both natural and chocolate flavors, packed in 1-pound cans, which make 1 gallon of "vegetable milk."

Ad in *Soybean Digest.* 1941. Sept. p. 17. "New items for the table: Soy products by Miller." "Soy-A-Malt: A delicious wholesome soy-malted milk–a pure vegetable beverage containing all and more of the food qualities of milk."

Ad in Leaflet titled "Optimal Nutrition in Infant Feeding." Undated. "Soy-A-Malt is put out under registered trade mark No. 390909 U.S. Patent Offices."

USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. International Nutrition Laboratory / Miller's Soya Foods makes SoyaLac, Chocolate SoyaLac, and Soy-A-Malt. "Distribution scattered throughout the United States by Health Stores."

966. **Product Name:** Miller's Soya Sauce (Importer-Marketer). Made in South China.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1940.
How Stored: Shelf stable.
New Product–Documentation: International Nutrition Laboratory. 1940? "Miller's Soy Bean Foods." Undated 12-page leaflet. 5. Miller's Soya Sauce: "Produced in South China where the finest soya sauce is made, insuring a pure and highly concentrated product. It should be used in flavoring all protein dishes where a meat-like flavor is desired."

967. **Product Name:** SoyaLac (Powdered Soymilk Infant Formula). Renamed Miller's Soyalac by Sept. 1944.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: 13246 Wooster Rd., Mt. Vernon, Ohio.
Date of Introduction: 1940.
Wt/Vol., Packaging, Price: Powdered.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Ad in *Soybean Digest.* 1941. Sept. p. 17. "New items for the table: Soy products by Miller." "SOYALAC: Spray-dried Infant Food–the perfect formula for the new-born infant–especially fine for malnutrition and allergic conditions."

Ad in *Soybean Digest.* 1944. Sept. p. 61. "Meet the Vegetable Cow." International Nutrition Laboratory now makes (1) Miller's Soyalac (powdered milk), plain, malted, or chocolate; and (2) Miller's Soyalac (soya milk), liquid, natural, or chocolate.

Shurtleff. 1981. Sept. Dr. Harry W. Miller: History of his work with soyfoods. Unpublished manuscript. Powdered Soya Lac was first produced in 1940.

Talk with Lillian Miller, wife of Clarence Miller, Dr. Miller's eldest son. 1994. March 28. She thinks Dr. Miller's first soymilk infant formula was sold in powdered form. After introducing a liquid for adults, Dr. Miller built equipment that would spray dry the liquid.

968. **Product Name:** Miller's Soya Lac. Renamed Soyalac by 1952.
Manufacturer's Name: International Nutrition Products, Inc.
Manufacturer's Address: 41 Nagathan St., Manila, Philippines. Phone: 6-62-71.
Date of Introduction: 1940.
New Product–Documentation: Ad in *Manila Tribune.*

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1941. Aug.

Ad in *A Half Century of Philippine Agriculture.* Manila, Philippines: Liwayway Publishing. p. 433. "Soyalac. The wonder vegetable milk. Processed by International Nutrition Products, Inc., 41 Nagathan St., Manila. Tel. 6-62-71. Note: This is the earliest reference seen for the company's name, address, and phone number. They could have been different in 1941. Note also that the product is now named Soyalac.

Shurtleff & Aoyagi. Soymilk Industry & Market. p. 106-07. Made at the first soymilk plant in the Philippines, set up by Dr. Harry Miller and Mr. Paul Sycip.

Note: This is the earliest known commercial soy product made in the Philippines.

969. White, Julius Gilbert. 1940. Abundant health: A digest of the "Learn-how-to-be-well" lectures. Madison College, Tennessee: Published by the author. ix + 317 p. Illust. 28 cm. [soy ref]

• ***Summary:*** Advocates vegetarian diet. Note that Madison College is a Seventh-day Adventist college and sanitarium. One section, titled "The Soy Bean–The Wonder Food," introduces the many benefits of soybeans, discusses their low cost, and describes (in fairly specific terms, but without recipes), how to use soybeans in baking, as cooked or canned beans, in commercial "meat substitutes," as soybean milk (good for those with allergies to cow's milk), as cheese (tofu), as greens (soybean sprouts), or in commercial "coffee substitutes." Note: The author lived 1878-1955. Address: Madison, Tennessee.

970. Glendale Sanitarium "vegetarian" cook book. 1940? Glendale, California: Glendale Sanitarium. 56 p. Undated. 21 cm.

• ***Summary:*** A full-page ad, facing the title page, states: "Twenty-eight acres–Spacious grounds. Quiet–Rest. Hospital service. Electrotherapy. Hydrotherapy. Medical care. Special diets. Sun baths. Massage. Fireproof building. Private rooms. Reasonable rates. For particulars write to Glendale Sanitarium and Hospital."

The Preface states: "Rational diet has long been a basic principle in the Sanitarium System of treatment so we are indeed happy to meet the need created by guests who have become acquainted with a palatable vegetarian diet and wish to continue it after leaving the institution. The recipes that we have compiled are representative of the food which makes up our daily menus."

Contents (called "Index"). Beverages. Cakes. Cake icings. Cooked cereals. Cooked fruits. Eggs. Entrees. Entrees, supper. Gravies and sauces. Hot breads. Memoranda: Description of nut foods and flavorings. Miscellaneous. Pies. Puddings. Pudding sauces. Salads. Salad dressings. Sandwiches. Soups. Toasts. Vegetables.

Soy-related recipes: Chow mein (with "¼ cup soy bean sauce," p. 19). Chop suey (with "Yong You or Soy bean sauce," p. 20). Tofu loaf (with "1 pound tofu," p. 23).

Proteena is called for in recipes on 8 different pages, Protose on 8 different pages, and Nuttose on 3 different pages, and Savita (a seasoning) on 13 different pages. Address: 1509 E. Wilson Ave., Glendale California.

971. International Nutrition Laboratory. 1940? Miller's soy bean foods (Brochure). Mt. Vernon, Ohio: International Nutrition Laboratory. 12 panels. Each panel: 19 x 10 cm. Undated.

• ***Summary:*** A description (probably written by Dr. Harry W. Miller) of each of the following foods is given: 1. Miller's Soya Lac: A liquid milk packed in 13 oz. and 30 oz cans. It is available in both natural and chocolate flavors. 2. Miller's Soy-A-Malt: A spray-dried powder available in both natural and chocolate flavors, packed in 1-pound cans, which make 1 gallon of "vegetable milk." 3. Miller's Soya Curd: "This delicate protein food is made by coagulating Miller's Soya Lac with lactic acid and then blending this soft curd with tomato puree, pimento and Soya Sauce. It is a pleasing protein addition to salads, or for spreading crackers and sandwiches."

4. Miller's Mien Jing: Wheat "gluten, or cereal protein, is the basic food element in Miller's Mien Jing. Mien Jing is the Oriental name meaning processed gluten. A high protein wheat flour is washed free of starch, and small slices of the remaining gluten are processed with fresh vegetables and soya sauce, making a highly nutritious food, quite meat-like in taste. This gluten food was first introduced into this country by us, and our Mien Jing, or gluten cutlets, has the genuine flavors that have popularized this food in the Orient... It requires only a little cooking to make Mien Jing into many savory dishes, such as stews, croquettes, entrees, and also Oriental dishes such as Chow Mien and Chop Suey."

5. Miller's Soya Sauce: "Produced in South China where the finest soya sauce is made, insuring a pure and highly concentrated product. It should be used in flavoring all protein dishes where a meat-like flavor is desired." 6. Miller's Soya Loaf: "Made from especially selected high protein edible soya beans, low in fat and carbohydrates. This food will be found to be a very pleasing entree that can be served as it comes from the can, or made into appetizing roasts, pot-pies, sandwiches, and other meat substitute dishes."

7. Miller's Soya Spread: This canned product can facilitate the making of tasty and nutritious sandwiches. 8. Miller's Whole Soya Bean Flour: This flour "is not made from oil extracted 'bean cake,' but fresh selected edible soya beans are ground to produce this rich golden flour. Wheat flour is classed among the acid foods while soya bean flour is strongly alkaline... One part of Soya Flour will neutralize the acidity of four parts of wheat flour." 9. Miller's Green Soya Beans: These delicious canned green beans "are an abundant

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source of Vitamins A, B, and G, and a splendid source of calcium, phosphorus and iron... rich in protein, they can be served just as they come from the can. They make a splendid addition to a vegetable salad. They combine well with many of the vegetables in cooking. Surprise your family and friends by serving this new food.

10. Miller's Giant Soya Beans: These soy beans are high in protein (43.18%) and low in fat (18.7%). "Miller's soy beans are processed so that the nutlike flavor is brought out and they are rendered entirely digestible. The eating of the soy bean creates an alkaline reserve so necessary for the healthful functioning of the body." 11. Miller's Soya Beans with Tomato Sauce: Edible soy beans are canned with tomato puree and malt. "This is truly a treat for the picnic lunch."

This brochure contains 8 recipes using Miller's products. Three panels discuss the "Dietetic advantages of the soy bean;" across the bottom is written in large letters "Alkalinize with Miller's Soy Bean Foods." These panels note of the soya bean: "So highly does it stand in the list of foods from the vegetable kingdom that the International Nutrition Laboratory is devoting 95% of its effort to the output of foods made from the soya bean." Edible Soy Beans are a remarkable food, a complete protein with adequate calcium for optimum metabolism, a ready alkalinizer, rich in Lecithin and Cephalin–the nerve foods, and "The only vegetable protein that is biologically able to substitute for animal protein... It is indeed unfortunate that so little interest has been aroused here in America in the culture of the so-called vegetable or edible type of soy beans... The International Nutrition Laboratory uses only these edible beans for canning and food manufacture.

"This institution now located at Mount Vernon, Ohio, first began its work in Shanghai, China, where extensive nutrition experiments were carried out in the feeding of infants, children and adults on soya milk. It operated a Soya Bean Dairy, providing daily milk distribution of plain and chocolate soya milk to thousands of persons. But as this plant was practically demolished during the recent war in the Orient, it was organized again in 1939 in Mount Vernon, Ohio as the International Nutrition Laboratory, and is producing from the edible soya bean all the valuable foods described in this folder."

Another panel describes the "Advantages of vegetable milk." Large letters across the bottom state: "Alkalinize with Miller's soy bean foods."

Note 1. This is the earliest document seen (April 2002) with the term "soy bean foods" in the title.

Note 2. This is the earliest document seen (Aug. 2013) that uses the term "Soy Lac" to refer to a soymilk. Address: Mt. Vernon, Ohio.

972. Madison Foods. 1940? Featuring Madison Foods Quartet (Leaflet). Madison, Tennessee. 1 p. Single sided. 28 cm. Undated.

• ***Summary:*** A photo shows cans of four products: Madison Burger–Vegetarian. Not-Meat. Cheze-O-Soy. And Dinner Morsels. Each appears to be dancing, with musical notes as its feet. Address: Madison, Tennessee.

973. **Product Name:** Soyagen (Soymilk for General Use) [Powdered, or Spray Dried].
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: 13246 Wooster Rd., Mt. Vernon, Ohio.
Date of Introduction: 1941 January.
New Product–Documentation: Raymond S. Moore. 1961. *China Doctor.* p. 185. After developing Soyalac, Dr. Miller developed a different product for adults, which he called Soyagen.

Talk with Raymond C. Kraft. 1989. Oct. 24. He worked for Dr. Miller from Jan. to Sept. 1941. When he started, he thinks he recalls that the company was making Soyagen in both liquid and powdered forms. Note: The year that this product was introduced and the manufacturer's name at that time are not certain.

974. Loma Linda University, School of Dietetics. 1941. Lesson outlines in nutrition & cookery. 1st ed. Loma Linda, California: Loma Linda University, School of Dietetics. 114 p. Jan. 20 cm.
• ***Summary:*** Contains recipes, including soy-related recipes. At this time, the School of Dietetics was part of the College of Medical Evangelists. Address: Loma Linda, California.

975. Holman, Ross L. 1941. Soybeans and college degrees. *Forward magazine* 60(5):5. Feb. 1.
• ***Summary:*** About Madison College, located near Nashville, Tennessee, and their work with soybeans and soyfoods. Reprinted in the *Madison Survey* of March 1983, p. 8.

Madison College has developed a large number of soybean food products and is selling them all over the United States "in such a volume as to net that institution a large amount of the revenue it needs to operate.

"In fact, Madison College is getting almost its entire support from its own 800-acre farm... Nearly all of its 400 students earn their tuition, board, clothes, and all personal expenses by growing these crops and preparing them for use.

"The most interesting of these processing plants is the soybean factory where these beans are manufactured into thirty different food products which, in addition to what are consumed at the college, bring the institution a revenue of $60,000 a year. Among these foods are meat, bread, cheese, breakfast foods, pork and bean products, sweet milk, buttermilk, and coffee... They say that such foods are more nourishing than the meat or vegetable products for which they are substituted.

"Take soybean milk, for instance. You can't tell it from any cow's milk you ever saw, except when you taste it. You

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may not like the taste, but many consumers prefer it to that drawn from a cow...

"The bread made from soys is baked in loaves of the same size and shape as bread from regular bakeries. This bread is sold in nearly all the grocery stores of Nashville and in other cities. All these soy foods are sold to grocery chains and are consumed from coast to coast...

"Madison College was started 37 years ago by Dr. E.A. Sutherland, who is still its president... The students have not only been working their way through college but have actually built, with their own hands, the 120 buildings in which the institution and its industries are operating. They not only process the soy foods and serve them to the patients of the sanitarium, but they also constructed the factory and sanitarium buildings in which these foods are made and consumed."

Note: Forward magazine is published weekly by the Board of Christian Education of the Presbyterian church, USA.

976. *Farmer's Digest* (*Ambler, Pennsylvania*). 1941. Soybean milk! 4(10):28-29. Feb.
• ***Summary:*** About the work of Dr. Harry W. Miller (of Ohio and China) with soymilk. This article is condensed from *The Ohio Farmer* (30 Nov. 1940, Cleveland, Ohio).

977. Grand Central Public Market. 1941. During Lenten season enjoy: Madison Foods. *Los Angeles Times*. March 7. p. A6.
• ***Summary:*** "Soyburger. Vigorost. Stakelets. Soy Cheese [tofu]. Nut Meat. Soy beans.

"Delicious foods that make Lent a season of real eating enjoyment... See them on display at Jones Grain Mill today!" Address: Between 3rd & 4th Streets, Broadway to Hill, Los Angeles.

978. Frank, Milo O. 1941. Just what is health food? *Health News* (*Hollywood, California*) 9(5):5, 9. March 14.
• ***Summary:*** "Two meanings are attached to 'health foods.' The wider includes all nutriment that the body can digest with benefit. The narrower refers to *selected products of high natural value* and to *supplements* prepared for specific purposes. But in every case, a real health food, is truly beneficial.

"On the distributor rests the duty of investigating every product to make certain that it meets this definition.

"Are you aware that the sugar problem is solved? The National Sugar Refining Co. has heard our demands and agrees that we must have what we want. Health shops are busy selling *Grans*, 'raw sugar at its best.' It's wholesome with natural cane juice..."

"Some firms have won such a reputation that the very *name* is a guarantee. One of these is the Pfaffman Co., Cleveland [Ohio]. They began in 1873 and in 1914 pioneered

health foods. From the start, they catered to those demanding utmost purity, served hospitals and other institutions where nutritive values are important. No one really knows how good macaroni can be unless familiar with their Soymac brand made of the highest quality durum wheat to which whole soybean flour has been added. And everybody likes their 'Kwik Soup'–even the sternest dieticians!"

"Also outstanding in the health field are the famous Madison products from Madison, Tennessee, delicious new soy foods and meat substitutes that accomplish more than arguing to produce enthusiastic vegetarians." Address: 2027 Hillhurst Ave., Los Angeles, California.

979. Madison Foods. 1941. A family of health foods: For the whole family (Ad). *Madison Health Messenger* (*Madison, Tennessee*). Campmeeting '41. p. 6. Undated.
• ***Summary:*** See next page. A full-page ad, with the best photos seen to date of the individual packages.

Note: On pages 2 and 4 are excerpts (indicated by paragraph number) from the very important book *Counsels on Diet and Foods*, a compilation from the writings of Ellen G. White. Address: Madison College, Madison, Tennessee.

980. Quivey, O.K. 1941. Soybean special ends three-state tour. *Soybean Digest.* April. p. 4, 10.

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• ***Summary:*** "The Soybean Special, operated by the Baltimore and Ohio and Alton Railroads in cooperation with Ohio State University, Purdue University, the University of Illinois and The American Soybean Association, April 2 completed a 6-week's pilgrimage through the Corn Belt, operating 2 weeks in each of the states of Ohio, Indiana and Illinois."

"During its pilgrimage the Special made 51 stops and was visited by 19,558 people, or an average of 383 per stop." It contained a soybean exhibit car and two lecture cars.

A cooking school was conducted in the women's lecture and exhibit car by Aneta Beadle Vogler, former nutrition specialist of Purdue University, who was specially engaged by the railroad to preside over the women's lecture program. Assisted by Miss Mary Mowry, an Indiana 4-H Club girl, Mrs. Vogler gave a general discussion of soybean products in the diet, then demonstrated three specific recipes– soybean loaf, soybean muffins, and soy fudge. "These dishes, as they emerged hot from the gas range, were served to the women and high school Home-Ec girls in attendance. One thousand and twenty-three muffins were made and served in the women's car and hundreds of prizes Ä all soybean food products such as soy flour, canned green soybeans, soy pancake and muffin flour, roasted salty soys, etc. Ä were presented to women visitors during the tour of the Special.

Note: The meaning of the term "Canned Green Soybeans" is unclear. They were probably canned mature soybeans with green seed coats rather than canned green vegetable soybeans. Moreover, they were probably sold by International Nutritional Laboratory (Dr. Harry Miller) of Mt. Vernon, Ohio.

"One of the features of the Special was the sound picture 'The Story of the Soybean,' made by Erpi Studios in cooperation with Dr. W.L. Burlison, University of Illinois.

"The program of the Soybean Special was broadcast from aboard the train by four different radio stations, including WLW Cincinnati, CKYW Cincinnati [Ohio], WMBD Peoria [Illinois] and WDZ Tuscola [Illinois]. As a result, the four stations and the Agricultural Development Department of the Baltimore and Ohio Railroad have been deluged with postcard requests for more information regarding the soybean and particularly for copies of the B&O booklets 'Soybean Recipes' and 'That Magic Plant, the Soybean.'"

Photos show: (1) The staff of men and women seated

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alongside The Soybean Special; the name and title of each person is given. (2) The men's lecture car packed with people listening to a lecture by D.F. Beard titled "Fitting Soybeans into the Farming System." (3) The inside of the exhibit car, with many displays on the walls. Another photo (p. 10) shows Mrs. Vogler and Miss Mowry in action at the cooking school. Address: Agricultural Development Dep., Baltimore and Ohio Railroad.

981. **Product Name:** Stakelets (Vegetarian Beefsteak).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1941 May.
How Stored: Shelf stable.
New Product–Documentation: Ad in *Los Angeles Times.* 1941. March 7. p. A6. During Lenten season enjoy: Madison Foods. Includes "Stakelets."

982. Madison Foods. 1941. A treat without meat (Ad). *Nature's Path* (*New York City*). July. p. 273.
• ***Summary:*** "Steaming hot or cold, you may have delectable foods without using meat of any kind. From these five basic food [products]–Soyburger, Stake-Lets, Vigorost, Not-Meat, and Yum–dozen of tasty entrees may be served to the delight of the most fastidious guests. Duplicate your favorite meat dish... All five basic foods contain complete protein... All five of these foods are hermetically sealed in enameled cans. Prices range from 10¢ for a 5-ounce can to 50¢ for a 39-ounce can. Available at health food stores and health food departments.

"Free–new issue *Madison Health Messenger* with newest information about soy beans, recipes, etc. Copies available at health food stores." Address: Madison College, Tennessee.

983. *Manila Tribune* (*Philippines*). 1941. Soya-Lac Supplement (Ad). Aug. 16. *
• ***Summary:*** This full-page supplement, including a 5-column ad for Miller's Soya Lac, is devoted to the story of soya milk and the soya bean. The lead article states: "By unbiased laboratory analysis, soya milk has been found to be virtually identical to cow's milk in nutritional elements, and higher, in fact, in protein content." Paul Sycip, a soya milk chemist and a graduate of the University of the Philippines, recently returned from a tour of U.S. soya milk factories. He stayed most of the time with Dr. Harry W. Miller, owner of the patent on soya milk processing.

Another article quotes Rafael Alunan, Philippines Secretary of the Interior, as saying that "The National Land Settlement Administration is already committed to the growing of the soybean on a large scale in the Koronadal Valley and to making soybeans one of the major producing crops."

984. *Times* (*Morning ed.*) (*Chattanooga, Tennessee*). 1941. The lowly soybean rises. Aug. 29.
• ***Summary:*** "Most people don't know what soybean are. They associate them, rather loosely and vaguely, with cover crops on farm hillsides. Something cows eat, maybe. But the lowly soybean may hold the future of the world health in its little husk.

"Henry Ford has been experimenting with soybeans down on his Ways (Georgia) plantation for many years. He has grown a lot of soybeans and has turned them into plastic things. Mr Ford, it is said, drinks soybean milk. It is healthful.

"Over at the Madison (Tennessee) sanitarium they grow a lot of soybeans, too. The doctors at Madison have found out how to make the soybean look like beefsteak. It not only resembles steak, but it tastes like steak. The soybean is a fine source of protein. So is steak, but the soybean is said to have steak beaten for the most proteins. The Germans have been using the soybean in their blitzkrieg tactics. The Nazi soldiers have been partly on a soybean diet since the war began."

985. International Nutrition Laboratory. 1941. New items for the table: Soy products by Miller (Ad). *Soybean Digest.* Sept. p. 17.
• ***Summary:*** The three new soy products are: "Soy-A-Malt–A delicious wholesome soy-malted milk–a pure vegetable beverage containing all and more of the food qualities of milk."

"Canned Green Soybeans–Delicious creamed, buttered, or in soups and salads.

"Soyalac–Spray-dried Infant Food–the perfect formula for the newborn infant–especially fine for malnutrition and allergic conditions.

"Available in Health Food Stores everywhere or for further particulars regarding these Miller Soya Foods write International Nutrition Laboratory, Mount Vernon, Ohio."

Note: The meaning of the term "Canned Green Soybeans" is unclear. They were probably canned mature soybeans with green seed coats rather than canned green vegetable soybeans. Address: Mt. Vernon, Ohio.

986. **Product Name:** Miller's Soyalac Infant Food [Spray-Dried Powder, or Liquid].
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1941 September.
Wt/Vol., Packaging, Price: 1 lb can.
New Product–Documentation: Ad in Leaflet titled "Optimal Nutrition in Infant Feeding." Undated. The spray-dried product is packaged in 1-lb cans, "sealed in nitrogen gas to insure shelf wear, 24 cans to the case. It is sold from coast to coast, mainly through health food stores and

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druggists."

Ad in *Soybean Digest.* 1949. Sep. p. 89. "Soyalac: A Spray Dried Infant Food." A photo shows a can of the Infant Food

987. Special Foods Incorporated. 1941. Retail order blank. Worthington, Ohio. 1 p. Catalog. Oct. 1.
• ***Summary:*** See next page. Products include: E-Z-Lax (smooth bulk and lubrication for constipation). Beta Broth (Meat-like flavor–dissolves instantly). Tastex (Yeast extract–meat-like flavor). Spread (Tasty sandwich spread). Protein foods (used in place of meat): Choplets (Cutlets in 8 oz, 17 oz, or 30 oz), Proast (Dark, in 8 oz, 16 oz, or 30 oz), Numete (Light, in 8 oz, 16 oz, or 30 oz). Soy Beans with Tomato Sauce (17 oz or 30 oz). Soy Beans, Plain (17 oz or 30 oz).

Note 1. This is the earliest document seen (Nov. 2013) concerning Worthington Foods and soy.

Note 2. Worthington was named Special Foods from its founding in 1939 until it was incorporated as "Worthington Foods, Inc." in Dec. 1945. Address: Worthington, Ohio.

988. Ralphs Grocery Co. 1941. "68 years of progress." Celebrating the opening of Ralphs new store at 14049 Ventura Blvd. (corner Hazeltine) (Ad). *Los Angeles Times.* Oct. 25. p. 8.
• ***Summary:*** This full-page ad lists many products that will be on sale from Oct. 25th to 28. Part of the ad is for "Loma Linda. Ovensweet Ruskets, malted toasted whole wheat biscuit, 12-oz. pkg.–12¢. Ovensweet Kris-bits, 13-oz. pkg.–12½¢. Oven cooked wheat, 1-lb. Cello–12¢. 2-lb. Cello–20¢.

Another part is for "Cubbison's. Assorted toast, per pkg.–13¢. Vegetized wheat cookies, per pkg.–13¢. Assorted cookies, Honey macaroons, or Dunkerettes, per pkg.–8¢. Wheat soda crackers, per pkg.–9¢.

Also: "Ficgo coffee substitute. 1-lb. pkg. or Individual bags (25 to a pkg.)–each 25¢." Address: [California].

989. **Product Name:** Canned Soybeans (Plain, or with Tomato Sauce).
Manufacturer's Name: Special Foods, Inc. Renamed Worthington Foods, Inc. in Dec. 1945.
Manufacturer's Address: Worthington, Ohio.
Date of Introduction: 1941 October.
Wt/Vol., Packaging, Price: 17 oz and 30 oz can.
New Product–Documentation: Wholesale price list. 1941. Oct. 1. With tomato sauce: 17 oz retails for $0.20 and 30 oz for $0.35; Ad in Health magazine. 1947. 14(2):2. Feb. "Good Foods for Every Occasion." Interview with James Hagle? 1983. Sold in 17- or 30-oz. cans.

Note: This is the earliest known product made by Special Foods, Inc. that uses soy as a major ingredient.

990. **Product Name:** Tasty Sandwich Spread (Ground Cooked Soybeans with Chopped Olives).
Manufacturer's Name: Special Foods, Inc. Renamed Worthington Foods, Inc. in Dec. 1945.
Manufacturer's Address: Worthington, Ohio.
Date of Introduction: 1941 October.
Wt/Vol., Packaging, Price: 10 oz or 30 oz cans.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Wholesale price list. 1941. Oct. 1. 10 oz retails for $0.25 and 30 oz for $0.65.

Chopletter (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods." April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include "Sandwich Spread." Interview with James Hagle? 1983. Sold in 10 oz. cans.

991. **Product Name:** Choplets (Resembling Pork Chops).
Manufacturer's Name: Special Foods. Renamed Worthington Foods, Inc. in Dec. 1945.
Manufacturer's Address: Worthington, Ohio.
Date of Introduction: 1941 October.
Ingredients: In 1971: Wheat protein slices [wheat gluten] in broth consisting of extract of Brewer's yeast and vegetables, soy and other hydrolyzed vegetable proteins, mushroom broth, MSG, salt, dextrose, corn oil, caramel coloring.
Wt/Vol., Packaging, Price: 8 oz, 17 oz, and 30 oz can. 20 oz can retails for $2.75 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Wholesale price list. 1941. Oct. 1. 10 oz retails for $0.20 and 30 oz for $0.60; Ad by Worthington Foods, Inc. in *Health.* 1947. Feb. p. 2. "Good foods for every occasion." Choplets are mentioned.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet*

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RETAIL ORDER BLANK

SPECIAL FOODS INCORPORATED

WORTHINGTON, OHIO

THERE'S WORTH IN Worthington FOODS

Date Aug. 27/42

Ship To:
Name B. S. Crandell
Street
City State

TERMS: CASH WITH ORDER WE PREPAY POSTAGE ON ORDERS OF $2.00 OR MORE

o. in ase	Quantity	NAME OF PRODUCT	Each	TOTAL
		E-Z-LAX		
		(Smooth Bulk and Lubrication for Constipation)		
12		E-Z-LAX 10 oz.	1.00	
4		E-Z-LAX 3 lb.	3.50	
		BETA BROTH		
		(Meat-like Flavor—Dissolves Instantly)		
12		BETA BROTH 3 oz.	.45	
12	1 cs	BETA BROTH 10 oz. ✓	1.25	7.50
4		BETA BROTH 5 lb.	8.50	
		TASTEX		
		(Yeast Extract—Meat-Like Flavor)		
12		TASTEX 2¾ oz. (Glass Jar)	.45	
[illegible]		TASTEX 5½ oz. (Glass Jar)	.95	
12		TASTEX 11 oz. (Glass Jar)	1.55	
6	1-50#	~~TASTEX 18 oz. (Glass Jar)~~ 50# ✓	2.40	38.10
		SPREAD		
		(Tasty Sandwich Spread)		
24	2 doz	SPREAD 10 oz. Pipe Chopped Olives ✓	.25	5.28
12		SPREAD 30 oz.	.65	
		PROTEIN FOODS		
		(Used in the place of Meat)		
48		CHOPLETS 8 oz. (Cutlets)	.20	
24	5 cs	CHOPLETS 17 oz. (Cutlets) 4.20 ✓	.35	21.00
12		CHOPLETS 30 oz. (Cutlets)	.60	
48		PROAST 8 oz. (Dark)	.20	
24	4 cs	PROAST 16 oz. (Dark) 4.20 ✓	.35	16.80
12		PROAST 30 oz. (Dark)	.55	
48		NUMETE 8 oz. (Light)	.20	
24	4 cs	NUMETE 16 oz. (Light) 4.20 ✓	.35	16.80
12		NUMETE 30 oz. (Light)	.55	
		SOY BEANS		
	18#	Bulk Tomato Cold ✓ (Ready to Eat)		4.52
24		SOY BEANS with Tomato Sauce 17 oz.	.20	
		SOY BEANS with Tomato Sauce 30 oz.	.35	
24		SOY BEANS, PLAIN 17 oz.	.18	110.00
12		SOY BEANS, PLAIN 30 oz.	.30	

Customer's Signature

October 1, 1941 Prices subject to change without notice.

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Manual. 1st ed. p. 95. Chaplets + their liquid contain 15.62% protein, 0.56% fat, and 5.40% carbohydrate. *Chopletter* (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods." April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include Choplets.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. Lists the ingredients in "Choplets (Worthington)."

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 175. The ingredients in "Choplets (Worthington)" are "wheat protein slices in a broth consisting of water, HVP, yeast extract, soy sauce, dextrose, L-lysine mono-hydrochloride, mushrooms, salt, corn oil, caramel color."

Interview with James Hagle? 1983. The name Choplets was suggested by Dr. George Harding's 11-year-old son. Choplets resembled Dr. Harry Miller's Cutlets. They were a unique best-seller into the 1960s.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. Ingredients are the same as those listed below.

By July 1990 the product had been reformulated to include textured soy protein concentrates.

992. Prehn's Health Food Store. 1941. Headquarters for soybean products (Ad). *Soybean Digest.* Dec. p. 12.

• ***Summary:*** "Let us supply you with Soybean Foodstuffs. Choose from such a wide variety as Dr. Miller, Dr. Fearn, Madison College, Soy Good, Battle Creek, Happy Hour, Penna Soy, Mother's Choice, Veta-Roni, Loma Linda, Bill Baker, Mrs. Hauser.

"Write for a Price List. We ship to 44 states. Why not let us ship to you... Located on the campus of the University of Illinois one block east of the Old Agriculture Building." Address: 700½ South Goodwin St., Urbana, Illinois. Phone: 6-1691.

993. **Product Name:** Light Numete. **Manufacturer's Name:** Special Foods, Inc. Renamed Worthington Foods, Inc. in Dec. 1945. **Manufacturer's Address:** Worthington, Ohio. **Date of Introduction:** 1941. **Wt/Vol., Packaging, Price:** 8 oz, 17 oz, and 30 oz can. 19 oz can retails for $2.65 (7/90, California). **How Stored:** Shelf stable; refrigerate after opening. **New Product–Documentation:** Wholesale price list. 1941. Oct. 1. 8 oz retails for $0.20 and 30 oz for $0.55.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. 19 oz (538 gm) can. The ingredients for Numete ("Light" is not mentioned) are now: Water, peanuts, white corn flour, soy flour, salt, monosodium glutamate, niacinimide [niacinamide], iron (as ferrous sulfate), vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12.

994. White, Julius Gilbert. 1941. The animal kingdom, a reservoir of disease. Madison College, Tennessee: Published by the author. Distributed by Julius Gilbert White Publications, Madison College, Tennessee. 64 p. No index. 22 cm. [215 ref]

• ***Summary:*** The author is a teacher at Madison College, a Seventh-day Adventist college and sanitarium. He presents the potential dangers of eating animal products, thus implying his support for a vegetarian diet–such as that served at Madison College. The main diseases discussed that can be transmitted to humans include tuberculosis, brucellosis, Bang's disease, pullorum disease, and leukosis. Address: Madison, Tennessee.

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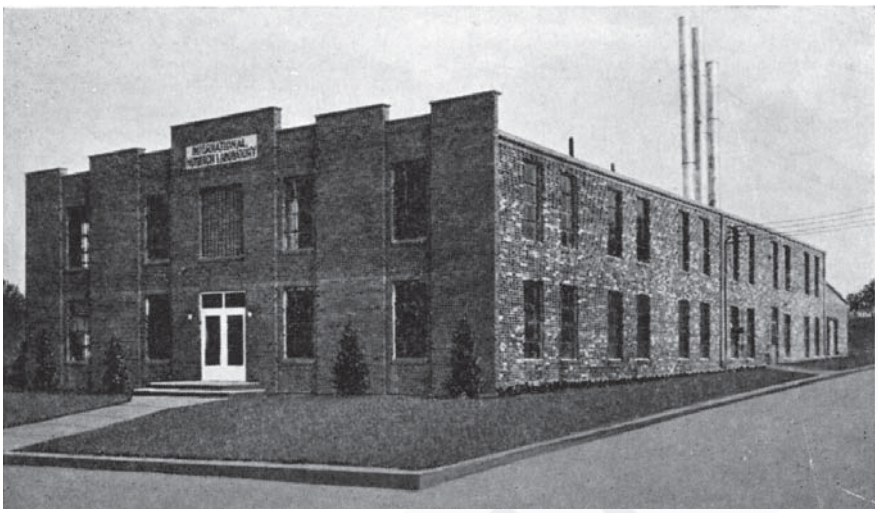

995. Leadsworth, J.R. 1941? Diet and endurance. n.p. 47 p. Undated. Life and Health Series, No. 3. Received by NAL Aug. 21, 1941. [3 ref]

• ***Summary:*** About vegetarianism. Discusses: Diet and endurance: Athletic contests, laboratory tests of the effect of diet on endurance, effect of diet on the strength of animals, endurance of vegetarians. Anatomy and physiology: Testimony of naturalists and physicians. Disease among animals: Stock-yard abominations. Effect on disposition: Personal experience, vegetarians and carnivorous animals, physical and mental qualities affected by diet.

A stamp shows that this booklet was received by the National Agricultural Library on 21 Aug. 1941. Address: M.D., Loma Linda Sanitarium, California.

996. Smith, A.K. 1941? Soy sauce producers. 1 p. Undated. Unpublished manuscript.

• ***Summary:*** This handwritten, undated list seems to have been written sometime after 1940.

San Francisco: Wing Nien Soya Sauce Co. (fermented).

Los Angeles: Mrs. Hauser's Soya Foods Co., 4617 Melrose Ave.

Chicago: Great China Foods Co.

Decatur, Illinois: A.E. Staley Mfg. Co.

Columbia City, Indiana: Oriental Show You Co.

Rochester, New York: Vegetable Products Co., 15 Circle St.

Lexington, North Carolina: Vitro Nu Foods Co. [Corp.].

Mt. Vernon, Ohio: International Nutrition Laboratory.

Philadelphia, Pennsylvania: Tastee Soy Foods, 254 E. Girard Ave.

Williamsport, Pennsylvania: Soya Products Co. Address: [NRRL, Peoria, Illinois].

997. Miller, Harry W. 1942. Answering America's protein problem! *Soybean Digest.* Jan. p. 6.

• ***Summary:*** "Editor's Note: Dr. Miller, whom we here introduce to the readers of The Soybean Digest, is a leader of the soybean food industry. President of the International Nutrition Laboratory, Mt. Vernon, Ohio, manufacturers of Miller's Soya Foods, he has had a most interesting career.

"Graduating in medicine in Chicago in 1902, he went to China the next year as a medical missionary under the Seventh-day Adventist board. He spent 8 years in the interior of China, and then was transferred to the superintendency of the Washington Sanitarium and Hospital, Tacoma Park, D.C., where he remained from 1913 to 1925.

"Returning to China in 1925, he established several medical centers in that country and in Japan, Korea, the Philippines and the Malay Peninsula.

"Becoming interested in dietary problems, because his specialty, goiter surgery, was directly concerned with a dietary deficiency condition, and because of the high Oriental mortality rate due to malnutrition, he began studying the food products which might ease the situation.

"This led him to the soybean, because, he observed, malnutrition was not nearly so acute in those sections in which the soybean was an article of diet.

"In 1936 Dr. Miller established a food plant in Shanghai from which he manufactured milk from the soybean. As he puts it: 'This work was nicely underway when the Japanese invasion of Shanghai resulted in the complete destruction of the plant, and after a year of waiting I again returned to America and established in Mt. Vernon the International Nutrition Laboratory where we have specialized on the processing of the soybean, not only studying varieties best suited for human food, but methods of preparing the bean and also developing processing equipment, that will give us a more satisfactory product."

"Dr. Miller has an interesting statement regarding the use of Soya Milk in infant feeding: 'In this country nearly a score of babies that we are in touch with have either been started on Soya Milk or have been transferred to it very shortly after birth, and the number of users of Soya Milk for infants are increasing very rapidly. Our results of feeding large numbers of babies and children are to be found in the National Medical Journal of China.'"

"Soybean foods for human consumption have to date been scarcely available in America, and the question arises: Why bother to supplement a dietary which is already so abundant?

"Still, it would seem strange it the raw material which has been a mainstay in the Oriental diet for so many centuries could not be utilized in the American diet. It can be!

"That part of the American diet most often lacking is

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protein. Most animal proteins are cumbered with toxins, and most vegetable proteins are inadequate for nutrition.

"Soybeans the Answer: The soybean provides the answer to the protein problem. With a protein content of more than 40 per cent, it is the best source of protein which we have. Its protein is biologically equal to that of meats and animal foods, and it has the advantage of being free from toxins.

"The effectiveness of the soybean is strikingly demonstrated in China. Where vegetable protein is abundantly supplied in the diet as in Manchuria, and in North China, we have a stalwart race of people. However, in South China where the major products are oil and sugar we see dwarfed bodies and it is a rare exception to find in the warm climate among oil and carbohydrate feeders a single well-developed individual." A photo shows "The International Nutrition Laboratories, Mt. Vernon, Ohio, home of 'Miller's Soya Foods.'" The building is large, and appears to be constructed from bricks. Address: M.D., International Nutrition Lab., Mt. Vernon, Ohio.

998. *Soybean Digest.* 1942. Manila paper praised milk from soybean. Feb. p. 7.
• ***Summary:*** On 16 Aug. 1941 the *Manila Tribune,* in the Philippines capital, published a "Soya-Lac Supplement" The full page, including a five-column advertisement for Miller's Soya Lac, is devoted to the story of soya milk and the soya bean. A nice photo shows Dr. Harry W. Miller.

999. Dies, Edward J. 1942. Soybeans: Gold from the soil. New York, NY: The Macmillan Co. 122 p. April. Index. 21 cm. Revised ed. March 1943. 122 p. Includes index, Illust., 22 cm. [205 ref]
• ***Summary:*** A landmark popular book and a good description of the pioneering period of soybean production and processing in the United States. Contents: 1. A certain man of science (William Morse and Dr. C.V. Piper). 2. Vignette from antiquity (how the soybean vine saved a caravan in China besieged by bandits). 3. Birth of an industry (U.S. soybean crushing). 4. The big drive starts (A.E. Staley, Glidden, Central Soya, Buckeye Cotton Oil Co., Drackett Co., ADM, Allied Mills, Ralston Purina, Spencer Kellogg and Sons, Swift & Co., Shellabarger Grain Products Co. Standard Soybean Mills, Iowa Milling Co.). 5. Breeding new types (Burlison, Hackleman). 6. Scientists commend product (oil and meal). 7. Lakes of oil. 8. In the field of industry (U.S. Regional Soybean Industrial Products Laboratory, and Henry Ford). 9. Listening post for soy (NRRL at Peoria). 10. Whims and price turmoil. 11. Milk for the tots of China (Dr. Harry Miller). 12. Soys in the home garden ("the vegetable soybean for table use," "garden varieties of soybeans," "green soybeans," "green vegetable soys," "vegetable type soybeans," "edible varieties"). 12. Americanizing soy foods (mainly about soy flour and improving its taste for use during World War II). 14. Little bean, what now? Appendix: Chronology of the soybean (27 entries). Bibliography. Dies was born in 1891.

Illustrations and diagrams show: (1) Principal centers of U.S. soybean production (p. 19, map). "Almost 90 per cent of all soybeans are harvested in Illinois, Iowa, Indiana, and Ohio. If three other states are included as shown on the map–Missouri, Michigan, and Virginia–the total is 97 per cent. (2) Principal centers of U.S. soybean processing (p. 20, map). Discs of different size show the various centers. Since Illinois produces 52% of the harvested soybeans, central Illinois is the center of soybean processing [crushing] in the USA. "Total processing capacity in late 1942 exceeded 100 million bushels for the regularly established soybean processing plants." (3) Diagram of uses of the soybean (p. 68).

Chapter 2, "Vignette from antiquity" begins: "Even when the Pyramids were being built, three hundred years before the Tower of Babel, and twelve centuries before Solomon fashioned his temple, the soybean was hoary with age. The earliest writings on the subject go back to the period of the Pyramids.

"But of the science of soybean growing you will find no recorded beginnings in the musty tones [sic, tomes] of oriental history. No book reveals the name of the inquisitive oriental who in the misty long ago began sowing the seeds, harvesting the beans, pounding them into a mash for cooking and eating, and probably boring his friends no end with tales of their merit. There is no record depicting this unsung hero's foresight in saving the seed of the magic plant against next year's hunger. Likely as not he was a crude dreamer who fumbled his hunches and accomplished little in a lifetime of wrestling with the problem of proper cultivation.

"Oriental literature of a later date contains much about the plant but of its origin as a food product again there are only legends.

"A choice vignette from antiquity on the initial use of soybeans runs something in this fashion. Long, long ago, far back in the dim past, a caravan pulled out of an eastern China town. It consisted of a number of merchants and their servants... The caravan was bound for a distant inland settlement intent upon disposing of its valuable wares." After trading in the north, the caravan headed home, "now laden with gold, silver, and choice furs received in payment for the merchandise. Suddenly at dusk on a day when the caravan was still far from home it was surrounded by bandits who had learned of the rich prize at hand. Merchants and servants took quick refuge in a rocky defile easy of defense. Here they were besieged day on day until their scanty provisions ran low and starvation seemed inevitable. At length a servant whispered to his master and pointed to a vinelike plant bearing some sort of legume. No one could recall having seen such a plant before but all were touched with the pinch of hunger. So with grave doubts the men pounded

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the beans into a thick flour, mixed it with water, and made coarse cakes. Upon these cakes the caravan survived, and with renewed strength fought off the foe until help arrived. And, so the legend goes, from that day forth the miracle bean became the staff of life in China." Note 1. This story of the caravan besieged by bandits in China is a longer and embellished version of the tale first dreamed up and told by H.W. Galley in *Soybean Digest* (Dec. 1940).

"True or false, the story has lived through the ages.

"For the first written record of the soybean one must turn to 'Materia Medica,' written by Emperor Shen-nung in 2838 B.C. It describes many plants of China including that of the soybean, but even the name is clouded with antiquity. In the early Chinese history the name 'Shi-yu' [sic] and the 'Ta-tou' were applied to the soybean. These names probably antedate the first authoritative records of the plant."

Dies then discusses Engelbert Kaempfer, Linnaeus, and Moench.

"Then in 1804 a Yankee Clipper ship in full sail glided down the coast of China searching for ports for a return cargo. Not sure of the length of the return journey, the captain ordered several bags of soybeans tossed into the hold as a reserve food supply. And thus did the first soybeans enter America. Little was done about the soybeans then. Note 2. This is the earliest document seen (June 2003) that further embellishes the myth of the "clipper ship" with phrases like "glided down the coast of China" or "ordered several bags of soybeans tossed into the hold"–all supposedly in connection with the introduction of the soybean to the United States. This is also the earliest document seen (Aug. 2000) that compares the age of the soybean with that of the pyramids (in Egypt; the oldest and largest was built for Khufu at Giza in the 26th century B.C.), the Tower of Babel (in Babylon [today's Iraq]), or Solomon's Temple (in today's Israel), arguing that the soybean was much older than all of them.

"James Mease of Pennsylvania first mentioned in American literature shortly after this importation that the soybean was adaptable to Pennsylvania and should be cultivated" (p. 9).

In Chapter 3 (p. 14) Dies notes: "The first soybeans processed in this country were imported from Manchuria in 1911 and sold to Herman Meyer who had a small crushing plant in Seattle, later called the Pacific Oil Mills. From the raw material he produced the two chief products–soybean oil meal for livestock feed and soybean oil, selling the latter locally for industrial use. The meal was advertised and sold as 'Proteina,' a high-protein feed. The venture did not last for any considerable period; a few years later Meyer passed away." Note 3. This is the earliest document seen (May 2010) that mentions Herman Meyer.

"Soybeans grown in this country were first processed by the Elizabeth City Oil and Fertilizer Company at Elizabeth City, North Carolina. W.T. Culpepper, now postmaster at Elizabeth City, was manager of the new mill, started in 1912. The first domestic soybeans were crushed for commercial purposes there in the late fall of 1915. It was a small operation." Note 4. This is the earliest document seen (May 2010) that mentions W.T. Culpepper.

"At that time, most of the soybeans were grown in North Carolina, and the Winterville Cotton Oil Company at Winterville, North Carolina, purchased expellers for processing purposes, and these operated on soybeans for a limited period. Still another mill, operated by Havens Oil Company at Washington, North Carolina, crushed thirty thousand bushels of beans as an experiment in 1916." Note 5. This is the earliest document seen (May 2010) that mentions the Winterville Cotton Oil Company.

"'My uncle, Jonathan Havens,' says J. Havens Moss, 'was the first to plant soybeans in this section, devoting considerable acreage to the mammoth yellow [Mammoth Yellow] type which grew and matured splendidly from the very start. Its value to the land was obvious'" (p. 14-15).

Note 6. On the first page of the copy owned by Soyfoods Center is a signed inscription, in dark blue ink, which reads: "With kind regards to Russell East, who has done much on behalf of the soybean–Edward Jerome Dies."

Note 7. Only minor changes were made on about 13 pages of the revised edition published in March 1943. None of the statistics in the many tables were been updated, and the bibliography was not changed. Address: USA.

1000. *Good Health* (*Battle Creek, Michigan*). 1942. Cow's milk a common cause of allergy. 77(4):52-53. April.
• ***Summary:*** In a group of children ranging in age up to 4 years, the causes of allergy were: milk 55%, eggs 40%, and wheat grains 40%.

"An effective remedy for milk allergy is to exchange cow's mild for an excellent milk prepared from the soybean which is now available under the commercial name of Soygal. This plant milk is the result of many years' research conducted in the food laboratories of The Battle Creek Food Company,..."

"Soygal, when examined by a government expert some months ago, was pronounced the first wholly satisfactory preparation of soy milk that he had ever examined, being wholly free from the unpleasant taste of the soybean."

1001. *Madison Health Messenger* (*Madison, Tennessee*). 1942. Dr. E.A. Sutherland, Health Educator. Campmeeting '42. p. 1-2.
• ***Summary:*** An excellent biography of the President of Madison College, with a large portrait photo. He was a student at Battle Creek College in Michigan, where he "earned a large portion of his school expenses by canvassing [selling Christian books door to door] during the vacation periods and by other work he could pick up. His student days were in the era of denominational controversy over health reform, and students took sides. Keen in their study of the

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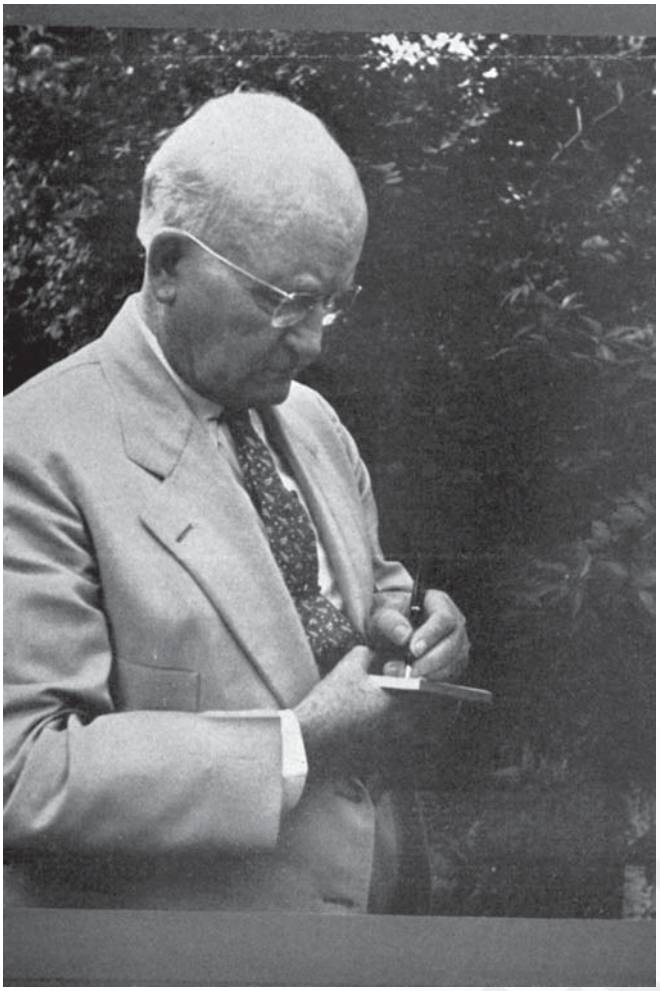

Spirit of prophecy, Sutherland and his friend and roommate, Percy T. Magan, persuaded the college matron to give the fleshless diet advocates a vegetarian table. Thus began a many-sided career in the field of health education.

Walla Walla College was founded as a Seventh-day Adventist college in the state of Washington–a first in the northwestern United States. Edward Sutherland, still a young man and newly married, was chosen to be president of this pioneer effort. As a health reformer, he saw that students at Walla Walla College were served a fleshless [vegetarian] diet.

In 1897 he became president of Battle Creek College. He became a leader in a country life movement, which at the turn of the century resulted in the transfer of Battle Creek College to a beautiful 300-acre fruit farm on the banks of the St. Joe River; it was rechristened Emmanuel Missionary College (EMC [in Berrien Springs, Michigan]). "Here, the health principles were taught by precept and practice."

Then Madison College was founded. "At Madison, another and important step came with the purchase of what had once been the conference-operated food factory at Edgefield Junction [formerly operated by Jethro Kloss]. The wrecked structure was rebuilt on Madison College campus, where, with meager facilities but with the pioneer spirit of former years and the faith of a Joshua, Dr. E.A. Sutherland and Mother Druillard set the pace for a health food manufacturing center that today [as Madison Foods] is distributing its products in the 48 states of the Union and some places across the sea.

"Madison Foods has carried on experimental work in its laboratories, especially with that rich, Oriental legume, the soybean, that has given Madison preeminence in its use as a successor of animal flesh.

"For fifty years, Dr. Sutherland has pioneered a many-sided work of health. He has ventured often into untried fields." "In the field of health, he is recognized by many as the one who, in God's hand, is responsible for the restoration of health. Through fifty years of unremitting service, he has come forth still sturdy in health, largely because of a consistent practice of the great principles he so strongly advocated and with a buoyancy of spirit that still serves to stimulate faith in many a faltering mind. To many who know him intimately, he is a fine example of the results of wholehearted commitment to the great principles of Christian education, with all that term implies, together with a simple personal acquaintance with the Saviour that makes it possible for him to say under all circumstances, 'We know that all things work together for good to them that love God.'"

1002. Carver, G.W. 1942. Re: Soy bean milk and peanut milk. Letter to Mrs. Ruth Sheldon Knowles, Petroleum Specialist, U.S. Department of Interior, Washington, DC, June 6. 1 p. Typed, without signature (carbon copy). [1 ref]
• ***Summary:*** In a letter dated June 3, Mrs. Knowles said she had read that "peanut milk was being used in the Belgian Congo with great success." Dr. Edward A. Perk, Pediatrician in Chief at Johns-Hopkins Hospital wrote her, in reply to letter of inquiry, saying that he knew of no one there who was working to develop a peanut milk. "He said he thought the chances with soy bean would be much better and that soy bean milk had been used in China as a food for infants and is the basis for nonmilk formula for babies, like Sobee."

Mr. Carver replied: "My work with peanut milk, soy bean milk, and other vegetable emulsions have been tried out by me, and the two that interested me most are soy bean milk and peanut milk. Where ever peanuts can be raised, I recommend the use of peanut milk, and where soy beans can be successfully raised soy bean milk, as soy bean milk has reached a much higher commercial stage than peanut milk, of course, as it is much older in development.

"Madison College, Madison, Tennessee, can give you much information with reference to the soy bean milk, as they have quite a number of commercial products made from soy beans.

"There is much yet to be learned about peanut milk and its uses. Missionaries from Africa, besides individuals working in foreign fields have used peanut milk most

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successfully in their work, according to the letters that I have received from them." Address: [Tuskegee, Alabama].

1003. Webber, P.A. 1942. The soy bean as a food. *Madison Health Messenger* (*Madison, Tennessee*) 4(2):1, 5. Undated.

• ***Summary:*** A photo shows a dignified, white-haired man, apparently Dr. Perry Webber, working in the chemistry laboratory of which he is in charge. Address: PhD, Prof. of Chemistry, Madison College.

1004. *Madison Survey* (*Madison, Tennessee*). 1942. For several months the Food Factory remodeling project has been under way... 34(4):52. July 8.
• ***Summary:*** "... supervised by Professor William Sandborn, head of the Industrial Arts Department. Another sixty days should conclude this work, which means that the Factory has been enlarged and in many ways brought up to date to meet growing business demands." Note: Actually, a practically new structure was built.

1005. USDA Bureau of Plant Industry. Div. of Forage Crops and Diseases. 1942. Firms manufacturing or handling soybean food products. 3 p. July. Mimeographed unpublished manuscript.
• ***Summary:*** The companies are listed alphabetically by state, and within state by city. Numbered codes after each company, keyed to a list of 35 soyfood types in the back, explain which foods are made by each company. Unfortunately, it is not clear from this list which companies are manufacturers and which are "handlers" (retailers or distributors). California: Arlington (Loma Linda Foods), Berkeley (Golden Gate Food Products Co.), Glendale (Hygenic [Hygienic?] Food Co.), Los Angeles (El Molino Mills, Mrs. Hauser's Soya Foods Co. {4617 Melrose Ave.}, Kevo Co., Klein Soup Co.), San Francisco (Radcliffe Soya Products {146 Fillmore St.}), Santa Cruz (Daglish Health Food Service). Delaware: Milton (Draper Canning Co.). Illinois: Bloomington (Funk Bros. Seed Co.), Chicago (Allied Mills, Armour & Co., Dewey Food Products Inc., Dietetic Supply House, Durkee Famous Foods, Fearn Soya Foods Co. {355 W. Ontario St.}, Glidden Co., Great China Foods Co., Griffith Laboratories {1415 W. 37th St.; handles soy flour and grits}, John F. Jelke Co., Soybean Products Co. {210 N. Carpenter St.}, Swift & Co.), Decatur (Spencer Kellogg and Sons, A.E. Staley Manufacturing Co.), Elgin (B.S. Pearsall Butter Co.), Urbana (Prehn's Health Food Store). Indiana: Columbia City (Oriental Show-You Co.), Decatur (Central Soya Co.), Indianapolis (Standard Margarine Co.). Iowa: Des Moines (Soy Products Co.). Maryland: Baltimore (J.H. Filbert, Inc., The Wm. Schluderberg–T.J. Kurdle Co.), Takoma Park (Hillcrest Health Products Co.). Massachusetts: Boston (Prince Macaroni Co.), Newton Centre (W.L. Cummings & Co.). Michigan: Battle Creek

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(Battle Creek Food Co.), Detroit (Shedd Products Co.). Minnesota: Minneapolis (Archer-Daniels-Midland Co.). Missouri: Kansas City (Harrow-Taylor Butter Co.), St. Louis (Blanton Co.). New Jersey: Vineland (George A. Mitchell). New York: Brooklyn (Agash Refining Corp., Cosmo Packing Co., Soy-Malt Co. {234-A Marion St.}), Elmhurst, Long Island (American Lecithin Co.), Glandale, Long Island (Beskor, Inc. Note: As of May 1997 there is no place named "Glandale"–or "Glendale"–on Long Island), New York City (Barrett & Eastwood, Borden Company, Enco Chemical Corporation, Franklin Mills Co., National Biscuit Co., Soya Corporation of America {Rockefeller Plaza}, Stein, Hall & Co.), Rochester (Vegetable Products Co.). North Carolina: Asheville (Judd's Health Foods), Lexington (Vitro Nu Foods Corp.). Ohio: Cincinnati (The Churngold Corp., Miami Butterine Co.), Circleville (Winoor Canning Co.), Cleveland (Barton Nut & Candy Co., Pfaffman Egg & Noodle Co.), Columbus (Capital City Products Co.), Greenville (O'Brien Milling Co.), Mount Vernon (International Nutrition Laboratory [Dr. Harry Miller]), Worthington (Special Foods, Inc.). Pennsylvania: Paoli (Great Valley Mills), Philadelphia (J.S. Ivins' Son, Inc., C.F. Simonin & Sons, Tastee Soy Foods), Williamsport (Penna Soya Products Co.). Tennessee: Madison College (Madison Foods). Wisconsin: Hortonville (Fox Valley Canning Co.), Oostburg (Oostburg Canning Co.), Owen (Owen Canning Co.).

The soy food types are: "1. Albumin or protein. 2. Beans–baked. 3. Beans–canned green. 4. Beans–roasted. 5. Breakfast foods. 6. Butter–soy. 7. Candies. 8. Chips or meats. 9. Chocolate. 10. Chocolate and other beverages. 11. Coffee substitute. 12. Crackers, wafers, cookies, puddings, etc. 13. Curd or cheese. 14. Diabetic foods. 15. Flakes. 16. Flavorings. 17. Flour. 18. Flour–prepared. 19. Grits. 20. Health foods. 21. Ice cream powder. 22. Infant foods. 23. Lecithin. 24. Macaroni products. 25. Malted products. 26. Meat-like products. 27. Milk. 28. Molasses–bean. 29. Oil. 30. Puffs. 31. Sauce. 32. Shortening. 33. Soups. 34. Soybeans. 35. Spreads–sandwich. 36. Toast."

Note: This is the earliest document seen (Nov. 2002) that mentions Griffith Laboratories. Address: Washington, DC.

1006. **Product Name:** Miller's Soya Milk [Liquid, or Powdered].
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1942 September.
New Product–Documentation: Ad in *Soybean Digest*. 1942. Sept. p. 16. "Miller's Soya Products." Soybean Blue Book. 1947. p. 72. Also listed in 1960, 1965.

1007. International Nutrition Laboratory. 1942. Miller's Soya Products (Ad). *Soybean Digest.* Sept. p. 16.
• ***Summary:*** This quarter-page black-and-white ad states: "The International Nutrition Laboratory are pioneers in soya bean processing of the choice edible varieties and of soya protein utilization in the human dietary. Our distinctive achievements are: 1. Flavor improvement. 2. Ready digestibility. 3. High protein yield. 4. Lower cost of man's protein dietary requirements.

"Send for catalogue of Miller's tasty soya foods including soya milk, liquid and powdered, delicious green soya beans, soya meat substitutes, such as Miller's savory vegetable cutlets, soya loaf, sandwich spread and soya cheese. Processed and packed by the International Nutrition Laboratory." Address: Mt. Vernon, Ohio.

1008. *Madison Health Messenger* (*Madison, Tennessee*). 1942. Soy bean exhibit at National Health Foods Convention. 4(4):3. Undated.
• ***Summary:*** See next page. "'The World of Tomorrow in Soybeans' was the theme of the Madison Foods exhibit at the National Health Foods Convention in New York City. A picture of this very beautiful exhibit is shown at the bottom of this page.

"Many new varieties of soybeans were shown to health food dealers from all over the United States, who saw for the first time at the National Health Foods Convention a comprehensive exhibit of various soybean products. There were small black soybeans, brown soybeans, green soybeans, yellow soybeans, of various sizes, shapes, and varieties. There were breakfast foods ready-to-eat and cooked. Other items in the exhibit consisted of soy flour, various kinds of soy oil, soy hydrogenated shortening, soy lecithin, stock feed, poultry feed, dog and cat foods; canned soybeans plain, canned soybeans in tomato sauce, meat substitutes, soy cheese, soy milk, soy albumin, soy bread, soy muffins, soy toast, soy coffee substitute, soy macaroni, soy noodles, soy sauce, linoleum, and plastics.

The exhibit was finished in an automobile lacquer with a photographic smear of soybeans covering the entire front of the exhibit around the display of sample bottles of various soybean products on the right wing of the exhibit, and the Madison Foods products on the left wing of the exhibit, the soybean smear was finished in a sepia tone to approximate the natural color of the soybean, and the lettering on the top of the exhibit was cut-out wood, raised letters, finished in automobile lacquer. It was one ot the most outstanding exhibits ever shown at a National Health Foods Convention from the standpoint of its educational value as well as its artistic layout and beautiful finish. Visitors to the exhibit were profuse in their commendatory comments of the exhibit, and E.M. Bisalski, Manager of Madison Foods, and Ulma Doyle Register, Chemist, were busy receiving visitors to the exhibit, who came from all parts of the forty-eight states to attend the National Health Foods Association Convention, Hotel McAlpin, New York City, August 26-29.

"Next year the convention will be held in Los Angeles, California, at approximately the same time."

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1009. **Product Name:** Soy-Fruit & Nut Cereal (Ready to Eat).
Manufacturer's Name: Butler Food Co.
Manufacturer's Address: P.O. Box 4, Cedar Lake, MI.
Date of Introduction: 1942.
Ingredients: Soybeans, bran (and other parts of wheat), figs, dates, salt, yeast, malt.
New Product–Documentation: Manufacturer's catalog. 1942. Sold in bulk; $0.20/lb.

1010. **Product Name:** ViM-eat Soy-Nut-Loaf (Vegetarian Meat).
Manufacturer's Name: Butler Food Co.
Manufacturer's Address: P.O. Box 4, Cedar Lake, MI.
Date of Introduction: 1942.
Wt/Vol., Packaging, Price: 8- or 16-oz can.
New Product–Documentation: Manufacturer's catalog. 1942. In 8- or 16-oz cans. "Appeals to those who like the meat flavors. Soy-Nut-Loaf is a highly nutrient [sic] food, containing a complete protein. It can be prepared in many delicious ways: in stews, roasts, vegetable pies, hash, and sandwiches. It is also tasty just as it comes from the can." Recipes are given: Soy-Nut Steak with onions. Macaroni with Soy-Nut-Loaf. Savory Soy-Nut-Loaf.

1011. **Product Name:** Soy-Kawfee (Roasted Soybean Coffee).
Manufacturer's Name: Butler Food Co.
Manufacturer's Address: P.O. Box 4, Cedar Lake, Michigan.
Date of Introduction: 1942.
Ingredients: Incl. soybeans, wheat bran, brown sugar.
New Product–Documentation: Manufacturer's catalog. 1942. Sold in bulk at $0.15/lb. "An alkaline food drink made from a blend of soybeans, wheat bran, and brown sugar, roasted to bring out a delightful flavor. A refreshing change from coffee, tea, and cocoa, and contains no harmful stimulants. Prepare the same as you do coffee, using approximately one tablespoon to each cup."

1012. **Product Name:** Flour: Entire Soy Bean (very fine) or Entire Soy Bean Wheat Mix (30-70).
Manufacturer's Name: Butler Food Co.
Manufacturer's Address: P.O. Box 4, Cedar Lake, Michigan.
Date of Introduction: 1942.
New Product–Documentation: Manufacturer's catalog. 1942. Sold in bulk, $0.10 or $0.06 per pound, for one pound, respectively. "All our flours are made extremely fine (stone ground) from cleaned, whole grains. Nothing added and nothing taken away." Recipes are given for Soy Bread (incl. 1.33 cups Soy flour, 2 cups ViM-ilk, and 1 tablespoon Soy butter), and Whole Wheat Bread.

Note: This is the earliest English-language document seen (Nov. 2013) that uses the term "Flour: Entire Soy Bean"

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[Flour] to refer to whole soy flour.

1013. **Product Name:** Soy Beanswithtomatosauce (Soybeans with Tomato Sauce).
Manufacturer's Name: Butler Food Co.
Manufacturer's Address: P.O. Box 4, Cedar Lake, Michigan.
Date of Introduction: 1942.
Wt/Vol., Packaging, Price: 8 oz can.
New Product–Documentation: Manufacturer's catalog. 192. 8 oz. can for $0.07 or 16 oz. can for $0.13. "Are prepared from choice soybeans grown on Butler's own mineralized farm. They are tasty, wholesome, and nutritious. The are strongly alkalin [sic, alkaline] and digest easily. The soybean contains a fine balance of practically all the minerals necessary for human nutrition. They are also the best source of protein in the vegetable kingdom." A recipe is given for Soybean Roast.

1014. **Product Name:** ViM-ilk (Soymilk).
Manufacturer's Name: Butler Food Co.
Manufacturer's Address: P.O. Box 4, Cedar Lake, Michigan.
Date of Introduction: 1942.
Wt/Vol., Packaging, Price: 8 oz or 16 oz can.
New Product–Documentation: Manufacturer's catalog. 1942. 8 oz. can for $0.06 or 16 oz. can for $0.10. "Resembles cow's milk. May be used in same manner, and is preferred by many to an animal milk. ViM-ilk, as it comes from the can, is of the consistency of cream, therefore should be diluted about half with sold water for drinking. ViM-ilk is purely vegetable, therefore it is pure and wholesome. This product should be kept in a cool place, if possible, in a refrigerator, as the lecithin, which is in abundance in the soybean, may cause ViM-ilk to solidify if stored in normal temperature. After ViM-ilk has become solid or sour, a fine cheese can be made from it, the same as cottage cheese is made from cow's milk."

1015. **Product Name:** Soy-Nuts (also spelled Soy Nuts).
Manufacturer's Name: Butler Food Co.
Manufacturer's Address: P.O. Box 4, Cedar Lake, Michigan.
Date of Introduction: 1942.
New Product–Documentation: Manufacturer's catalog. 1942. 2 oz. packet for $0.05 or 5 oz. packet for $0.10. "Selected, large, soybeans roasted and salted. Nice to eat out of hand like peanuts. You'll like their nutty flavor."

1016. **Product Name:** Soy-Wheat Cereal.
Manufacturer's Name: Butler Food Co.
Manufacturer's Address: P.O. Box 4, Cedar Lake, Michigan.
Date of Introduction: 1942.
Ingredients: Incl. soybeans and wheat.
New Product–Documentation: Manufacturer's catalog. 1942. "A specially prepared food composed of soybeans and wheat. It is very easy to digest, has a greatly reduced starch content, and a mild laxative action when eaten regularly. For each serving us ¼ cup of cereal to each cup of water that has been salted to taste. Boil twenty minutes and serve with cream in the usual way."

1017. **Product Name:** ViM-eat Soy-Nut-Cheese (Vegetarian Meat).
Manufacturer's Name: Butler Food Co.
Manufacturer's Address: P.O. Box 4, Cedar Lake, MI.
Date of Introduction: 1942.
Wt/Vol., Packaging, Price: 8- or 16-oz can.
New Product–Documentation: Manufacturer's catalog. In 8- or 16-oz cans. "A highly nutritious food which can be used in a variety of palatable dishes. Rich in protein and fat. Easily digested." Two recipes are given, including Soy-Nut-Cheese croquettes.

1018. **Product Name:** Vegetable Chili Con Carne. Renamed Vegetarian Chili Con Carne by 1948.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: P.O. Box 388, Mt. Vernon, Ohio.
Date of Introduction: 1942.
Ingredients: Incl. wheat gluten.
Wt/Vol., Packaging, Price: 16 oz jar.
New Product–Documentation: Ad in Leaflet titled "Optimal Nutrition in Infant Feeding." Undated. "Rich in all-vegetable protein of soya beans and wheat gluten; processed in tasty sauce. 16-oz. jars." Soybean Blue Book. 1948. p. 82.

1019. **Product Name:** Vegetable Chop Suey. Renamed Vegetarian Chop Suey by 1948.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: P.O. Box 388, Mt. Vernon, Ohio.
Date of Introduction: 1942.
Ingredients: Incl. soya beans, wheat gluten, green fresh vegetables (soy sprouts).
Wt/Vol., Packaging, Price: 16 oz jar.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Ad in Leaflet titled "Optimal Nutrition in Infant Feeding." Undated. "Soya beans, wheat gluten, green fresh vegetables."

International Nutrition Laboratory, dealer's order blank. 1946. Jan. "Chop Suey (Mein Jing) Vegetarian." 16 oz can.

Soybean Blue Book. 1948. p. 82. Note: The word "chop suey" was first used in English in 1888.

1020. Anderson, Hans Steele. 1942. Food therapy: Diet and the healing art. Fort Meade, Florida: The Anderson Publishing Company. 152 p. 23 cm.
• ***Summary:*** The author was born in 1877.

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1021. Butler Food Co. 1942. Order blank. P.O. Box 4, Cedar Lake, Michigan. 1 p. Catalog. Undated (but date is written on by hand).
• ***Summary:*** The following soy products are listed: Cereals: Soy-fruit & nut cereal (ready to eat). Vegetarian Meats: ViM-eat soy-nut loaf, ViM-eat soy-nut cheese. Beverages: Soy-kawfee. Flour: Entire soybean (very fine) bulk, entire soybean wheat mix 30-70 bulk, soy beans with tomato sauce, ViM-ilk, and Soy-Nuts.

Note: This is the earliest document seen (March 2001) concerning Butler Food Co., Cedar Lake, Michigan. Address: Cedar Lake, Michigan. Phone: 128-F-21.

1022. Butler Food Products of Cedar Lake Academy. 1942. [Product descriptions and recipes]. P.O. Box 4, Cedar Lake, Michigan. 4 p. Catalog. Undated (but date is written on by hand).
• ***Summary:*** The company's products are listed, a brief description is given of each, and with many a recipe is also given, as follows: Cereals: Soy-fruit & nut cereal (ready to eat.). Soy-Wheat Cereal. Vim-eat Soy-Nut-Loaf. Soy-Nut-Cheese. Vim-Ex (a savory extract of dry yeast and vegetables). Soy Kawfee. Flour. Soybeans with tomato sauce. ViM-ilk. Soy Nuts. Address: Cedar Lake, Michigan. Phone: 128-F-21.

1023. Lager, Mildred. 1942. Soy bean recipes: 150 ways to use soy beans as meat, milk, cheese, & bread. Los Angeles, California: House of Better Living. 43 p. Index. 21 cm.
• ***Summary:*** Contents: History of the soy bean. Food value. Analysis. Comparison with other legumes. Ash analysis. Soy beans in low starch diet. Alkaline in ash. Recipes: Green beans. Dry beans. Meat substitutes. Soy milk. Soy cheese. Soy butter [soynut butter]. Salads. Salad dressings. Soy spreads. Soy cereal. Soy macaroni, spaghetti and noodles. Soy bread and muffins. Waffles and pancakes. Cakes and cookies. Candies. Beverages. Toasted soy beans. Bean sprouts.

"Alkaline in ash: Soy beans have one great advantage over many proteins especially the meat proteins, in that they are alkaline in their chemical reaction or ash. This applies to the soy bean itself and to the other 100% soy bean products. The alkalinity will naturally be less in products where soy beans are mixed with acid ash foods."

A small portrait photo (p. 1) shows Ms. Lager and notes: "I want to acknowledge the aid received from Madison College, Tennessee; Loma Linda Food Company, El Molino Mills, Penna Soya Products Company, and from the many friends who gave me suggestions and recipes." Address: 3477 West 6th St., Los Angeles, California.

1024. Lager, Mildred. 1942. Soy bean recipes: 150 ways to use soy beans as meat, milk, cheese, & bread. 2nd ed. Los Angeles, California: House of Better Living. 43 p. Index. 20 cm. Reprinted in 1943. *
• ***Summary:*** Contents: History of the soy bean. Food value. Analysis. Comparison with other legumes. Ash analysis. Soy beans in low starch diet. Alkaline ash. Recipes: Green beans. Dry beans. Meat substitutes. Soy milk. Soy cheese. Soy butter [soynut butter]. Salads. Salad dressings. Soy spreads. Soy cereal. Soy macaroni, spaghetti and noodles. Soy bread and muffins. Waffles and pancakes. Cakes and cookies. Candies. Beverages. Toasted soy beans. Bean sprouts.

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1025. White, Julius Gilbert. 1942. Abundant health: Expounding the Learn-how-to-be-well system of daily living. Madison College, Tennessee: Published by the author. xix + 378 p. See p. 298-303. Illust. Index. 24 cm. [50+* ref]
• ***Summary:*** The maintenance of physical and mental health can be achieved through a vegetarian diet and wholesome living. Interesting sections include: Denmark's food experiment under Dr. Hindhede during World War I (p. 144). Sixteen reasons for vegetarianism (p. 144-48). Note that Madison College is a Seventh-day Adventist college and sanitarium.

Soya is discussed on the following pages: Soy bean flour (p. 136). Soybeans and soybean products as a replacement for meat (p. 143-44). One section titled "The Soy Bean: The Wonder Food" (p. 298-303) discusses soybean sprouts, soybeans as coffee, soy "butter" (this product, similar in taste and texture to peanut butter, is now on the market), home-made soy butter homemade soy mayonnaise (made from the above soy butter), soy acidophilus milk (also often called soy buttermilk).

Recipe for home-made soy butter: 4 tablespoons of soy flour. 4 tablespoons of water. Mix well and cook four minutes or less. Add one cup soy bean oil and beat with a rotary beater till the oil disappears. If color is wanted add a little of some kind of butter color. Add a little salt to suit taste.

Note: This is the earliest document seen (Dec. 2012) that describes how to make soynut butter on a home or laboratory scale. Address: Madison, Tennessee.

1026. International Nutrition Laboratory. 1942? Soyalac: Optimal nutrition in infant feeding. Mt. Vernon, Ohio. 12 p. Each page 22 x 10 cm. Undated.
• ***Summary:*** Contents: Mothers milk simulated in Soyalac. Solves feeding problems ("While Soyalac is an ideal food for non-problem infants, it becomes tremendously important in cases of milk allergy"). Composition of Soyalac (two

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forms: Soyalac dry powder {22.31% protein}, and reliquified Soyalac {2.79% protein}). Preparation of baby's feedings (always add the powder to water, not water to powder). 24 hour feeding formulas. Canned liquid Soyalac. Soyalac hypoallergenic. Laxative correction. Supplementary feeding (starting 3rd month). Soyalac benefits mothers. Quick, nourishing for children and adults. Medical supervision. The home of Soyalac (photo of large brick building at Mt. Vernon, Ohio). You can get Soyalac ("mainly through health food stores"). Miller's high protein soya foods: 1. Soyalac All Purpose spray dried soya milk. 2. Soyalac Malt Flavor. 3. Soyalac Liquid. Soyalac Chocolate. Soyalac Infant Food–Powder (1 lb cans). Soyalac Infant Food–Liquid (20 oz cans). Miller's Cutlets. Cutletburger. Giant Green Soya Beans. Soya Beans in Tomato Sauce. Soyaspread ("Delicious sandwich filler"). Vegetable Chili Con Carne (with soya beans and wheat gluten). Vegetable Chop Suey (with soya beans and wheat gluten). Address: Mt. Vernon, Ohio.

1027. University of Missouri, Agronomy Dept. 1943. Edible soybeans: Partial list of growers and distributors* (Leaflet). Columbia, Missouri. 1 p. Single sided. 28 cm.
• ***Summary:*** A typewritten list, arranged alphabetically by variety name. Varieties: Aoda (2 growers and distributors). Bansei (10). Easycook (2). Funk Delicious (3). Hokkaido (3). Kanro (1). Willomi (1). Growers include: Associated Seed Growers, Inc., 301 Kentucky Ave., Indianapolis, Indiana (Sells Bansei {wholesale only} and Willomi). Fred H. Scholl, Memphis, Tennessee. International Nutrition Laboratory, Mt. Vernon, Ohio. Strayer Seed Farms, Hudson, Iowa. W. Atlee Burpee Co., Clinton, Iowa.

Footnote: *"This list is furnished for your convenience, with no discrimination intended and no guarantee of seed quality, varietal purity, or any other factors involved in the purchase or distribution of seed implied. Additions to this partial list will be welcome." Address: Missouri.

1028. Dies, Edward J. 1943. Soybeans: Gold from the soil. Rev. ed. New York, NY: The Macmillan Co. 122 p. March. Index. 21 cm. First published in April 1942. [205 ref]
• ***Summary:*** This revised edition is very similar to the first edition published in April 1942. Minor changes have been made on the following pages: 20, 28, 70-73, 84-85, 90-94, 121-22. None of the statistics in the many tables have been updated, and the bibliography is unchanged. Address: USA.

1029. Harris, R.S.; Weeks, E.; Kinde, M. 1943. Effect of a supplementary food on the nutritional status of school children. *J. of the American Dietetic Association* 19(3):182-89. March. [9 ref]
• ***Summary:*** Soy flour was used in soup. Address: National Biochemistry Laboratories, MIT, Cambridge, Massachusetts; W.K. Kellogg Foundation, Battle Creek, Michigan.

1030. Chen, Philip S. 1943. The importance of soybeans in the present crisis. *Review and Herald* 120(21):16-17. May. *

1031. Madison Foods. 1943. Zoy-Koff: Coffee flavor without coffee after-effects (Ad). *Nature's Path* (*New York City*). June. p. 227.
• ***Summary:*** A similar ad appeared in the Feb. 1944 (p. 66) issue of this magazine. Address: Madison College, Tennessee.

1032. **Product Name:** Soya-Choc. Introduced in Jan. 1940 as Soya Choc-Malt.
Manufacturer's Name: Roberts (F.G.) Health Food Products.
Manufacturer's Address: 40 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia.
Date of Introduction: 1943 June.
Ingredients: Incl. water, soybeans.
Wt/Vol., Packaging, Price: Tin-plated steel can.
New Product–Documentation: Ad in *Nature's Path to Health* (*Melbourne, Australia*). 1943. May/June, p. 15. "Your best moment. When the drink is Soy-Bev or Soya-Choc. These are the nicest drinks. Freshly made from the choicest soya beans in our modern factory, St. Kilda, Melbourne. In Hygienic ½ lb. and 1 lb. Tins at all Health Centres Throughout Australia." An illustration shows a man and woman seated in chairs by their fireplace each enjoying a cup of Soy-Bev or Soya-Choc. Below this is a steaming cup of the hot beverage. This ad also appeared in the Feb/March 1946 issue (p. 25), the Aug/Sept. 1946 issue (p. 23), and the April/May 1949 issue (p. 8) of this magazine.

Note from Paul Smith of Soy Products of Australia (Pte.) Ltd. 1995. March 14. Soya-Choc = Soy Compound with added cocoa. Soya-Choc = Soya Choc-Malt of 1940. Paul thinks Soya-Choc was first introduced in about 1933 or 1934.

1033. Hodges, Leigh Mitchell. 1943. Are you neglecting the wonder bean? Wartime food economy underlines multiple soybean values for both consumers and millers. *American Miller.* Aug. p. 36, 38.
• ***Summary:*** Discusses the work of Clive McCay at Cornell University, the Soya Corporation of America which is milling soya flour by a new process in Hagerstown, Maryland, and Dr. Artemy Alexis Horvath, "who under a Rockefeller grant, spent eight years in the Peking Union Medical College studying the more than 5000 different varieties of soybean which have been developed in China."

"The German scientist, Furstenberg, had a gift of prophecy in 1917, when he visioned the soybeans as 'the plant that is going to revolutionize the nutrition of humanity.' At that time Germany was importing more of them than any other country, mostly from Manchuria. One of Hitler's first acts after coming to power was to plan a 2,000,000-ton

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soybean reserve. He also arranged for vast soy plantings in Rumania and other Balkan countries. Part of this huge reserve has been used in the making of explosives and other chemicals. But most of it has been milled into flour which has proved invaluable in piecing out insufficient supplies of animal foods."

A photo shows students at Madison College in Tennessee making tofu and other commercial soybean products for general sale to the public.

1034. American Soybean Association. 1943. Soybeans go to war: Program of American Soybean Ass'n War Conference (Leaflet). [Hudson, Iowa]. 2 panels each side. Each panel: 21 x 14 cm. Sept.

• ***Summary:*** This leaflet gives the program for the "War Conference" held by the ASA from 5-7 Sept. 1943 at the Hotel Montrose in Cedar Rapids, Iowa.

"Sunday, Sept. 5.

2:30 p.m. Committee Meetings, Soybean disease–Corn room. Nominations.

"6:00 p.m. Board of Directors Meeting–Parlor D.

"8:00 p.m. Annual business meeting–Ballroom.

"9:00 p.m. 'Soybeans and the Orient'–Dr. H.W. Miller, International Nutrition Laboratory, Mt. Vernon, Ohio.

"Film strip–'Soybean production, improvement and utilization'–K.E. Beeson, Purdue Univ. [West Lafayette, Indiana].

"Informal discussion and open meeting.

"Monday, Sept. 6.

"9:00 a.m.–Ballroom. David G. Wing, Pres. American Soybean Association, presiding.

"'What the soybean means to Iowa'–Harry Linn, State Secretary of Agriculture.

"'Bureau of Plant Industry's soybean program'–Dr. W.J. Morse, Senior Agronomist, Bureau of Plant Industry, Washington, DC.

"'Development and distribution of new soybean varieties'–Dr. J.L. Cartter, Agronomist, U.S. Regional Soybean Laboratory, Urbana, Illinois.

"'Regional Laboratory's study of soybean diseases'–Dr. W.B. Allington, Assistant Plant Pathologist, U.S. Regional Soybean Lab., Urbana, Illinois.

"'Problems of processing green soybeans'–H.R. Schultz, Standard Soybean Mills, Centerville, Iowa.

"'Soybean industry as seen by a grower'–Walter McLaughlin, Decatur Farm Management, Inc., Decatur, Illinois.

"General discussion.

"1:15 p.m. Ballroom. Hotel Montrose.

"'You're in the oil business now!'–Lamar Kishlar, Chairman, Soybean Nutritional Research Council, St. Louis, Missouri.

"'The federal grading standards need revision'–G.H. Iftner, Director, Grain Marketing, Illinois Agricultural Association, Chicago, Illinois.

"'Commodity Credit Corporation's 1943 soybean price support and marketing program'–J.H. Lloyd, Ass't Regional Director CCC, Chicago, Illinois.

"'The 1943 soybean oil meal distribution program'–O.D. Klein, AAA [Agricultural Adjustment Agency], Washington, DC.

"'Soybean research at the Northern Regional Research Laboratory'–Dr. W.H. Goss, Senior Chemical Engineer, NRRL, Peoria, Illinois.

"'The Ohio early variety campaign'–S.D. Hollett, Swift & Company Soybean Mill, Fostoria, Ohio.

"'Explanations of Pure Food & Drug Administration rulings'–Speaker to be announced." Address: [Hudson, Iowa].

1035. International Nutrition Laboratory. 1943. Miller's soya foods (Ad). *Soybean Digest.* Sept. p. 35.

• ***Summary:*** "Miller's International Nutrition Laboratory are among the largest growers of the Edible Soya bean, as also processors of high protein yielding foods from the Soya Bean. They possess both Eye and Flavor Appeal. Miller's Laboratory is a demonstration that Soya Beans are a delicious food for humans.

"Miller's Soya Foods Include:

"1. Canned liquid Soya Milk.

"2. Spray dried Soya Milk Powder (natural, malted and chocolate flavors).

"3. Superb canned Giant Green Soya Beans.

"4. Delicious meat substitutes and extenders in appearance, and taste, like bologna, veal cutlets, etc.

"Price and detailed information supplied to interested individuals, address,..."

Note: This is the earliest English-language document seen (March 2003), published in the USA by a manufacturer of soybean foods, with the term "soya foods" in the title. Address: Box 326, Mt. Vernon, Ohio.

1036. Miller, Harry W. 1943. Soybeans and the Orient. *Soybean Digest.* Sept. p. 18, 44.

• ***Summary:*** "It was my privilege during 23 years of residence in the Orient to travel very extensively through the provinces of China, and to acquaint myself with all eastern Asia relative to soybean production. I found that while the central and northern provinces of China including Manchuria are the principal soybean producing areas of the Orient, that soybeans are widely used by all the groups of Orientals, save the Filipinos, and the Malays, and are universally used by the Chinese, and that wherever they emigrate in any part of the world, the one universal food of the Chinese is soybeans, and not rice, as so often claimed.

"There are millions of the Chinese who do not live in the rice producing territories. The Chinese and many of the Oriental people have come to understand by common

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experience rather than scientific deduction that soy protein is an essential to livelihood and cannot with safety he dispensed with from their diet. Wherever in Chinese occupied territories soil and climatic conditions are at all favorable to the production of soybeans, they will be found as one of the stable crops. However the yield in the tropical portions of China is rather small. They have depended on importing beans from Manchuria and northern China. The same is true of the South Sea Islands.

"Foundation: Much that we have learned concerning handling soybeans and preparing them into food materials we must credit to the knowledge gained through studies made and travels in the Orient, chiefly in China, Korea, and Japan. Like their handling of many other things, they have developed the soybean culture and processing up to a certain point and there they stand. We have built upon their foundation, and have carried research in the agricultural field, as also processing methods several steps farther, and have made soya food products not only better but far more digestible, and therefore nutritionally more available, and found out that the bean can be made tasty as well.

"You may ask how are the Oriental people using the soybean. There are many ways. If you were to visit the Chinese markets during the late summer and early autumn months you would be able to purchase shelled green soybeans. You would also be able to purchase the unshelled beans, that is in the pods just like you buy peas in the pod. Some people prefer to purchase them in the pods, cook them in the pods in salt water, and then squeeze out the beans and eat them from the pod. There have been no canning facilities available to the Chinese for any of their products in years past, and so the use of the green soybean is only seasonable. You might expect that since the Chinese have stone mills everywhere to grind their wheat and their corn into flour and meal that they would be grinding their soybeans into a flour. But soy flour is largely an Occidental product. It would be very difficult for you to pick up in any of the markets of China a pound of soy flour.

"Curd: The Chinese have learned through long experience that the greatest value nutritionally from the soybean is obtained through a water extraction of its protein. This milky liquid after it is strained is coagulated into a cheese [tofu]. Ninety percent and possibly even higher of the nutrition the Oriental obtains from the soybean is taken in the form of this cheese. Of course they have many ways of dealing with this soft gelatinous curd, which has a very high water content. They press it into cakes, about the thickness of a large slice of bread. This then is placed in a brine solution or other flavored liquid, and later sliced up like we at times dice cheese. Again it is pressed into thin sheets that are about a sixteenth of an inch in thickness. These are also diced up and eaten like a relish or a salad.

"Another common product is a thin semi-transparent sheet of protein [yuba] made by a slow heating vat filled with this soya milk. A heavy scum will come to the surface, which they lift off at intervals and suspend to dry. These sheets are later on used as food wrappers. They can use these sheets which are pure protein, like we can use cellophane sheets, but instead of wrapping parcels with them they stuff them with certain vegetables, imitating the body and legs of a fowl, or the form of a fish, or they can represent almost anything in the way of an animal, and by submitting them to a little baking, give the same nice brownish hue by the use of a little oil, so you could hardly tell whether you were eating actual turkey or an artificial one.

"When you go to the market where the soybean producer delivers his finished products, you will see a great variety of foods made from soybeans. As I say, you can buy the bean curd in squares, or you can buy the patties, or you can buy the thin sheets of soya cheese, or you can buy these large semi-transparent sheets of soya protein. These in turn can be incorporated into many tasty and highly nutritious dishes, by the skill and ingenuity of the cook, and has also the likeness of meat in flavor and appearance. Naturally nutritionally we know of the high value of these proteins for a proper substitute for meat, fish, fowl, eggs, and the protein of animal milk.

"Of course the Chinese have as one of their big industries the making of oil from the soybean, and that is true of the Koreans and the Japanese. They heat the bean, grind it, and put it into wooden presses and extract the oil by driving wedges into their oil presses, bringing a tremendous pressure to bear upon the roasted beans. This oil is all used for edible

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purposes.

"The residue of the bean cake contains about 6 percent of oil, and has been exported in recent years to great extent. But the Chinese have in certain localities ground it up and used the bean cake meal for food, although much has been used in China and exported for fertilizer.

"The soybean is also extensively sprouted, and these sprouts are used in their vegetable food mixtures and eaten as bean sprouts.

"I shall not attempt at all to discuss the varieties of soybeans found in the Orient. I have seen almost every color, every shape and size, running from a small shot sized bean to the large jumbo sizes, such as we have in our edible list. All the beans that I have seen that come from India have been of a very small size. When we buy beans in China we go to the market and ask for soya beans. If we are not satisfied with what they have we go to another shop, and see if we can find a bean of superior size and quality. We never purchase soybeans in China by name of any variety.

"As is well known, China and most parts of the Orient grow from two to three crops per annum on the same ground. In some areas when they harvest a rice crop they plant a soybean crop on the same soil. In other areas when they harvest a wheat crop they put in a crop of soybeans. We believe in many of our central states, and certainly this would be true of the southern portions of our central states, that it would be quite practical to harvest a crop of peas, and disk the land, and plant and harvest a crop of soybeans" (Continued).

1037. Miller, Harry W. 1943. Soybeans and the Orient (Continued–Document part II). *Soybean Digest.* Sept. p. 18, 44.

• ***Summary:*** In the non soya producing parts of the Orient the people for generations are particularly marked by their small physical development, and are quite a contrast to the Chinese people living in the soya producing areas, where the people for generations have had an adequate protein dietary. The average weight per individual of men and women living in northern China, where soybeans are eaten in sufficient amount, will he practically a third more than that of the inhabitants of certain races of the South Sea Islands, or Chinese in the southern tropical areas. There is a marked difference in stature also. On other occasions like this I have stressed the fact that the time will soon be here when we will come to regard the protein entity of the soybean as its greatest contribution to humanity. Even though these Oriental races have been using the soybean as a leading protein supplier of their dietary, when we view the needs nutritionally of the entire Asiatic races we find a lack of protein. They are getting oils and carbohydrates in sufficient amount, but these are only fuel foods and transitory. Protein is our chief nutritional requirement. It surpasses vitamins or minerals in importance.

"We make our growth out of protein. We maintain our stature on protein. We build up all our digestive secretions from protein. We supply all of our body regulators such as thyroid secretion, the pituitary secretion, and the adrenalin secretion from protein. Our nutrient body fluids such as our blood and lymph are chiefly protein liquids. Our body defenders which ward off the inroads of bacteria and disease, and which destroy contagion and enable us to recover from disease are all from protein. Therefore in common terms, our ability to work, to resist fatigue; in fact to live, is closely tied up with adequate protein supply.

"When we were in Dearborn [Michigan, as the guests of Henry Ford] three years ago we were shown wool being made from the soybean. Yes, we grow our hair from protein, the sheep grows his wool from protein. It is just a question of whether we synthetically do it by laboratory methods or whether we pass it through the animal laboratory, and get it in that way. The great difference is that there is a tremendous economic loss in utilizing an animal to produce our important protein requirements. For example an animal stores in its fixed tissues through growth only 1/12 of what it eats, and will throw down into secretions like milk, only 1/3 of the food value it eats.

"The Oriental populations are so enormous that they can't survive if they feed their valuable foodstuffs to the animals and endeavor to recover their food need from these animals. They are vegetarians from necessity and not from choice. Without huge importations the Orient must reserve the products the soil yields for humans and not for animals.

"There is no greater yielder of protein than the soybean.

"But will the people learn to like it? Such splendid beverages, such tasty foods are now available, and so readily could they be made available on large scale production that all except the extreme fastidious few can be made amply satisfied in getting their protein, the direct source of all protein. namely vegetation, king of which is the Soya Bean."

1038. *Battle Creek Enquirer and News* (*Michigan*). 1943. 'Peanut butter friendship' exists over 50-year period. Oct. 21.

• ***Summary:*** An eye-witness account which seems to support Dr. Kellogg's claim to the invention of peanut butter was given by Dr. Charles William Dabney of Cincinnati, Ohio. Dabney was the former president of the Universities of Cincinnati and Tennessee and an assistant secretary of agriculture under President Grover Cleveland from 1893 to 1896. In 1943, at the age of 85, Dabney provided this account of his collaboration with Dr. Kellogg in an interview: "Having heard of the fame of Dr. Kellogg's sanitarium, Dr. Dabney brought his wife here for treatment while he went on to Chicago [Illinois] to attend the World's Fair [Columbian Exposition of 1893]. That was back in 1893. Upon his return to the Sanitarium from the fair, Dr. Dabney met Dr. Kellogg for the first time. At that time, Dr. Kellogg was seeking a substitute for meat and, knowing that

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Dr. Dabney had been director of the agricultural experiment station of North Carolina at Raleigh from 1881 to 1887, inquired if he thought peanuts could be used.

"Dr. Dabney said he thought they could and sent to North Carolina for five bushels of peanuts which he and Dr. Kellogg used in creating peanut butter.

"'It was a simple job for us,' Dr. Dabney said. We just roasted the peanuts, pressed out the oil, added some cotton seed oil, sugar and salt–the result, peanut butter.'" Address: Battle Creek, Michigan.

1039. Kollmorgen, Walter M. 1943. The soybean goes to college. *Tennessee Planner* 4(1):15-20. Sept/Oct.
• ***Summary:*** The author was invited to lunch at Madison by E.M. Bisalksi, who is in charge of the food research and production program. The menu, typical of the meatless meals served on the campus, included: Meatless meat balls (Yum), fresh soymilk, Zoy-Koff (coffee substitute), margarine (75% soybean oil), and bread (made in part from soybean flour). "It should be noted that in the above menu animal foods and animal products are completely absent, with the exception of a small portion of cream used in the Zoy-Koff... Cans of Madison Foods substitutes for milk and meat carry the words "Contains no animal products." These food were not developed to stretch meat ration points during the war; some of them are nearly 20 years old.

Large photos on a 2-page spread show the following Madison products: Wheatasoy, Kreme O'Soy (sliced bread), Kreme O'Soy (canned soymilk), bottled soymilk, Yum, Zoyburger, Soy Cheese, Kreme O'Soy Butter Muffins, Stake-Lets, Not-Meat, Vigorost, and Zoy-Koff.

"Dr. Floyd Bralliar, Vice President of Madison College, has for years conducted experiments with soybean varieties. In this work he is closely associated with experts in the United States Department of Agriculture. Dr. Bralliar believes that Tennessee farmers can profitably devote more acreage to the soybean. He holds that canneries will do well to can more fresh soybeans..." Address: Research Director, Tennessee State Planning Commission.

1040. **Product Name:** Kreme O'Soy Butter Muffins.
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Nashville Agricultural Normal Institute, Madison, Tennessee.
Date of Introduction: 1943 October.
Ingredients: Incl. Wheat flour, water, soy flour, sugar.
New Product–Documentation: Walter M. Kollmorgen. 1943. Tennessee Planner. Sept/Oct. p. 17. A photo shows a package labeled "Kreme O'Soy Butter Muffins: A New Taste Thrill."

1041. *RSLM* (*U.S. Regional Soybean Laboratory Mimeograph, Urbana, Illinois*). 1943. Edible soybean producers and distributors*. No. 101. Nov. 15. 3 p. Not for publication.
• ***Summary:*** Varieties: Aoda (5 producers and distributors). Bansei (19). Easycook (8). Emperor (2). Etum (4). Funk Delicious (3). Giant Green (4). Higan (1). Hokkaido (10). Imperial (1). Jogun (5). Kanro (1). Kanum (1). Rokusun (4). Sac (1). Sonsei [sic, Sousei] (4). Toku (1). Willomi (1).

Growers include: Associated Seed Growers, Inc., 301 Kentucky Ave., Indianapolis, Indiana or New Haven, Connecticut (handles Bansei {wholesale only}, Emperor, Giant Green, Jogun, Toku, and Willomi). E.F. Johnson, 1151 Claytonia Terrace, Richmond Heights, Missouri. Fred H. Scholl, Memphis, Tennessee. International Nutrition Laboratory, Mt. Vernon, Ohio. Ray Monier, Carrollton, Missouri. Rufus Gillett, Mazomanie, Wisconsin. Russell-Heckle Seed Co., 16 S. Trout Street, Memphis, Tennessee. Strayer Seed Farms, Hudson, Iowa. T.W. Wood and Sons, Richmond, Virginia. W. Atlee Burpee Co., Clinton, Iowa.

Footnote: *"This partial list is furnished for your convenience, with no discrimination intended and no guarantee of seed quality, varietal purity, or any other factors involved in the purchase or distribution of seed implied. Additions to this list will be welcomed."

1042. *Battle Creek Enquirer and News* (*Michigan*). 1943. Dr. Kellogg is dead at 91. Pneumonia attack is fatal at home here. Dr. Kellogg wills entire estate to promote health. Dec. 15. p. 1-4, 9-10. Wednesday.
• ***Summary:*** This special reprint edition contains an excellent summary of the material concerning Dr. John Harvey Kellogg's life and death, with a large portrait of the silver-haired goateed celebrity, published by the *Enquirer and News* in the week following his death. He was born in 1852 and died on 14 Dec. 1943. He was buried at Oak Hill Cemetery on Saturday afternoon, beside his wife who died in 1920. For 67 years he was associated with the Battle Creek Sanitarium.

Titles of the various stories are: Page 1: Pneumonia attack is fatal at home here: Distinguished head of Sanitarium active until last few hours in service of mankind. He perpetuates biologic living: Leaves nothing to individuals in creating trust to teach reforms. New officers chosen for Battle Creek Food Co. Funeral is held for Dr. Kellogg: "Life work a record of human helpfulness," the Rev. Carleton B. Miller says. For 'grass eater' [vegetarian], Dr. Kellogg reckoned he did pretty well. Page 2: His life work felt by the whole world. Dr. John Harvey Kellogg a factor in civilization (the story of his life and work). Photos of old and new (post-1942) sanitarium buildings. Page 3: A world authority on health methods. Biologic theories gained him fame. Battle Creek's tribute scroll on 90th birthday. Photos: Kellogg at age 41. Last big birthday party. Page 4: WELL [radio station] to carry funeral service. Nation's great pay homage to Dr. Kellogg in messages: including former president Herbert Hoover, Secretary of the Navy Frank Knox, philosopher

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Will Durant, senator Arthur Vandenberg and senator James J. Davis, C.R. Keypart (president of the Michigan State Medical Society), David Fairchild (Cocoanut Grove, Florida), Alonzo I. Baker, Miss Lenna F. Cooper (chief dietitian of Montefiore hospital, New York, first dietitian at the Sanitarium, and former dean of home economics at Battle Creek College), John D. Rockefeller Jr., Dale Carnegie, Prof. Irving Fisher of Yale Univ., Dr. E.A. Sutherland (head of the Madison Sanitarium, Madison, Tennessee), and Dr. Charles W. Dabney. Nurses stand by Dr. Kellogg's bier. Seen in review. The lengthened shadow. Public service for Dr. Kellogg: Funeral at San auditorium at 2:30 P.M.; Body to lie in state. Address: Battle Creek, Michigan.

1043. Marentette, Charles. 1943. For 'grass eater,' Dr. Kellogg reckoned he did pretty well. *Battle Creek Enquirer and News* (*Michigan*). Dec. 15. p. 1. Wednesday.
• ***Summary:*** This article is part of a special reprint edition containing an excellent summary of the material concerning Dr. John Harvey Kellogg's life and death. "'They called me a "grass eater" back when I first got started teaching people about biologic living,' he explained. 'All of us, even those who believed as I did, were laughed at. But I guess we showed 'em.'" At age 91, clad only in white shorts and running shoes, he trotted back and forth across a backyard cinder footpath for news photographers. He said "'That's something I do every day in the year. It's the best exercise in the world. People don't exercise enough... You can't smoke and drink alcohol and expect to live a long life... I believe that man was intended to eat the plants and fruits and not the animals. Meat is bad for a human being. It clogs your colon, and eventually you'll be sick...

"I haven't touched meat for more than 75 years [i.e., since before 1868]. I don't smoke and I don't drink. Never have. I don't take patients at my Sanitarium unless they agree to abstain from eating flesh foods and from smoking and drinking, at least as long as they want me to help them." Address: Battle Creek, Michigan.

1044. Payne, Donald S. 1943. The story of soya products. In: U.S. Food Distribution Administration, War Food Administration, ed. 1943. Soybeans and Soya Products. Program for Meeting of Interdepartmental Nutrition Coordinating Committee. 25 p. See p. 8-19. Dec. 7. [5 ref]
• ***Summary:*** Contents: Introduction. Production and distribution. Soya flour and grits on the retail market. Soya in mixed foods. Information activity. Reference list of some of the materials available on soya products: Recipes and recipe leaflets, speeches, other (pamphlets, book chapter).

Soya flour and grits on the retail market include the following: A.E. Staley Manufacturing Co. of Decatur, Illinois, opened test markets early in June 1943 with 1- and 3 pound packages of Stoy, a low-fat expeller type of soya flour. Results were good. Complete national distribution of this product is expected by 1 March 1944.

At least two other large processor-distributors have also started on campaigns for nation-wide distribution. The Archer-Daniels-Midland Company has initiated the distribution of Viva Soy, a low-fat extraction-process type flour. The Glidden Company, Cleveland, Ohio, through Durkee Famous Foods, has recently introduced into test markets Durkee's Soya Bits (a low-fat expeller-type grit) and Durkee's Soyarich (a full-fat soya flour).

Other processor-distributors are The Central Soya Company, Decatur, Indiana, distributing Me-T-Soy, an extraction-type grit, and The Soya Corporation of America, introducing both a full-fat type flour and grit on the East Coast.

"Closely following the lead of these processor-distributors, private-label brand grocery houses started to package these products for retail distribution at popular prices. These have been very widely distributed. These are now packaged by G.L.F. Farm Products, Inc., Ithaca, New York, a 2-pound package of full-fat type soya flour and a 2-pound package of a toasted soya flake of the low-fat expeller-type.

The Vee-Bee Company of Chicago, Illinois, with its Vee-Bee brand soya flour and soya grits, and the P.D. Ridenour Company, Chicago, Illinois, with its Little Major brand soy flour of the low-fat extraction type, have both attained distribution of 1-pound packages through jobbers in 36 of the 48 states. "The H.D. Lee Company is distributing the Lee Brand soy flour and soya grits in 1-pound packages throughout Kansas, Oklahoma, Colorado, southern Nebraska, Arkansas, and Missouri.

"The Battle Creek Food Company, Battle Creek, Michigan, and The Walker Company, Chicago, Illinois, continue to market retail packages of full-fat soya flour in specialty stores throughout the Nation...

"In addition to those retail distributors, the following manufacturers sell [soy] four and grits in wholesale quantities to food manufacturers, restaurants, and institutions." Allied Mills, Inc. (Chicago, Illinois), Archer-Daniels-Midland Company (Minneapolis, Minnesota), Central Soya Company, Inc. (Fort Wayne, Indiana), Commander-Larabee Milling Company (Minneapolis, Minnesota), The Glidden Company (Chicago, Illinois), Procter & Gamble Company (Ivorydale, Ohio), Shellabarger Grain Company (Decatur, Illinois), Soya Corporation of America (Hagerstown, Maryland), Soya Products Company (New York, New York), Spencer Kellogg and Sons, Inc. (Decatur, Illinois), A.E. Staley Manufacturing Co. (Decatur, Illinois), Swift & Company (Champaign, Illinois).

Under "Soya in Mixed Foods" many companies that make foods such as pancake mixes, breakfast cereals, pasta, breads, crackers and cookies, candy bars, muffin mixes, dry soup mixes, etc. are listed, along with the brand name of the product and the area of distribution. "To mention a

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few others. The Atlantic Macaroni Company, New York City, the Mission Macaroni Company and the Golden Grain macaroni Company, both of Seattle, Washington, and Traficanti Brothers, Chicago, Illinois, also manufacture for local distribution a variety of products containing soya flour in amounts ranging from 10 to 15 percent." Soya products are used in only about 1% of frankfurters or sausages. "Roasted salted soybeans are about as common now as salted peanuts, but not many people realize that soya flour and grits are at present universally used in chocolate bars and any other candy. For further information on these uses I might refer you to the Curtis Candy Co., Chicago, Ill., or the Clark Candy Co., Pittsburgh, Pennsylvania...

"A large number of dry soup mix manufacturers are experimenting with soya flour and preparing products for domestic distribution. Soya flour and grits are now and will continue to be used extensively in foods prepared for lend-lease and relief feeding. Pea-soya soup, spinach-soya soup, cheese-soya sauce, oat-soya cereal, whole wheat-soya cereal, wheat-soya-egg macaroni and vegetable-cereal-soya stew mixes are being purchased in appreciable quantities... Pork-soya sausage links have been purchased in tremendous quantities under lend-lease...

"Nine coast-to-coast radio shows have featured the news of soya food products since June 1943. Over 15 prepared radio scripts and stories featuring soya have been distributed since May 1943." Address: Chief, Soya Products Section, Grain Products Branch, Food Distribution Administration, War Food Administration.

1045. USDA War Food Administration, Food Distribution Administration. Grain Products Branch. comp. 1943. Soya products distribution. Washington 25, DC. 5 p. Dec.
• ***Summary:*** Gives a partial list of companies that retail products containing soya, the names of the products distributed, and their areas of distribution. Address: Washington, DC.

1046. **Product Name:** Soy Protose (Meatless Potted Meat with 32% Soya).
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1943.
New Product–Documentation: USDA War Food Administration, Food Distribution Administration. Grain Products Branch. 1943. Dec. "Soya products distribution." p. 5. The company sells Soy Protose, containing 32% soya (it is not clear in what form). Distributed through health food stores.

Taylor. 1944. Soy Cook Book. p. 200. Soybean Blue Book. 1947. p. 71.

1047. **Product Name:** Loma Linda Proteina (Meat Analog).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1943.
New Product–Documentation: Wholesale price list. 1943.

1048. Year Book of the Seventh-day Adventist Denomination. 1943. Washington, DC: Review and Herald Publishing Assoc. 397 p. See p. 72, 292-93. Index. 20 cm.
• ***Summary:*** Partial contents: Institutions: Educational (p. 208-250). Publishing houses (p. 251-62). Periodicals issued (p. 263-76). Sanitariums (p. 277-88). Dispensaries and treatment rooms (p. 289-91). Food companies (p. 292-93).

The section titled "Food companies" includes: Boulder-Colorado Sanitarium Food Company (established 1895). Buenos Aires Food Company (Alimentos Granix, Sociedad Anonima, est. 1938 [Argentina]). Copenhagen Food Factory (Denmark). Food Factory "Pur Aliment" (Paris, France). German Health Food Factory (Hamburg; De-Vau-Ge Gesundkostwerk Vollmer & Lühr (formerly: Deutscher Verein für Gesundheitspflege Hamburg {e.V.})). Granose Foods, Ltd. (British Health Food Factory; Stanborough Park, Watford, Herts, England. Est. 1899). Gland Hygienic Food Factory (Fabrique de Produits Alimentaires Hygeniques "Phag," Gland, Switzerland. Est. 1896). Loma Linda Food Co. (Arlington, California. Incorporated 1935). Sanitarium Health Food Company (Head Office, "Mizpah," Fox Valley Road, Wahroonga, NSW, Australia).

"Wholesale food branches" (of Sanitarium Health Food Company, in Australia and New Zealand; each has a manager): Adelaide, South Australia–151 Gouger St. Brisbane, Queensland–Garrick St. Melbourne, Victoria–118 Union St., Windsor. Newcastle, New South Wales–Tudor St. (Hamilton). Papanui, New Zealand–P.O. Box 11. Perth, West Australia–240 Lake St. Sydney, New South Wales–Brown St. (Lewisham).

Cafes and retail food stores (in Australia and New Zealand; the first two have a manager): Auckland, New Zealand–174 Queen St. Brisbane, Queensland–138 Adelaide St. Camberwell, Victoria–791 Burke St. Christchurch, New Zealand–698 Colombe St. Dunedin, New Zealand–8 George St. Hobart, Tasmania–43 Elizabeth St. Laucestan, Tasmania–82 Charles St. Melbourne, Victoria–293 Little Collins St. Newcastle, New South Wales, 14 and 18 The Arcade. Perth, West Australia–757 Hay St. Sydney, New South Wales–13 Hunter St. Wellington, New Zealand–83 Willis St.

On p. 72 is a directory of in "Health food factories" in the Austral-Asian Union Conference. All but one have the same name: "Sanitarium Health Food Co." They are located at: (1) Cooranbong, NSW. (2) 62 Randolph St., Auckland, New Zealand. (3) Papanui, Christchurch, New Zealand. (4) Sanitarium Buyers and Packers, Sydney, NSW. (5) Warburton, Victoria. (6) Carmel, West Australia. (7) Brisbane, Queensland. (8) Adelaide, South Australia. (9) Lewisham, Sydney, NSW. "Sanitarium Health Food Co."

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Address: Battle Creek, Michigan.

1049. Holt, Jane. 1944. News of food: Experts point out many advantages of adding soy beans to American diet. *New York Times.* Feb. 16. p. 20.
• ***Summary:*** Soy is a bean, and for many people "beans symbolize all that is humdrum in cookery." This may be one reason that some people have given soy beans a cool reception. As they struggle for recognition (with not much success), soy beans must confront the "natural suspicion with which people regard new foods and the resistance they show to efforts to 'reform' their eating habits." Another problem "may be the indifferent quality of some of the soy products that have been offered at retail and that have prejudiced customers."

"These explanations of why the bean is not more popular despite Federal and State campaigns urging its greater use were advanced yesterday by speakers at a luncheon given under the joint auspices of the New York State Emergency Food Commission and the Neighborhood Luncheon Club." The meeting took place at the Hotel Wellington, which has been exhibiting various soy products this week. Those now available in New York City stores include oil, flour, grits, sauce, etc.

Miss Adeline Hoffman, a nutritionist on the staff of the commission, gave an address in praise of soy beans; "she reminded her audience that they were an admirable stand-in for meat," and gave numerous reasons why.

Pre-cooked, canned whole soybeans are very convenient for the woman who doesn't like to spend much time in the kitchen. They can be "served cold in a salad or hot with seasonings, or they may be enhanced with a tomato sauce" or transformed into other dishes. One such product, sold under the trade name of "Miller" in a tin weighing 1 lb. 4 ounces, is available at Gimbels for 25 cents.

Another interesting and tasty product is soy macaroni, which is sold at Health Food Distributors, 123 East 34th St. A 7-ounce cellophane bag sells for 15 cents.

For more information on soy cookery and recipes, write to the commission's offices, 247 Park Ave., New York City 17.

Note: This is the earliest document seen (Sept. 2009) that discusses the slow acceptance of soy food products during World War II.

1050. **Product Name:** Battle Creek Soy Beans (Tender Casein?).
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1944 February.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Florence Paine. 1944. House Beautiful. Feb. p. 86. "I was skeptical about soy beans." Photo of a can and its label. Last word in subtitle is not clearly legible. The can appears white with black print and no illustrations.

1051. Madison Foods. 1944. Zoy-Koff: Restful sleep with Zoy-Koff's zestful flavor (Ad). *Nature's Path* (*New York City*). Feb. p. 66.
• ***Summary:*** "Prepare Zoy-Koff as you would coffee. Two grinds–Regular and fine. Available at health-food stores and specialty groceries. Devoted to the protection of your health." A photo shows the "new flavor-fresh package." A small illustration shows a woman sleeping soundly in bed. Address: Madison College, Tennessee.

1052. Paine, Florence. 1944. I was skeptical about soy beans. *House Beautiful* 86:33, 88, 97, 101, 104. Feb.
• ***Summary:*** The first page contains a large photo of a housewife standing by a table filled with commercial soy products including Soy-B-Prep, Battle Creek soy beans, Arcadia soya puffs, Golden wheat-soy mix for griddle cakes and waffles, Walker's soya sauce, Me-T-Soy extender, and Vivasoy (a high protein soya product). All are available from Kubie's Health Shop in New York City.

The article describes how to sprout soybeans at home and contains recipes for: Chopped bean sprouts with beef. Baked soy beans. Soybean perfection salad (with soybean sprouts). Tangy soy bean soup. Soya nut bread (with soy flour). Meatless chop suey (with soy sauce).

The author was originally turned off to soy after eating a "Soy Bean Loaf" at a vegetarian restaurant. "My shifting from soy-bean avoider to booster began last summer after attending a luncheon given [in New York] by Governor Dewey at which soy beans were fed to a critical and skeptical group in salads, souffles, bread, and as vegetables. The dishes really were delicious, and I could hardly wait to get home and do some experimenting myself. I have been trying them out ever since on my family and friends. I'll let you in on a secret, though. At first I made the mistake of telling my guests what they were being served. In nine cases out of ten they were anti-soy beans because of some previous experience, and so were antagonistic right away and I could seldom change their opinion. So I changed my tactics. I now wait until I get a favorable verdict before I make my announcement. The new system works like a charm."

1053. *Madison Survey* (*Madison, Tennessee*). 1944. Madison College. 26(8):29-30. April 26.

1054. *Business Week.* 1944. Soya Butter. July 22. p. 85-86.
• ***Summary:*** "'Soya Butter' is a new food spread formulated by Butler Food Products, Cedar Lake, Michigan, which is said to resemble dairy butter in 'taste and appearance... but which will not turn rancid.'... The process by which it is made consists of churning hardened soybean oil in soya milk and adding certain unspecified ingredients. The product

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is shipped in pint-sized cardboard containers or in 38-lb. fiberboard tubs."

1055. **Product Name:** Butler's Soya Butter (Non-Dairy Margarine made with Soybean Oil and Soy Milk).
Manufacturer's Name: Butler Food Products.
Manufacturer's Address: P.O. Box 4, Cedar Lake, Michigan.
Date of Introduction: 1944 August.
New Product–Documentation: *Business Week.* 1944. July 22. p. 85-86. "Soya Butter." *Soybean Digest.* 1944. Aug. p. 16. "What is Status of Soya Butter?" Ad in *Soybean Digest.* Sept. 1944. p. 11. "New foods from the wonder bean: Butler's Soya Butter."

Short in *Soybean Digest.* 1945. Feb. p. 22. "The *Detroit News* puns in headlines: 'Uses his bean to make butter: Spread it soya can forget about points,' which doubtless refers to the soya butter of Butler Food Products." Note: "Soya" is a pun on "so you." During World War II dairy butter was rationed and one needed points to buy it. *Soybean Digest.* 1945. May. p. 14. "Ohio Ruling on Soya Butter."

Note: This was the first all-soy margarine and the first non-dairy (vegan) margarine made in the USA. It appears to be related somehow to Shedd's Willow Run Margarine. There were conflicting state and federal regulations to whether the product was margarine or not. Finally in December 1945, at which time the company was manufacturing 100,000 units of soya butter a month, a federal judge in Detroit ruled that the product was oleomargarine as defined by the internal revenue code, and therefore subject to back taxes of 10 cents a pound on every pound made to date. The three-year battle and the ruling assessing an estimated $150,000 in back taxes drove the company out of business in 1946. In about 1950, while typing out an appeal to the government to reconsider his case, Butler suffered a fatal heart attack. Shortly after his death, the margarine law was changed and the tax (on other companies) removed.

1056. *Soybean Digest.* 1944. What is status of soya butter? Aug. p. 16.
• ***Summary:*** "Butler Food Products of Cedar Lake, Michigan, has obtained restraining orders which would prevent the Michigan State Department of Agriculture and the U.S. Collector of Internal Revenue from enforcing margarine regulations against the firm's product, 'Soya Butter.'

"The company advertises 'Soya Butter' as being an all-vegetable product, about 79 percent of it soy oil. H.L. Hoover, manager of the firm, claims the he is the victim of conflicting federal and state regulations, and that he cannot comply with one set of regulations without violating others."

1057. Butler Food Products. 1944. New foods from the wonder bean (Ad). *Soybean Digest.* Sept. p. 11.
• ***Summary:*** A full page ad. "Mean a greater demand for soybeans and high prices for soybean growers." "Butler's Soya Butter was developed to meet the specific need of those who have allergic reactions to dairy products and for those who wish to maintain a strictly vegetarian [vegan] diet. Only Butler's Soya Butter can fill the above specific need. Butler's Soya Butter is available only to Health Food Stores and other outlets catering to those whose diet requires specialty foods." Photos show cans of each of these five Butler products: Butler's Soya Cheese [tofu]. Butler's Vegeburger. Butler's Soya Nut-Loaf. Butler's Vegetarian Chops. Butler's Soya-Butter.

Note: This is the earliest English-language document seen (Jan. 2007) that uses the word "Vegeburger" to refer to a meatless / vegetarian burger. Address: Cedar Lake, Michigan.

1058. **Product Name:** Butler's Soynut Cheese.
Manufacturer's Name: Butler Food Products.
Manufacturer's Address: P.O. Box 4, Cedar Lake, Michigan.
Date of Introduction: 1944 September.
Wt/Vol., Packaging, Price: 1 lb can.
New Product–Documentation: Ad in *Soybean Digest.* Sept. p. 11. "New Foods from the Wonder Bean." Sold in 1-lb cans. Company founded in 1939 by Howard O. Butler.

1059. **Product Name:** Butler's Vegeburger.
Manufacturer's Name: Butler Food Products.
Manufacturer's Address: P.O. Box 4, Cedar Lake, Michigan.
Date of Introduction: 1944 September.
Wt/Vol., Packaging, Price: 1 lb can.
New Product–Documentation: Ad in *Soybean Digest.* 1944. Sept. p. 11. "New Foods from the Wonder Bean." Sold in 1-lb cans. Note: This is the earliest commercial food product seen that bears the name "Vegeburger."

1060. **Product Name:** Butler's Soya Nut-Loaf.
Manufacturer's Name: Butler Food Products.
Manufacturer's Address: P.O. Box 4, Cedar Lake, Michigan.
Date of Introduction: 1944 September.
Wt/Vol., Packaging, Price: 1 lb can.
New Product–Documentation: Ad in *Soybean Digest.* 1944. Sept. p. 11. "New Foods from the Wonder Bean." Sold in 1-lb cans.

1061. **Product Name:** Butler's Vegetarian Chops.
Manufacturer's Name: Butler Food Products.
Manufacturer's Address: P.O. Box 4, Cedar Lake, Michigan.
Date of Introduction: 1944 September.

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Wt/Vol., Packaging, Price: 1 lb can.
New Product–Documentation: Ad in *Soybean Digest.* 1944. Sept. p. 11. "New Foods from the Wonder Bean." Sold in 1-lb cans.

1062. International Nutrition Laboratory. 1944. Meet the vegetable cow (Ad). *Soybean Digest.* Sept. p. 61.
• ***Summary:*** A creative illustration shows the head of a cow made entirely from soya. The main part of the face is made from whole dry soybeans. The ears are made of soybean leaves. The horns, forelock, parts surrounding the eyes, nostrils, and mouth are made of soybeans in their pods.

The company now makes 8 commercial soy products: 1. Miller's Giant Green Shelled Soya Beans. 2. Miller's Soyalac (powdered milk), plain, malted, or chocolate. 3. Miller's Soyalac (soya milk), liquid, natural, or chocolate. 4. Miller's Vegetarian Cutlets in uniform slices or diced [made from wheat gluten]. 5. Miller's Soya Loaf. 6. Miller's Soya Spread. 7. Miller's Edible Soya Flour. 8. Miller's Edible Soya Beans.

A photo shows a 14 oz glass jar of Miller's Soya Spread, with some of it being spread, using a knife, on two slices of bread. It is a butter substitute and sandwich filling. Standing next to the jar is a small cartoon figure of man dressed like a chef or baker. The caption reads: "The Soybean Man says: 'There's nothing like it!'"

Note: This is the earliest document seen (June 2009) concerning the marketing of green vegetable soybeans. Address: Mt. Vernon, Ohio.

1063. Loma Linda Food Company. 1944. Re: Loma Linda Soy Milk. Letter to Mrs. Marie G. Thompson of Milwaukee, Wisconsin, Oct. 17. 2 p. Typed, without signature on letterhead.
• ***Summary:*** This letter is written on the company letterhead which contains an illustration (line drawing) of the new Arlington headquarters, and gives the address and phone number. Across the bottom is written: "Tasty. Wholesome. Nutritious." The author writes: "We are surely interested to know that you have had such good success in raising your baby entirely on Soy Milk and we trust that this good progress will continue. It encourages us to know that there are those who believe in the vegetarian regime and... are willing to demonstrate that babies can be raised on Soy Bean Milk. We are sending you with this letter a copy of our folder featuring Loma Linda Soy Milk. The Kreme O'Soy put up by Madison [Foods] is also a good product. They do not add Carotene [which Loma Linda does, to provide essential vitamin A].

"One of the largest children's hospitals in Los Angeles where they have many allergy cases is using our Soy Milk very extensively and has done so for a number of years." Address: Arlington, California. Phone: Riverside 9217.

1064. **Product Name:** Battle Creek Steaks, Battle Creek Skallops, and Meatless Wieners.
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1944 October.
Ingredients: Skallops in 1971: Wheat protein [wheat gluten], water, salt.
New Product–Documentation: These three meat alternatives, introduced during the early 1940s, were made from varying combinations of nuts (mainly peanuts), wheat gluten, and natural flavorings. None of them contained any soya. Worthington Foods, Inc. 1960. Oct. 15. "Battle Creek Food Company, authorized dealer price list." "Vegetable Skallops" and "Vegetable Steaks, regular or small cuts" are listed. Note: This is the earliest commercial meat alternative seen which has a name clearly indicating that it is an alternative to fish, shellfish, or other seafood products.

Richard W. Schwarz. 1970. John Harvey Kellogg, M.D. p. 122. "The doctor's interest in new vegetarian meatlike protein foods continued active until shortly before his death. Among some of the more popular creations later developed in his laboratories were Protose, Battle Creek Steaks, and Battle Creek Skallops. Various combinations of nuts and wheat gluten composed the principal ingredients in the imitation meats."

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Skallops (Battle Creek–by Worthington)."

Letters from Charles R. MacIvor or Hendersonville, North Carolina. 1981. March 4 and April 28. Battle Creek Steaks and Battle Creek Skallops were launched sometime before 15 Oct. 1944, as they were listed in the 1944 dealer retail price list. Neither of these products contained any soya.

Talk with Allan Buller of Worthington Foods. 1994. July 14. Battle Creek Steaks was mainly a gluten product, which was part of the product line that Worthington took over in 1960.

1065. *Soybean Digest.* 1944. Grits and flakes from the industry: Loma Linda Food Co. and Vegemeats. Oct. p. 16.
• ***Summary:*** The Loma Linda Food Co. is now preparing for an advertising campaign to broaden acceptance of its Vegemeats line, made of soybeans and select grains. The company will try to reach consumers first, then food processors. "Vegemeats were first introduced to consumers at the Golden Gate International Exposition" [Feb. 1939 to Sept. 1940]. The company now offers "a complete line of Vegemeats, including 'steaks' and 'burger,' as well as Vegemeats for loaves, roasts, and spreads."

1066. Loosli, J.K. comp. 1944. Manufacturers and distributors of soybean products (Brochure). In: New York State Emergency Food Commission. 1944. 4 p.

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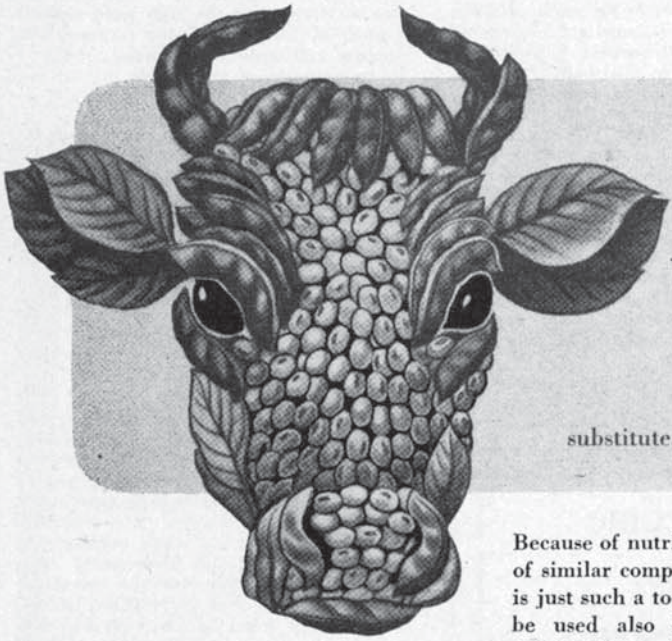


Meet the VEGETABLE COW

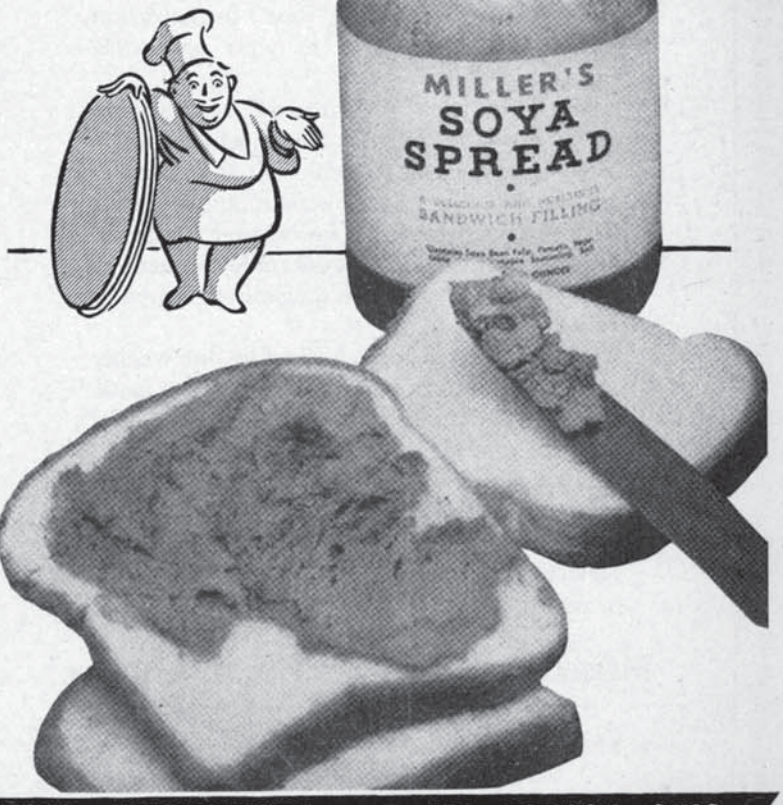
The Soybean produces a milk substitute, *Soyalac*,* and a butter substitute, *Soya Spread*.

Because of nutritional needs we should use butter or a tasty spread of similar composition on our bread. MILLER'S SOYA SPREAD is just such a toothsome spread for plain or toasted bread. It may be used also in various combinations for salads, sandwiches, entrees, omelets, croquettes, etc.

Miller's SOYA SPREAD comes in 14-ounce glass jars, and a trial purchase will convince you how little you miss butter when *Miller's* SOYA SPREAD is put on a cracker or slice of toast. Besides a high oil content, *Miller's* SOYA SPREAD, like *Miller's* popular VEGETARIAN CUTLETS, has a high protein value.

* Miller's milk substitute in powdered or liquid form.

THE SOYBEAN MAN SAYS:
"There's Nothing Like It!"



All Miller's products are distinctive and FIRST in quality. Here they are:

1. **Miller's Giant Green Shelled Soya Beans.**
2. **Miller's Soyalac (powdered milk), plain, malted, or chocolate.**
3. **Miller's Soyalac (soya milk), liquid, natural, or chocolate.**
4. **Miller's Vegetarian Cutlets in uniform slices or diced.**
5. **Miller's Soya Loaf.**
6. **Miller's Soya Spread.**
7. **Miller's Edible Soya Flour.**
8. **Miller's Edible Soya Beans.**

If your dealer does not stock *Miller's* foods—

Address

INTERNATIONAL NUTRITION LABORATORY » Mt. VERNON, OHIO

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• ***Summary:*** The names and addresses, of sources most readily available to the New York State trade, appear under the following headings: Soy flour and flakes: Manufacturers, wholesale distributors. Flour mixes for pancakes, muffins, etc. Dry soybeans: For cooking, for sprouting. Canned soybeans. Sprouted soybeans (LaChoy Food Products, Inc., Archbold, Ohio. Most Chinese restaurants).

Note: This is the earliest document seen (Jan. 2013) stating the LaChoy Food Products sells sprouted soybeans.

Macaroni, spaghetti, noodles (The Pfaffman Co., 6919 Lorain Ave., Cleveland, Ohio). Beverages. Bakery products: Soy bread, Soy cookies, crackers, wafers, etc. (Incl. Cubbison Cracker Co., 3407 Pasadena Ave., Los Angeles, California. Tom Soya Foods, Inc., P.O. Drawer 510, Williamsport, Pennsylvania). Breakfast cereals (Soyawheat, Soyawheat Co., Red Wing, Minnesota. Tom Soya Puffs and Exploded Soybeans, Tom Soya Foods, etc.).

Soybean curd [tofu] (International Nutrition Laboratory, P.O. Box 326, Mt. Vernon, Ohio). Meat-like products (The Battle Creek Food Co., Battle Creek, Michigan. Madison Foods, Madison College, Tennessee. Natural Health Products, 143 W. 41st St., New York, New York). Soups. Soy nuts (Dewey Food Products, Inc., 2251-3 N. Knox Ave., Chicago, Illinois. La Choy Food Products, Inc., Archbold, Ohio. Soybean Products Co., 9025 Monroe, Chicago, Illinois. Tom Soya Foods, Inc., etc. Vegetable Products Co., Rochester, New York). Spreads. Address: Vice-Chairman, Soybean Committee, Cornell Univ., New York.

1067. **Product Name:** Miller's Canned Baked Soybeans.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1944.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Taylor. 1944. The Soy Cook Book. p. 201.

1068. **Product Name:** Miller's Edible Soybeans (Whole Dry Soybeans for Home Cooking).
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1944.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Taylor. 1944. The Soy Cook Book. p. 201.

1069. **Product Name:** Loma Linda Soy Fortified Cereals.
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: 11503 Pierce Place, Arlington, California. Phone: Riverside 9217.
Date of Introduction: 1944.
New Product–Documentation: Wholesale price list. 1944. The city where the company located is now named Arlington, California.

1070. Anderson, Hans Steele. 1944. The new food therapy: Diet and the healing art. Maitland, Florida: Printed by The Academy Press. 165 p. See p. 37-38, 64-66, 85-86, 89, 118-19. 23 cm.
• ***Summary:*** This is a rewritten and enlarged edition of the author's *Food Therapy: Diet and the Healing Art*, published in 1942. The author, apparently a Seventh-day Adventist, was born in 1877.

Pages 37-38 contain a discussion of soya bean products (including Soya Lac, which is alkaline in reaction, and is made by the International [Nutrition] Laboratory, Mt. Vernon, Ohio). There are home-scale recipes for: Soybean milk no. I (made from soybean flour). Soybean milk No. II (made from powdered soybean milk–Soya-Lac). Soy butter substitute No. I (made by blending soybean flour, soybean oil, and a few drops of dandelion butter color with a Dover beater). Soya bean butter substitute No. II (made by blending Soya-Lac powdered soybean milk with soybean oil; refrigerate). Soybean cheese, made by curding hot soybean milk with a little citric acid. "Season with rich soybean milk and salt as you would flavor ordinary cottage cheese and serve."

Pages 64-66 give nutritional information on soybeans and soy-products, and compare soybean milk with cow's milk. "As a source of wholesome food constituents, the soybean probably has no peer... Soya bean milk contains more food mineral and vitamins than cow's milk; is alkaline in reaction; has a greater proportion of calcium; and forms into smaller curds in the stomach. Soya milk, moreover, is far cheaper than cow's milk and may be prepared fresh as required, and can be seasoned to suit anyone's taste."

Other soy-related recipes include: Soybean-wheat muffins (p. 85-86). Use of soy bean flour in wholewheat bread (p. 89; it can be substituted for up to 25% of the wheat flour).

In the chapter titled "Diet and the healing art," under "Lecithin," pages 118-19 note that "there is a new food factor called lecithin which promises to become a factor of importance on account of its being essential for reconstruction and for the maintenance of vital organs, including the brain, nerve forces, heart and liver. Oil that is contained in the soybean is comparatively rich in lecithin and vitamin A and in this respect it is said to resemble butter. Cow's milk proves rather deficient in lecithin whereas soya milk is fairly rich in this essential constituent. Nutritional anemia which has been brought about through an exclusive use of cow's milk may be quickly eradicated by a liberal use of soybean milk."

1071. Miller, Harry W. 1944. The story of milk from the soya bean. Mount Vernon, Ohio: International Nutrition Laboratory. 37 p. See p. 1-6.
• ***Summary:*** This rare and very interesting booklet was sent

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to Soyfoods Center by Charles D. Howes of Mt. Vernon, Ohio, in Feb. 1979.

Contents: Full page photo of the "International Nutrition Laboratory established for processing soya bean foods, located at Mt. Vernon, Ohio. Foreword, by J.A. LeClerc, PhD, Formerly Senior Chemist of the USDA (Retired). March 5, 1944. The story of vegetable milk (Soyalac), by Harry W. Miller, M.D. Early trend, observations in China, back in America, the milk question, encouraged to produce a vegetable milk, further studies in China, the role of the International Nutrition Laboratory in America. Other products of the International Nutrition Laboratory.

"Foreword: The preparation of a palatable and appetite-appealing soya milk is proving a great boon to people allergic to cow's milk. It has been estimated that 20 to 25 per cent of our population are allergic to ordinary milk and many thousands of babies suffer from infantile eczema and other violent symptoms, whose condition clears up when transferred to soya milk feeding.

"Soya milk as prepared has approximately the same composition as cow's milk, except when soya milk is especially prepared for infants its formula simulates mother's milk. Soya milk contains more Vitamin B than cow's milk, and an equal quantity of Vitamin B-2. The valuable proteins found in soya milk contain all the Amino-acids known to be essential for growth. Preparations made from the soya bean are relatively rich in iron and copper, so that soya milk compares very favorably with animal milk as to its nutritional and biologic values.

"Soya milk has this further advantage that it does not endanger the user to disease producing germs.

"In view of the fact that there is not enough animal milk available in this country for the optimum nutrition of our population, also that it takes three years of care and feeding before a cow gives milk, that only a small percentage of the food consumed by the cow is returned in the form of milk, and further that the use of only ten million bushels or one twenty-fifth of our annual soy bean crop for conversion into soy bean milk, would supply a pint of milk every day to 8,000,000 people, at a cost less than that for cow's milk, and that soya milk is palatable, and especially acceptable by children, it would seem the sensible thing to encourage the preparation and consumption of soya milk on a large scale.

"The 'Story of Vegetable Milk' is most interesting to read. The successful preparation of an appetite-appealing soya milk, after years of experimentation by Dr. Harry W. Miller, now bids fair to become one of the most practical of modern food discoveries. Its use will not only be the means of saving thousands of children from unnecessary suffering and sickness but soya milk should prove a good substitute for cow's milk for those who are allergic to animal milk.

"It is my sincere wish that all who are fortunate enough to obtain a copy of Dr. Miller's "Story of Vegetable Milk," will study its contents and then pass it on to others, in order that in due time, millions of our people will have recognized the full nutritive value of this most excellent food product."– Signed, Joseph A. LeClerc, PhD.

"Early trend: Being the oldest of a family of five children, it fell to my lot to help Mother about the kitchen. She was well known for her sumptuous meals, and we always had many visitors at our house. Later as a part of the curriculum of the college which I attended was a course in cookery, and this stimulated my interest in knowing how good things were made as well as their food values. Then when I became a student of medicine we were introduced into a study of food preparation which in those days (1898) was rather unusual in the program of a medical school. This course only seemed to further whet up my interest in the study of foods and their preparation.

"Having to earn the resources for pursuing my medical education. I secured the position of guiding visiting groups through a food factory. As I explained the processes of manufacture, many questions were directed to me on all phases of nutrition as it relates to health and disease, and I took great interest as a guide to inform myself in every way available. I hungrily devoured literature on the subject and was fortunate in being under the tutorage [sic, tutelage] of the father of nutrition work in America, namely the late Dr. John Harvey Kellogg, to whom more credit belongs for furthering the selection, processing and sanitary packaging of breakfast foods than any other man. He was forty years ahead of the times in advocating the value of proper diet in relation to the cure of the sick, and so I have been able to grow up with the advance of nutrition work from its beginning and see the birth of the science of dietetics.

"Observations in China: In the autumn of 1903 my wife and I sailed as medical missionaries for interior China. After a stormy voyage, in which seasickness had deprived us of rations that were included in the price of our ticket, as well as several pounds of flesh, we arrived at the port of Kobe, Japan, where our colleagues, Dr. and Mrs. Lockwood, who preceded us one year, had a small sanitarium and had prepared a sumptuous meal for us. Half starved, we ate with great relish. One dish that was new to us especially attracted attention. It was a protein loaf made from the soy bean curd which was marketed under the name 'To Fu.'

"Arriving at the port of Shanghai, China, we went inland and took up our abode in the central part of the province of Honan, where we not only wore the Chinese costumes, including the queue, but our diet was from foods bought from the local markets, and consisted of only those edibles indigenous to China. Here again we were introduced to the soy bean, whose home is China, and which has been the great source of protein of the Chinese people for millenniums.

"The bean was grown abundantly in Honan, and in fact in all parts of North and Central China. Wherever the Chinese emigrate, they utilize this bean in many marvelous

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and tasty ways, mostly, however, in the form of cheese made by coagulating the milk with calcium sulphate. This curd is eaten in its soft state, or else pressed into little square cakes. The curd may be formed in sheets by pressing cloths. They also gather sheets of almost pure albumen [yuba] from a scum arising to the top of the soy milk on heating same. Accustomed to people chiefly drinking cow's milk, rather than making products from it, I questioned the Chinese why they did not use the soy milk. They said some of the aged with weak digestions do, but that the cheese was more popular, as they could combine it with other cooked foods. Still more did I wonder why, for the much undernourished infants of the Orient, they did not give them soy milk, containing as it does such important food entities as salts, vitamins, protein and oil in richer amounts than the bean curd and without the undesirable gypsum.

"Being engaged in language study and other mission responsibilities for several years I could do but little more than ponder over what I felt were great possibilities in soy milk for the people of China as well as other lands, were it scientifically studied.

"Another observation I made was that the people of North and Central China who were vegetable-protein eaters, getting especially soy bean rations, were a large and muscular people in comparison with those of the South, where rice was the food, and who used more meat in their diet. These results were later confirmed by experiments to show that the protein of the soy bean is one of the greatest body building foods known.

"Back in America: After eight years' service in China, I was compelled to return to America on account of illness contracted in interior China. When sufficiently recuperated, I was called to the position of medical superintendent and surgeon of the Washington Sanitarium and Hospital at the nation's capital. This again brought me in touch with important nutrition studies carried on at the government bureaus in Washington and also the work at Johns Hopkins University. We also had our own laboratory where we prepared several soy products and introduced many original dishes into our hospital dietary. The Washington Sanitarium was an institution whose dietary was of the lacto-vegetarian type" (Continued). Address: M.D., Mt. Vernon, Ohio.

1072. Miller, Harry W. 1944. The story of milk from the soya bean (Continued–Document part II). Mount Vernon, Ohio: International Nutrition Laboratory. 37 p. See p. 6-11.
• ***Summary:*** Continued. "In order to get our protein supply, we went heavy on cow's milk and dairy products. In 1917 we received notice from the dairy which supplied us milk, that the government had requisitioned their entire milk supply to the Walter Reed Military Hospital, and we would have to look to other sources. We secured a large farm nearby and expended several thousand dollars buying the best registered cows we could secure. Our heavy investment necessitated that I should give some study to the dairy business. And, although I grew up on the farm and as a boy it fell to me to do the milking, which was usually accomplished in the barnyard or in the cow stable, my boyhood anxiety while milking was how best to save the milk from dirt contamination, in which we had many narrow escapes, and when none to successful we had to add an extra thickness to the strainer cloth. We knew nothing then of infected milk through disease of animals, or of milk as a carrier of infections and spreader of epidemics, of cow allergy, or that the milk contained toxins that came from certain feeds and pastures. My father being a school teacher, taught us, however, to try to keep flies out of the butter, and lids on the milk crocks while the cream was rising. From the day I began to milk cows I lost interest in drinking milk.

"The acquisition of this dairy by the Washington Sanitarium not only convinced me of the need of a substitute for animal milk, but my investigations into all phases of the care of a herd and its product, milk, served as a preparation for building up just such a product with nutritious properties equal to those of animal milk.

"The Milk Question: Among the several dairy publications studied, I was especially impressed with Dr. M.J. Rosenau's book on "The Milk Question," especially since he was recognized as America's foremost hygienist, being surgeon-general of the U.S. Public Health Service. Dr. Rosenau aimed in his book to inform the public of dangers in animal milk and the need of improved methods for caring for same. To start with, he calls attention to the following: The milk-giving animal may be suffering from serious disease or there may be contamination while milking, both from filth on the animal or from exhalations from diseased cows, from milkmen's unclean hands, dirty milk pails or strainer cloths, unclean holding receptacles, the fly menace, putrefactive changes in milk while standing in the sun or being hauled to the market, contamination from often repeated handling of milk, failure of pasteurization to make infected milk good and safe, and also the contamination of the infant nursing bottle. In his amazing statement of the high infant mortality through contamination of milk, he also enumerated numerous epidemics transmitted by milk infection, typhoid, scarlet fever, and other disease scourges. However. Dr. Rosenau's book was written too early to list undulant fever now known to be wholly contracted from infected animals.

"The results of these investigations led me to check our herd of carefully selected cows for tuberculosis, with the result that five of the finest milk cows reacted as tuberculosis infected animals, and the results were confirmed by specimens of infected glands taken from each animal. During these years of investigation and practical experience I became convinced of the following facts:

"1. That the cow's milk is a perfect food for the calf during its early period of development. The grown calf turns to other food later and the mammary secretion of the cow is

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for a short period. The calf has four stomachs and possesses enormous powers to digest the heavy curd of cow's milk. It should be kept in mind that each animal gives a milk most suitable for the nourishment of its own kind. A calf's growing conditions are different from the human, so that cow's milk is not suited by nature as a perfect food for man.

"2. Out of a mixture of milk from several cows you are almost certain to get strains of pathogenic germs, which are not always certain of destruction by Pasteurization temperatures. Only when Pasteurization temperatures are held at 154 degrees Fahr. for 30 minutes can its germicidal action be depended on.

"3. Tests made on 500 well people showed that 27 per cent gave evidence of allergy to cow's milk, of whom about one-fourth were severe reactors.

"4. Certain foods in the animal diet affect the character of the cow's milk.

"5. Cow's milk has six times the amount of calcium of human milk, but such salts are not so available to the human infant as the calcium of woman's milk.

"6. The casein or protein of cow's milk forms a tough curd in the infant's stomach, and since the infant's digestive organs are poorly developed, the casein is only partially available.

"7. Cow's milk is frequently constipating to both infants and adults and has a tendency to gas formation.

"8. Both vitamins and minerals are a variable item in cow's milk, depending on her diet. The cow borrows all she contributes in food values from vegetation. If what she eats does not have vitamins, her milk cannot contain same.

"9. Animal milk certainly has proven of value in the feeding of infants and children, still, because of certain lacks and dangers to be found in cow's milk, an effort to find a safer and more suitable substitute is justifiable.

"10. Deriving nourishment from cow's milk is an extravagant waste of food materials, since the cow returns but 12 per cent of her feed in milk and only 8 per cent of what she eats is stored as muscle tissue for beef.

"After all, the only perfect food for humans is woman's milk, and that only during the lactation period, as every animal gives a perfect milk to start off the nourishment of its kind. The reason goat's milk is better for infants, is that its offspring's growing needs more nearly parallel those of the human infant, whereas the milk of the large animals whose offspring make a very rapid growth are not so suitable for the human species without considerable modification. Thus extensive modification of cow's milk is required to make it suitable for infants, so that baby food manufacturers discard some of the fat, others modify the salts, still others soften the curd, and some replace the entire sugars; and to be sure of vitamins, they always have to be supplemented.

"So, we ask why not build up just the milk we want to start with, and this we have now accomplished. Nevertheless, cow's milk will still continue to occupy an important place in the American dietary, but let us not conclude it is indispensable, by any means. However, we are convinced that every process the cow uses to make milk could be duplicated in the laboratory as regards the transformation of food materials to become a part of our growth and energy needs. We have sugars even superior to animal lactose, vegetable oils with a less tendency to rancidity. Minerals, as also vitamins, are today added to food with greater certainty than depending on their existence in animal milk, and thus far there is no protein superior to that found in the soy bean, as it contains all the indispensable amidoacids [sic, amino acids] that constitute complete protein nutrition" Continued. Address: Mt. Vernon, Ohio.

1073. Miller, Harry W. 1944. The story of milk from the soya bean (Continued–Document part III). Mount Vernon, Ohio: International Nutrition Laboratory. 37 p. See p. 12-18.
• ***Summary:*** Continued. "Encouraged to Produce a Vegetable Milk: Having arrived at these conclusions which were based on extensive feeding experiments, we set about to get milk from a vegetable cow. However, my colleagues shook their heads saying, 'You might make something that looks like milk, but will it have those living properties that fit the requirements of a growing life in the form of a human individual?' But I have only to remind them that in the early days we thought of vitamins as living principles that evaded analysis, causing reactions but perishing with attempts at investigation, subsequent years have erased this argument and we can now analyze vitamins as well as manufacture them, as they have a chemical formula.

"I could easily have become discouraged in trying to bring out a substitute for animal milk because of the well established dairy business in America where sixteen per cent of United States industry flourishes, except that all the while I had in mind the people of the Orient in behalf of whom I had dedicated my life for service as a young man. Millions die annually for the lack of a suitable balanced food beverage to take the place that animal milk occupies in the American dietary, and as many more suffer lifelong weakness and ills because of faulty nutrition, especially in the early years of life. I was also well aware that in America we have many who cannot take animal milk, either dislike it, are fearful of it, or are allergic to it, who are ill nourished for lack of a milk substitute. And even yet cow's milk is not available to all the inhabitants of the Americas.

"As I pondered over what a suitable milk food would mean to the Oriental races, where there was such a lack of that kind of food, I felt that humanity was throttled at its start. I was also aware of the dangers to health and life that lurk in the lacteal secretions of animals and the way milk is handled in dairy yielding countries. Consider also the economic food waste, in view of the enormous amount fed to animals and the little protein return. Think of what this well-processed vegetable protein would mean were it fed

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to the starving millions of this world. I determined to work out the problem of a vegetable milk. It occurred to me that if wool could be made direct from vegetable protein instead of feeding protein to the sheep, we could make milk without the digestive laboratory of the cow.

"I first investigated to see what had been accomplished, and discovered that two groups of child specialists, one in Baltimore, the other in Cleveland, had fed infants a gruel made from soy bean meal, and the reported results were very satisfactory. In America, all experimental feeding work was done with mixtures made from milling the soy bean into flour, although the fiber of the meal was a drawback. Yet because of the high nutritive value of soya protein and its alkalinizing properties, it possessed remarkable values as reported in infant feeding by these authorities.

"We made the acquaintance of two men prominent in soy bean work of the U.S. Department of Agriculture, Dr. W.J. Morse, Chief of the Soy Bean Division of the Department of Agriculture, and Dr. J.A. LeC1erc. Chief Senior Chemist of the Bureau. These men filled me with inspiration, enthusiasm and information. Throughout the succeeding years, we have had several interviews, and both of these men have made frequent visits to our Nutrition Laboratory at Mt. Vernon, Ohio.

"My preliminary studies made me aware that I would be confronted with many problems in producing from the soy bean an easily digested, tasty, wholesome milk that would meet a popular demand.

"My thirteen years spent at the nation's capital as surgeon and Medical Superintendent of the Washington Sanitarium and Hospital gave me a preliminary foundation in research methods for the years to follow in China. These years, from 1913 to 1925 were synchronous with the time of the beginning of modern dietetics. [Elmer] McCullum at Johns Hopkins University in Baltimore was neighbor to us, and he was actively pursuing the study of vitamins and their dietetic value. I was intimately acquainted with this pioneer worker and in fact at the Government Bureaus in Washington there was a great arousement on the importance of dietetics and cooking advances, to which work I had ready access, as well as utilizing the marvelous Surgeon General's and the Congressional Library facilities, seeking the latest publications on food, processing and nutritional work.

"It was during this year I published my first book entitled, *The Way to Health*, which has enjoyed a wide circulation.

"During all these studies, my thoughts were focused on the Soy Bean, the world's great protein yielder, and how to best utilize it, and incorporate it into the American dietary as a substitute for meat, fish, milk, eggs and cheese. Early and late we were running experiments at the little food plant we erected in connection with the Washington Sanitarium and Hospital. We realized that the large things in soy bean utilization in America, as also in the Orient, remained to be worked out in the future, and that our work was the first real effort to be recorded relative to a soy bean milk suitable for infant feeding and as a complete beverage milk.

"Further Studies in China: Finally in 1925 the opportunity came for me to return to China. My employing organization, the Seventh-day Adventist Church, sent me to establish a sanitarium at Shanghai. During the early years after my return to China, my time was fully occupied with medical and surgical work and the building of the Shanghai Sanitarium and Clinic, and assisting in the establishment of numerous other medical units in different parts of the Orient. However, simultaneous with this work, my son and I began to carry forward the assembly of a soy bean plant at the Shanghai Sanitarium. My work necessitated my return to America for a brief period about every two or three years and this gave me the chance to discuss my problems with chemists as well as investigate suitable processing machinery.

"In my contacts, while traveling in China. Korea and Japan, I discovered that a milky looking solution, a water extraction of soya protein, oil and its contained vitamins and minerals, had been tried out in infant feeding in some hospitals, in some instances with satisfactory results, but for the most part with quite disappointing results.

"The method used in its manufacture in most cases was to soak the beans, grind them in a stone mill with a stream of running water and this milky solution was filtered through a cotton cloth and then boiled, sugar added, and various flavors tried out to cover the beany taste, but flavor control was not possible by the strongest essences. As I examined this milk, it was apparent that something must be done to overcome the beany taste, and I concluded the reason the people were using bean curd rather than drinking the milk from which the curd was made, was that it tasted better after it was coagulated than before. Further, it needed to be farther processed to make it more digestible, and until we could add sugar and additional oil to it, we could not have a balanced milk as is found in human milk.

"Being familiar with the process of constituting cow's milk from skim milk powder, and sweet butter, through melting the butter, mixing it with the dissolved milk powder, and then homogenizing it, I concluded that we could do the same with this water-extracted solution from the hydrated soy bean.

"Since I knew that soy milk was a colloid liquid just the same as animal milk, and would hold a suspension of emulsified oil, I lost no time in getting a colloid mill that would do this same work, and could now constitute a liquid of any formula of protein, fat and sugar, so the resulting solution would be a colloid liquid as animal milk. Yet, I was far from having a milk that gave satisfactory results as to digestibility and could be borne by infants without too great looseness of the stools; and while you could sweeten it up so babies would take it, the older group would take a

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sip and turn it aside because of its bitter taste. To get rid of that beanish taste seemed far off, but to process it so that it could be more digestible, I thought was surely possible. Much work had been done at Ames, Iowa, in experimental animal feeding. Not only did these experiments show that thorough cooking under pressure of soy beans raised the availability of soy protein to 95 per cent absorption, but that weight and growth records in feeding of pigs and fowls were far superior to those of animals fed ordinary cooked beans, and thorough processing caused a disappearance of digestive disturbances."

Note. This is the earliest English-language document seen (Dec. 2013) that contains the word "beanish" or the term "beanish taste" used as the word "beany" or the term "beany taste" are used today (Continued). Address: Mt. Vernon, Ohio.

1074. Miller, Harry W. 1944. The story of milk from the soya bean (Continued–Document part IV). Mount Vernon, Ohio: International Nutrition Laboratory. 37 p. See p. 18-23.
• ***Summary:*** Continued. "This coincided with work that I had done in which I discovered the fact that the more you process vegetable protein, the more digestible and available the protein becomes, while the contrary holds for animal proteins, which are less digestible when overcooked. Having proven that soy beans were improved in both taste and availability through thorough processing, we conducted extensive cooking tests to determine optimum temperatures and length of cooking required to give us the best flavor and to render the several soya products, including soya milk, most readily digestible and assimilable. In the feeding of infants, whereas simply boiling milk causes great looseness of the bowels, as soon as we processed at the correct temperature and determined the exact period of time in most cases even the premature and weakest infant could take the soya milk without this laxative effect. Occasionally an infant would still have too loose movements and the soya milk would have to be modified by adding the acidophilus organisms or a little boiled cow's milk. With the solving of many nutritional problems regarding soya rations, we began feeding it to the infants and children at the Shanghai Clinic, keeping careful records in each case. We had no difficulty in getting children to accept soya milk, even though it was not so tasty in those days as the soy milk we have now.

"I knew there were yet many factors that must be solved to accomplish in this vegetable milk all that is claimed for animal milk. For instance, we must correct the beany taste, then the milk must be capable of being made to formula, containing definite quantities of fat, sugar, protein, minerals and vitamins. It must remain a colloid liquid and be capable of spray-drying into a powder that completely reliquefies, also made as inexpensive as animal milk.

"All these I believed must and could be accomplished, just as we had already made the milk more digestible than animal milk. The first problem was that of flavor control. I had endeavored to educate my American friends to learn to like the natural bean taste, just as people have learned to like yeast, as later the soya taste will be as pleasant to them as to the Oriental people who do not care for the taste to be changed. But the result was that they would pick up a glass that looks like animal milk, smell of it and sip it and say, 'It does not taste like cow's milk.' To this I replied, 'No, it does not taste like cow's milk, nor goat's milk, nor horse's milk, nor human milk," but I assured them that an infant would as readily change from its mother's milk to soya milk flavor as to cow's milk flavor. When I insisted on their drinking a glass of it instead of smelling of it or sipping at it before they passed judgment on its taste, the results were much better. Still I concluded that it takes much more than mere proof that a thing is scientifically correct to put a food across. The food must have a taste appeal and I believed that this could be accomplished with soya milk. It is a fact that food we relish is the food that gets the most bountiful supply of our digestive secretions, for good flavors and odors are a stimulant to the organs of digestion.

"Returning to America, I addressed myself again to this problem of removing the beanish taste. I had previously filed application to the U.S. Patent Office for a patent for constituting a vegetable soy milk of any given formula. Through our research we had now found that which was responsible for the beanish taste and also what to do to debitter it. We were able to make a milk from the soy been that could not be detected as from the bean. I therefore appeared at Washington with my samples of debittered soy milk powder and canned liquid soy milk and accompanied by my attorney we went before the commissioner of patents. Never before was I put through such a grilling. One man had spent several months looking through all available literature to see if my claims were entirely original and others checked over to see that they were true, and then my finished products were examined by expert tasters. The commissioner assured me that there were already patents on making a vegetable milk out of the soy bean and that as far as he knew none had ever netted their originator very large returns. This was my opportunity, and I remarked, 'Yes, but you have no patent that gives a method for debittering the soy bean nor of constituting a milk from it of any given formula, and not one of those products is palatable.' He and his taster admitted having tasted many soy products, and this was the first time there had ever come to them a truly debittered soy milk.

"My lawyer assured me my case was won and in a short time I received word that the patent had been awarded me No. 2078962. This patent covered several processes original with us, as debittering, and thus making a usable milk; the special methods of cooking so as to make soy products readily digestible; the method of preserving the protein from spoiling whereby it could be bottled as liquid milk, tinned as condensed milk, or dried as powdered milk;

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also the method of incorporating through homogenization the food principle to any given formula, reinforced by both vitamins and minerals. It but remained for us to find suitable machinery and equipment for practically carrying out extensive production by means of the above patented processes, and since much of this was not available, we had to have some specially built. For many years we had made soya milk only for our Shanghai Sanitarium and Clinic, using a few small machines and cookers sufficient for our needs. Through this small unit we were able to carry on extensive feeding of infants and children as well as the sick patients, also expectant and nursing mothers. Remarkable results were obtained in feeding post-operative cases, as they could start nourishment with soya milk much earlier than with other foods without the usual gas complaints. Ulcer of the stomach people did exceptionally well, also sprue patients, those suffering from colitis, the several types of dysentery, and those with constipation. For diabetics and arthritis cases the results were most satisfactory. In meeting up with allergy, soy milk proved to be the one food we could always turn to in our dilemma of finding something to agree with those suffering from skin rashes, vomiting. diarrhea, nervous attacks, dyspepsia. etc.

"In order to meet a growing demand for soya milk, we shipped to China the essential machinery for the first soy bean milk factory. It was the first soy bean creamery ever established and equipped with laboratory and machinery to make canned milk, condensed milk and spray dried powered milk and vacuum packed bottled milk, with regular deliveries. Milk routes were established in all parts of Shanghai, and the production doubled each succeeding month. Three types of liquid milk were produced: natural soya milk, chocolate soya milk and acidophilus milk, packaged in pint and quart bottles. The price to the consumer was less than that of cow's milk in Shanghai, which thus made available a milk rich in food value for all members of families whose circumstances did not permit them to buy the more expensive animal milk. It was here demonstrated that soya milk in every way filled the average family requirement for a milk, and that in countries where the economic conditions make impracticable dairies, where stock feed is scarce and costly, the people may still have an equally suitable milk. We were able to bottle soya milk so that it would keep indefinitely without the need of refrigeration, and could be kept for a week or a month if necessary without spoiling. Thus we had a bottled milk and also a powdered milk that did not require refrigerators, and the expense of delivery was eliminated. Also, people were assured of a pure bacteria-free milk, one that would not give rise to intestinal disturbances in hot weather.

"Soyadophilus, a delicious sour milk made by growing the lactic acid organism in sterilized soya milk, had a remarkably large sale. In fact, cheese and numerous other preparations were made from our soya milk, while the powder afforded a convenient form in which to ship soya milk to western and northwestern China, where transportation rates were high. One pound of powder will make eight pounds, or four quarts of liquid soya milk" (Continued). Address: Mt. Vernon, Ohio.

1075. Miller, Harry W. 1944. The story of milk from the soya bean (Continued–Document part IV). Mount Vernon, Ohio: International Nutrition Laboratory. 37 p. See p. 23-30.
• ***Summary:*** Continued. "Unfortunately, the war that broke out in Shanghai on August 13, 1937, put an end to this illustrious beginning of making a soya milk with the vegetable cow. The sales returns were just beginning to equal the cost of operation. As a consequence of the war, the fire and bombing destroyed more than a hundred thousand dollars, national currency, worth of property and equipment. However much valuable experience had been gained during this time through the feeding of infants and children and the dieting of special disease conditions. The results of this experience were published in the *China Medical Journal,* 1937. These results showed that soy bean milk was second only to mothers milk in the feeding of infants and children and has no equal in dieting cases of stomach acidity and other intestinal complaints. The high biologic value of its protein, the ease of its digestion and ready absorption, when combined with dextrose and maltose, yielded a food of tremendous value to the people of the Orient where the soy bean is indigenous. This brief experiment in conducting a soy bean dairy left a contribution far exceeding the losses sustained by fire and the bombs. For two years we had to turn largely aside from food manufacture. We were busy establishing and organizing a sanitarium at Hankow, China, known as the Wuhan Sanitarium and Hospital. This large institution was extensively used for the care of sick refugees and disabled and wounded soldiers up till October 25, 1938, when the Japanese army forces entered the Wuhan area. Three months later I, with a group of four other Americans, being among the first to evacuate from Central China, were granted transportation on a Japanese transport to Shanghai.

"The Role of the International Nutrition Laboratory in America: Back in America, my first thoughts were how most advantageously to follow up our food research work and lay hold upon the wealth of nutritional advance and the knowledge of food processing in the U.S.A. in perfecting processes developed in China. The need of the peoples of the Orient was uppermost in our mind and protein direct from vegetation seemed their only way out for adequate nutrition, the soy bean naturally being that source. We, therefore, secured land and erected a suitable building on a farm at the suburbs of Mt. Vernon, Ohio, as this was in the soy bean growing belt.

"No sooner did we start the foundation of the building than we began also to fabricate the equipment for carrying forward the processes already worked out for the

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manufacture of soya milk and subsidiary food products from the soy bean according to our more recent research. The farm gave me opportunity to grow several types of the edible soy beans. The edible soy beans differ widely from the field type beans grown so extensively in the United States. The field varieties are raised for hay or for ripened beans to be used by the oil refiners, the residual bean cake is sold for stock feed. A small part of the bean crop is used for flour. The edible beans are those varieties that are better flavored, easier to cook, make better flour and are such as can be shelled in the immature state for green pack tinned beans. There is as much difference in foods made from the edible beans and those made from the field soy beans as in the taste and quality of sweet corn and that of field corn. There are two belts in America for producing soy beans. Some varieties of soy beans mature in from 90 to 120 days and are suitable for planting in the northern belt which includes the states of Ohio, Indiana, Illinois, Michigan, Wisconsin and Iowa, and the beans requiring over 120 days to mature are grown in the southern belt including the states of North and South Carolina, Georgia, Arkansas, Texas and Missouri.

"Out of fourteen varieties of the edible beans planted on our farm, four outstanding varieties were selected, namely, Bansei, Aoda, Funk's Delicious and Hokkaido. These four mentioned in the order of their value were found best for green pack canning, also made the best quality flour and milk, and were found best for processing for other foods. From our southern soy bean station located in North Carolina, there were three varieties, namely, Rokusun, Tokyo and Woods Yellow, named in the order of their value for food processing, A very unique feature of our farm experiment work was the shelling of green soy beans, with the use of a Viner obtained from the Scott Viner Company of Columbus [Ohio]. Some 40,000 cases of these delicious beans were put up this season (1943). A single unit of these Viners is capable of shelling five tons of green beans in one day.

"Because of the limited production in America of these fine vegetable types of soy beans, we readily saw that we would have to run, as an important adjunct of the laboratory, a seed department, and an extensive agricultural program in raising this type of beans, and our methods in these lines have been perfected to overcome shattering, uneven ripening and other heretofore drawbacks to the raising of these splendid beans. We now have under cultivation annually several hundred acres of these large delicious edible soyas for green bean canning and for milk processing.

"Our factory, a newly built brick structure, lined with enameled tile, was completed in the autumn of 1939 and contains laboratory space, test kitchen space where soy milk and soy products are under continual tests for their combining properties in tasty recipes. This modern food factory has three large boilers for supplying steam pressure for processing, and contains specially constructed stainless steel cookers, vacuum pans, spray dryer, iron cow (homogenizer), grinder, centrifuges, sterilizers and other processing machinery. This is our first model plant where we have arranged the machinery in series so that the hydrated beans start at one end of the factory and come out a dehydrated complete milk powder at the other end, all ready for tinning in sanitary cans, and shipping.

"Nothing is perhaps more spectacular than to watch this milky bean juice being converted into a palatable, readily digestible milk, containing all the food essentials, with minerals and vitamins added and flowing from the iron cow in quantities as much as is often secured from the aggregate milkings of several hundreds of cows. It is truly a wonder, a colloid milk, bacteria free, being made in a sanitary laboratory.

"The splendid tasting and readily soluble powdered milk as it is now produced at the International Nutrition Laboratory came about only as a result of much effort and time in making many improvements and alterations of equipment from week to week. Dr. Weisner, of Ohio State University, did much valuable research work on the bacteriology of soy milk, and we are indebted to Dr. W.J. Morse for supplying seeds and much valuable information, and to Dr. LeClerc, senior chemist of the Government Department of Agriculture, for check-ups that assisted us in the standardization of our products.

"We were fortunate in being able to develop this milk in the Orient with a background of the Chinese experience with soy bean foods for ages and also have the benefit of scientific and technical expert help in the United States through the frequent visits I made to this country, and I feel profoundly grateful for the services of many of the leading nutrition experts as also the laboratory and engineer help to be found in Government Bureaus at Washington and at the Ohio State University. For vitamin assays, I am indebted to Dr. Howard J. Cannon, Director of the Laboratory of Vitamin Technology at Chicago. In the Orient we also had able laboratory help, and the feeding work was under our own supervision in Shanghai Sanitarium Clinic, a 200-bed hospital conducting a very large maternity and children's department.

"Soy beans can be grown in almost any country of the world and are capable of many methods of preparation. In Oriental countries we need to improve the preparation of soy bean foods to make them more digestible. In the Occident we have readily at hand the processing vats to thoroughly cook the beans, but to go over big, they must be made readily available and also palatable. The International Nutrition Laboratory, as its name indicates has been established to thoroughly process the bean and at the same time make it palatable so that its use can be universal. In warm climates or frigid areas nothing is more easy of digestion than the colloid liquid, soya milk.

"On several occasions we have gone out to lecture and give demonstration to clubs and to the annual meetings of the American Soy Bean Association. We have observed the

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textiles, fabrics and plastics made from soy bean protein with great admiration. At one meeting, wool was shown made from the soy bean and at another a cap, necktie, and many other articles we use" (Continued). Address: Mt. Vernon, Ohio.

1076. Miller, Harry W. 1944. The story of milk from the soya bean (Continued–Document part VI). Mount Vernon, Ohio: International Nutrition Laboratory. 37 p. See p. 30-34.
• ***Summary:*** Continued. "After all, protein is an important component of our clothing and many articles we commonly use. The soy bean is nature's greatest protein yielder. From 35 to 52 per cent, or almost one-half the weight of the dried soy bean, is protein. Next in value is the oil. By way of comparison with navy beans, peas, lentils and lima beans, the soy bean has 300 per cent more protein and ten times as much oil content.

"In making up our dietary requirements, we pay eight times as much for our protein as we do for carbohydrates and three times as much for protein as we do for oil. This may impress the reader with the great economic wealth in the soy bean. Nitrogen or protein is of first importance to the growth and maintenance of the human race, as well as the entire animal kingdom. While mankind has often depended on the flesh and products of animals, such as milk and eggs, for this protein supply, the animals had to basically depend on vegetables for their nitrogen. It is only vegetation. that can utilize the nitrogen of the air and inorganic sources of nitrogen and place it in accessible form for animal life. For instance, we exhale every atom of nitrogen of the air that we inhale. None is utilized or stored in our tissues. Therefore, whether we drink animal milk, eat animal flesh, or take only vegetation, we get our edible protein solely from plant life, and there is no superiority in the animal stored protein, to that eaten by the animal and which is primarily available to the human from vegetation. So, as the sheep makes wool from the protein it eats, so the cow makes casein from the protein she eats. Unless the animal gets protein, there would be no wool or casein. But it is not necessary to use the animal digestive laboratories to make either wool or milk, for we can take the products the animal eats to make wool or milk by means of laboratory technique, and that under sanitary conditions.

"The chief and outstanding product of the International Nutrition Laboratory is soy milk, put out under the names of Soyalac and Soy-A-Malt, names having originated in the early days of our experimental work while pioneering in this field. Soy-A-Malt is put out under the registered trade mark No. 390909 U.S. Patent Offices and Soyalac registered trade mark is 389131 U.S. Patent Office.

"However, the Laboratory is concerned in making a large variety of foods from the soy bean and already has a score of such products on the market utilizing the entire bean, which is all valuable in human nutrition. Since milk has a wide variety of uses, we are making a beverage liquid Soyalac put up in tin cans, of 13 ozs. and 30 ozs. respectively. A chocolate flavored Soyalac is also put up in 13 oz. tins. A modified infant food powder, called Soyalac, is put up in one pound glass containers, which meets all the requirements of the growing infant from birth onward to the end of the nursing period, after which it is used to supplement the child's diet. This infant food has as its chief constituent vegetable oils homogenized, a combination of sugars including dextrose, maltose and dextrin, and supplemented by vitamin A and D with calcium, phosphorus and iron added. Hundreds of babies in America and other countries with allergy, weak digestion and intestinal disturbances, are now being most satisfactorily nourished by Soyalac, a complete infant food including all known requirements for infant nutrition.

"Miller's Soy-A-Malt is now a country-wide known beverage milk sold in either natural malt flavor or chocolate flavor and packed in one-pound, four-pound and twenty-pound containers, possessing all values of the soy bean nutritionally but without the bean flavor. Many who want a milk more nearly the animal milk flavor call for All Purpose Soyalac. This is packed in containers same as Soy-A-Malt, and can he used for cooking purposes as well as beverage the same as animal milk. Until we brought out these vegetable milks which are rapidly taking their place in the market beside cow's milk, soya milk was chiefly demanded for certain specific diseases such as correcting acid states, intestinal upsets, and for diabetics. The composition of all soya milk powders will be found on the labels as well as directions for using them.

"Frozen soya milk desserts and soya ice cream are now quite popular. Recipes are given for the home refrigerator.

"This little pamphlet concerns itself with the history of soya milk development rather than trying to cover the field of the International Nutrition Laboratory, for this soy food processing institution is the largest plant in the world devoting its entire efforts to human nutrition from the soy bean and for making meat substitutes. Foods that look like and taste like meat are made with high protein values. Our canned soya beans are among the most delightful and tasty vegetables. The soy bean is nature's highest protein yielder and the International Nutrition Laboratory engages in the manufacture of these fine protein foods from the edible varieties only.

"No claims are made that soya milk has yet been developed by us to its final possibilities, but at least these twenty-five years of painstaking study and experimentation has resulted in a food second to none as an essential to strong body building and health. So much progress has been made in changing the extracted milk liquid of the soy bean used for millenniums by the people of China for making cheese [tofu] into a complete food of inviting appearance and delicious taste, with food values the equivalent of either

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human or animal milk that we feel rewarded for the effort and expense. Our soy milk can be made into a sour milk resembling buttermilk, it can be made into a cheese, and this cheese can be treated so as to have the appearance and flavor of meat. We have not tried to enter into the comparative values of soya milk and cow's milk. There is much to be said regarding the value of soya milk and the story of Soya Milk would not be complete without a summary of the many virtues and nutritional values of soy food products. The soy bean, often called these days the 'wonder bean,' is just as wonderful as a food supplier as in the oil industry, or when used for plastics.

"The protein of the soy bean possesses all of the indispensable amidoacids [sic] and therefore is a complete dietary substitute for milk, eggs and meat, and stands as the only vegetable protein that is biologically equal to meat proteins. By our extraction process we are able to obtain 85 per cent of this edible protein in a soluble form that means that it is very readily digested. Truly, it is a wonder bean, for it does wonders in the nourishment of the well as also the sick. It is good for growth and excellent for body maintenance" (Continued). Address: Mt. Vernon, Ohio.

1077. Miller, Harry W. 1944. The story of milk from the soya bean (Continued–Document part VII). Mount Vernon, Ohio: International Nutrition Laboratory. 37 p. See p. 34-37.
• ***Summary:*** Continued. "Let us notice the high points in favor of soya milk as manufactured by the Miller process at the International Nutrition Laboratory:

"1. The edible soy bean, which is the protein base of soy milk, is the richest source and unquestionably the highest type of protein known.

"2. Soyalac made by our modern equipment takes from the soy bean about 85 per cent of its protein content, 50 per cent of the oil and the major portion of the mineral and vitamin content, all of which is extracted in true colloid liquid form.

"3. Soya protein contains all the indispensable amido-acids that are of known value in human nutrition, and is biologically comparable to animal protein.

"4. Soyalac, as made by the International Nutrition Laboratory, supplies every purpose of animal milk for the new born, the growing child, for the adult, the pregnant or nursing mother, and in the dieting of special diseases.

"5. Soya milk, being first thoroughly debittered, is capable of affording all varieties of flavors by their addition, and its sweetness will depend on the amount of dilution added.

"6. It is hypoallergic and serves as a substitute protein diet to those of allergic tendencies.

"7. It has a definite standard formula which can always be maintained, for it is laboratory checked.

"8. It is free from pathogenic germs and other types of harmful bacteria.

"9. It is a definitely alkalinizing food of great value in treating arthritis or dieting acid or ulcer states, and serves as an ideal nonresidue diet of high nutrition value in intestinal disorders, particularly amoebic dysentery, sprue and colitis.

"10. Mixed with lactic acid bacillus or acidophilus cultures it makes a delicious sour milk drink and one of known therapeutic value in intestinal disturbances.

"11. Eight pounds of soy beans fed to a cow will produce a gallon of cow's milk, whereas the same eight pounds of beans by our process yields eight gallons of soya milk equivalent in value to cow's milk. In other words there is a great economic saving, not to consider perhaps other advantages in a vegetable milk.

"12. It is the only vegetable protein that is biologically equal to and may be substituted for animal milk, cheese, eggs, fish and meat in the human diet with safety, and mixes well with fruits and vegetables.

"13. All Miller's milks are richer in calcium than cow's milk and are vitamin D fortified.

"This little pamphlet on the Story of Soya Milk is issued by the International Nutrition Laboratory, Mt. Vernon, Ohio.

"Other Products of the International Nutrition Laboratory: The Vegetarian Cutlet is another of Miller's distinctive high protein foods. These are marketed as choice, uniform sliced cutlets for frying or broiling; or diced for use in roasts, chop suey, patties, croquettes, hash, or as meat extenders. Sold in small family size, or in large containers for hotels, restaurants and institutions.

"Miller's Canned Green Shelled Soya Beans are a treat. They contain the nutritious values of meat, fowl, eggs and milk. They are grown as choice edible beans, and canned just before ripening.

"Miller's Soya Spread not only takes the place of butter as a spread, being rich in fat as well as protein, and very pliable; but is also combined in many table recipes. It comes packed in 14-oz glass sealed jars.

"Miller's Soya Milk is packed in various formulas and different sized containers.

"Soya Malt, as a spray dried powder, either with a malt or chocolate flavor.

"Soyalac all purpose milk, for either a beverage or in cooking and baking.

"Soyalac Infant Food, a soluble milk powder, hypo-allergic, fortified as a complete vegetable milk.

"Soyalac Liquid Milk, in either natural or chocolate flavor.

"For descriptive material regarding other Miller Foods, such as Soya Loaf, Vegetable Cheese, Soya Flour, write to the manufacturers at Mt. Vernon, Ohio." Address: Mt. Vernon, Ohio.

1078. White, Julius Gilbert. 1944. Abundant health: Expounding the Learn-how-to-be-well system of daily living. 4th ed. Madison College, Tennessee: Published by the

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author. xix + 437 p. Illust. 24 cm. [21+ ref]
• ***Summary:*** The maintenance of physical and mental health can be achieved through a vegetarian diet and wholesome living. Interesting sections include: Meat not necessary (p. 150-52; 13 quotes from authorities). Denmark's food experiment under Dr. Hindhede during World War I (p. 152-53). Sixteen reasons for vegetarianism (p. 153-). The animal kingdom a reservoir for disease (p. 165-). Note that Madison College is a Seventh-day Adventist college and sanitarium.

Soya is discussed on the following pages: Soybeans and soybean products as a replacement for meat (p. 151-52). One section titled "The Soybean: The Wonder Food" (p. 345-59) discusses many aspects of soybeans and how to use soybeans: In baking. In general cooking. As beans. As beans ready-cooked. As meat. As milk (gives 3 recipes for making soybean milk and ways for using "the pulp left after making milk"). As cream. As cheese ("A very satisfactory soybean cheese is now available in the health food stores. It has a texture something like cottage cheese..."). As butter. As oil. As home-made soy butter (made from 4 tablespoons each soy flour and water, 1 cup of oil, a little salt and butter color if desired). As home-made soy mayonnaise (based on the above home-made soy butter). As soy acidophilus milk (also often called soy buttermilk). As greens (soy sprouts). As soy sauce. As coffee. As substitute for egg white.

On page 389 begins a long treatise on the safety of aluminum in connection with cooking and foods, a subject which is causing much debate. Address: Madison, Tennessee.

1079. Gotham, Lucille J. 1944? Allergy to certain foods. *Madison Health Messenger* (*Madison, Tennessee*) 6(1):1-2. Undated.
• ***Summary:*** A reader writes to ask: "I am on a diet eliminating wheat, milk, and eggs. What products and foods can I substitute for them while I am experimenting?" The author answers: "Milk is the hardest problem. Through the years nut milks and soy milks have been developed, and they may be used in cooking in place of cow's milk, with satisfying results for almost everyone. They are also very nutritious. The soy milks are liquid or dry... If you make your own nut or soy milk you had better ask your physician about the advisability of adding some dicalcium phosphate with viosterol and some vitamin A. These additions will not change the flavor noticeably, and they will safeguard your health.

"You will like soy cheese in place of real cheese. Health food stores have these special foods." The following recipes are then given: Nut milk (almonds make the best milk). Soy milk (made from soy flour). Plantation cocktail (with soy milk). Creamy soup (with soy milk and Savita [a product made from brewer's yeast]). Soybean apple crisp (with soy flour). Soy cookies (with soy flour). Creamy rice pudding (with soybean milk). Soy piecrust (with soy flour). Corn soy mush (with soy flour). Mayonnaise (with soy flour). Address: Dietitian.

1080. **Product Name:** Miller's Veja Links (Meatless Wieners).
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: Mt. Vernon, Ohio.
Date of Introduction: 1944?
Ingredients: Incl. seasoned okara or soy flour, and wheat gluten.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Herbert P. Ford. 1958. *The Life Story of Dr. Harry W. Miller.* p. 130-31. Dr. Miller developed a "vegetarian wiener" [Veja Links] containing raw vital wheat gluten, soy flour, seasonings, and flavors. He stuffed these into wiener casings, submitted them to a smoke house and to cooking, then peeled off the casings / skins and canned the wieners. He developed these at the Mt. Vernon slaughterhouse.

In the mid-1940s Dr. Miller developed Veja Links, the world's first meatless wiener or hot dog, made of seasoned okara and wheat gluten, packed in a sausage casing.

1081. **Product Name:** Savory Bits.
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: Arlington, Riverside, California.
Date of Introduction: 1944?
Ingredients: Incl. wheat flour, soy flour, Savorex.
Wt/Vol., Packaging, Price: -
How Stored: Shelf stable.
New Product–Documentation: The Loma Linda line: 35 selected recipes (booklet). 1944? Page 16. "Tasty wafers made from wheat and soy flours with a liberal addition of Savorex, the savory vitamin food flavor."
*

1082. Loma Linda Food Company, Inc. 1944? The Loma Linda line: 35 selected recipes. Arlington, Riverside, California. 16 p. Undated. 16 cm.
• ***Summary:*** This little undated booklet, bound with 2 staples, is printed with brown ink on tan paper. Front cover: "They're tasty. Wholesome, Nutritious." On the inside from cover is a quotation by Ellen G. White: "Those who understand the laws of health and who are governed by principle, will shun the extremes, both of indulgence and of restriction. Their diet is chosen not for the mere gratification of appetite, but for the upbuilding of the body. They seek to preserve every power in the best condition for the highest service to God and man" (Source: *Ministry of Healing*, p. 319).

Contents: Soy beans (canned; introduction + 4 recipes). Soy Mince sandwich spread (Specially ground soy bean with nuts, olives, tomatoes, and choice vegetable flavoring; 9 recipes). Garbanzos (canned, 4 recipes). Proteena (Plain or with smoke flavor) (A nut- and cereal combination with

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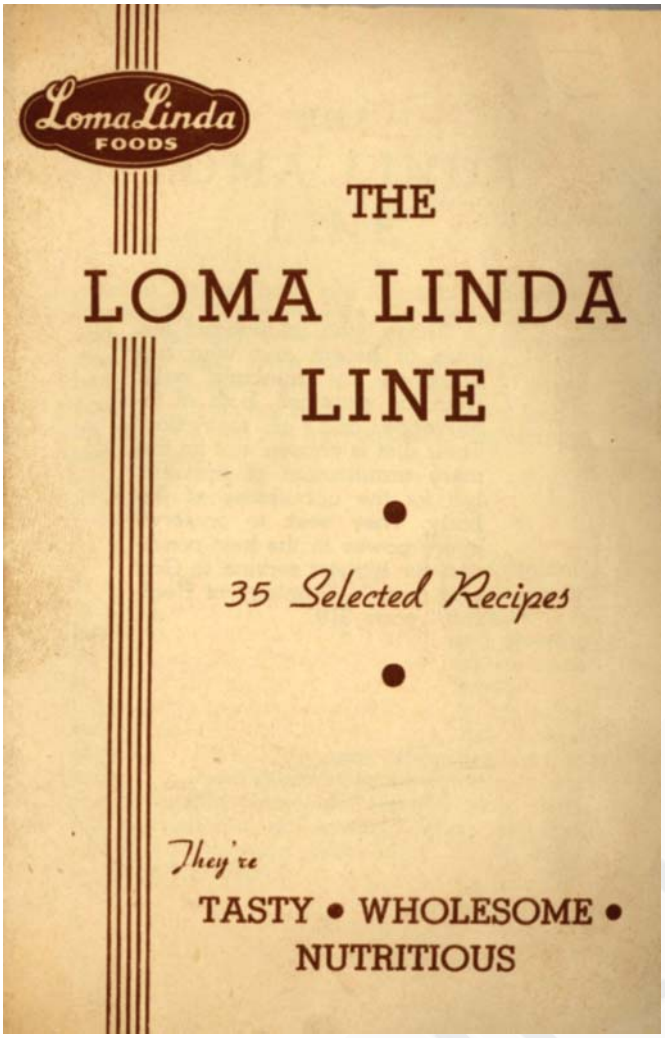

a meat-like texture, "yet contains no animal product"; 8 recipes). Nuteena (Makes tasty cutlets; 7 recipes). Savory lentils ("One of the latest additions to the Loma Linda line." Grown in Chile. Cooked, seasoned to impart a meat-like flavor, and canned. 2 recipes). Syl-Dex breakfast wheat (with dates and powdered psyllium, dextrinized). Oven-cooked wheat (dextrinized, 1 recipe). Fruit cereal. Breakfast cup (Made with soy beans, plus grains and figs. Alkaline beverage served like coffee). Fruities (bite-sized raisin-filled wafers). Fruit wafers. Date sandwich. Soy-Weet Wafers (with soy flour). Ruskets (Whole wheat with malt, sugar, and salt; dextrinized). Soy milk (canned). Savorex (yeast extract). Savory Bits (Wafers made from wheat and soy flours plus Savorex). Address: Arlington, Riverside, California.

1083. U.S. Regional Soybean Laboratory. 1945. Sources of edible soybeans. Urbana, Illinois. 3 p. Jan. 30.
• ***Summary:*** This 3-page table contains 4 columns: Varieties and sources, addresses, amount, and price. Varieties: Aoda (5 sources). Bansei (28). Easycook (2). Etum (3). Funk Delicious (5). Giant Green (2). Higan (2). Hokkaido (5). Imperial (1). Jogun (5). Kanro (2). Mendota (7). Rokusun (1). Sac (2). Sanga (1). Soncei [sic, Sousei] (1).

Growers include: Associated Seed Growers, Inc., 301 Kentucky Ave., Indianapolis, Indiana. E.F. Johnson, 1337 McCutcheon Ave., Richmond Heights, Missouri. Farmers Seed & Nursery Co., Faribault, Minnesota. Fred H. Scholl, Memphis, Tennessee. Holmes Seed Co., 224 Cleveland Ave., Canton, Ohio. International Nutrition Laboratory, Mt. Vernon, Ohio. LaChoy Food Products, Archbold, Ohio. L.L. Olds Seed Co., Madison, Wisconsin. G.G. McIlroy, Farm Management, Inc., Irwin, Ohio. Ray Monier, Carrollton, Missouri. Rufus Gillett, R.R. 2, Mazomanie, Wisconsin. Russell-Heckle Seed Co., 16 S. Trout Street, Memphis, Tennessee. J.A. Saltzer Seed Co., LaCrosse, Wisconsin. Strayer Seed Farms, Hudson, Iowa. T.W. Wood & Sons, 11 South 14th St., Richmond, Virginia. W. Atlee Burpee Co., Clinton, Iowa.

Footnote: *"This list is compiled for the convenience of those interested in edible soybeans. We recognize that it is not complete but does include all of those who have replied to our questionnaire. We make no statement as to the varietal purity or seed quality since we did not request producers to send in samples of the seed they had to sell. We will welcome names of any additional growers."

Note: This is the earliest document seen (July 2013) that mentions the soybean variety Sanga. Address: 178 Davenport Hall, Urbana, Illinois.

1084. Bowman, Ferne; Maharg, Leta; Mangel, Margaret; McDivitt, Maxine. 1945. Culinary preparation and use of soybeans and soybean flour. *Missouri Agricultural Experiment Station, Bulletin* No. 485. 28 p. Jan. [32 ref]
• ***Summary:*** Contents: Introduction (brief history of soybeans). Purpose of investigation. Nutritive value of soybeans: Protein, carbohydrate, fat, minerals, vitamin A, the B complex vitamins. The place of soybeans in American diets. Green soybeans (or immature soybeans). Soybean sprouts. Dry mature beans (pressure cooked at 15 pounds pressure). Three recipes. Soybean products as meat extenders. Four recipes. Soya flours: Full fat food flour, low fat food flour (expeller processed), low fat food flour (solvent extracted). Fifteen recipes. Pastry (1 recipe). Yeast breads (2 recipes for rolls).

Tables: (1) Amino acid content of soybean glycinin and milk casein (percentage). (2) Biological value of various proteins (raw vs. heated). (3) Iron availability of some common foods (percentage). (4) Vitamins (7 types) in edible varieties of soybeans (Aoda, Bansei, Green Giant, Hokkaido, Toku, Willomi). (5) Comparison of vitamins in meat, wheat, and mature soybeans. (6) Rating of nine "garden varieties of soybeans." (7) Comparative cooking qualities of 13 varieties of soybeans (mostly "vegetable types" but including two "field types"). (8) Analyses of 12 brands of soya flour and comparative weight per cup: Minimum fat flours–Mel

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K-Soy, Nutrisoy, Vivasoy, Soyafluff. Low fat flours–Stoy, Lee, Soyalose. High fat flours–Fat-T-Soy, Orange Blossom, Soyarich, Battle Creek, Land-O-Soy. (9) Recommended proportions of soya flour or grits to total flour in various products tested (e.g., apple sauce cake 25%, cooked cornmeal mush 50%, cookies 15-33%, cornbread 17%, muffins (plain) 25%, muffins (whole wheat) 50%, yeast rolls (white or whole wheat) 12.5%). (10) Formulae for plain and whole wheat muffins showing substitutions with three types of soya flour.

Photos show: (1) A casserole full of baked soybeans. (2) Soybean meat loaf with parsley sauce. (3) Soy meringue spice cake. (4) Soy cookies. (5) Soy peanut butter cookies. (6) Soy whole wheat muffins. (7) Soy rolls. Address: Columbia, Missouri.

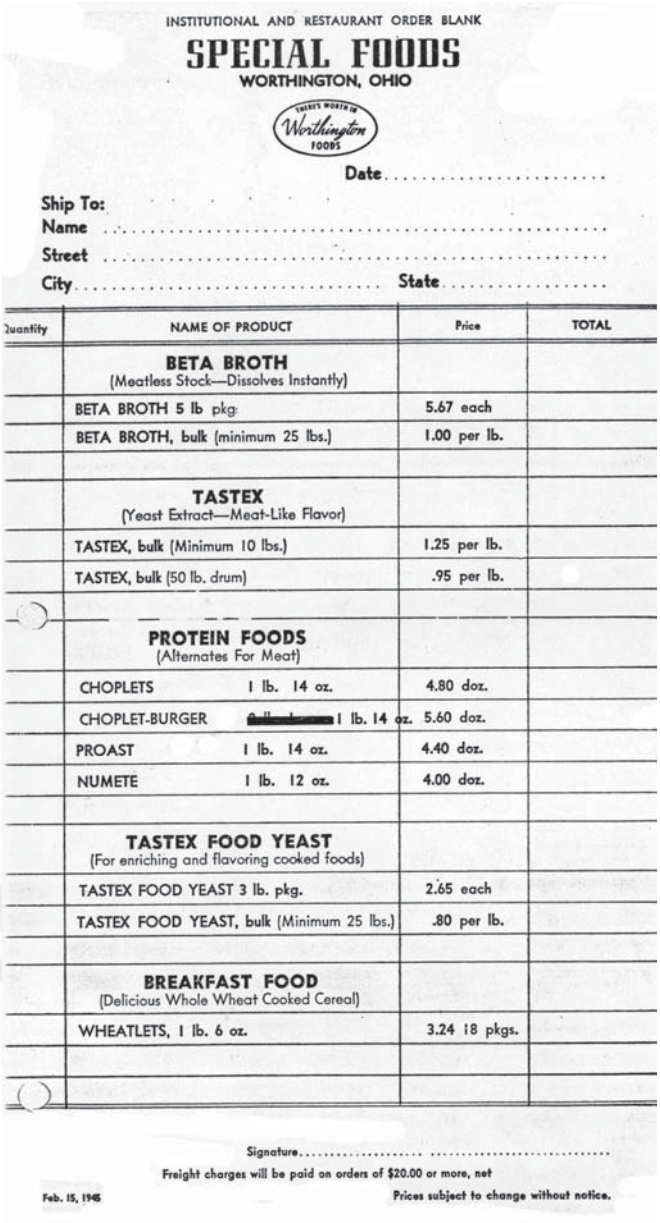
1085. Special Foods. 1945. Institutional and restaurant order blank. Worthington, Ohio. 1 p. Catalog. Feb. 15.
• ***Summary:*** Products include: Beta Broth (Meat-like flavor–dissolves instantly). Tastex (Yeast extract–meat-like flavor). Protein foods (Alternates for meat): Choplets, Choplet-Burger, Proast, and Numete. Tastex food yeast (For enriching and flavoring cooked foods). Wheatlets (Delicious whole wheat cooked breakfast cereal). Address: Worthington, Ohio.

1086. **Product Name:** Numete (Meatless Cold Cuts Made from Peanuts and Soy Flour).
Manufacturer's Name: Special Foods, Inc. Renamed Worthington Foods, Inc. in Dec. 1945.
Manufacturer's Address: Worthington, Ohio.
Date of Introduction: 1945 February.
Ingredients: In 1975: Peanuts, corn and soy flour, salt, MSG, niacin, thiamin, iron, vitamin B-6, riboflavin, vitamin B-12.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Special Foods. Institutional and restaurant order blank. Feb. 15. *Chopletter* (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods." April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include Numete.

Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Numete contains 13.10% protein, 16.90% fat, and 11.10% carbohydrate. One serving, ½-inch slice, weighs 65 gm.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned peanut product resembling cold cuts. Can also be used in salads or sandwiches.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Numete (Worthington)" are given.



INSTITUTIONAL AND RESTAURANT ORDER BLANK

SPECIAL FOODS

WORTHINGTON, OHIO

Date.....

Ship To:
Name .....
Street .....
City..... State.....

Quantity	NAME OF PRODUCT		Price	TOTAL
	BETA BROTH (Meatless Stock—Dissolves Instantly)			
	BETA BROTH 5 lb pkg.		5.67 each	
	BETA BROTH, bulk (minimum 25 lbs.)		1.00 per lb.	
	TASTEX (Yeast Extract—Meat-Like Flavor)			
	TASTEX, bulk (Minimum 10 lbs.)		1.25 per lb.	
	TASTEX, bulk (50 lb. drum)		.95 per lb.	
	PROTEIN FOODS (Alternates For Meat)			
	CHOPLETS	1 lb. 14 oz.	4.80 doz.	
	CHOPLET-BURGER	1 lb. 14 oz.	5.60 doz.	
	PROAST	1 lb. 14 oz.	4.40 doz.	
	NUMETE	1 lb. 12 oz.	4.00 doz.	
	TASTEX FOOD YEAST (For enriching and flavoring cooked foods)			
	TASTEX FOOD YEAST 3 lb. pkg.		2.65 each	
	TASTEX FOOD YEAST, bulk (Minimum 25 lbs.)		.80 per lb.	
	BREAKFAST FOOD (Delicious Whole Wheat Cooked Cereal)			
	WHEATLETS, 1 lb. 6 oz.		3.24 18 pkgs.	

Signature.....
Freight charges will be paid on orders of $20.00 or more, net
Feb. 15, 1945 Prices subject to change without notice.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. 19 oz (538 gm) can. The ingredients for Numete ("Light" is not mentioned) are now: Water, peanuts, white corn flour, soy flour, salt, monosodium glutamate, niacinimide [niacinamide], iron (as ferrous sulfate), vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12.

1087. **Product Name:** Choplet-Burger. Renamed Chopletburger by 1960, but Choplet Burger by 1975.
Manufacturer's Name: Special Foods. Renamed

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Worthington Foods, Inc. in Dec. 1945.
Manufacturer's Address: Worthington, Ohio.
Date of Introduction: 1945 February.
Ingredients: In 1975: Wheat protein, oats, soy grits, dehydrated onions, HVP, yeast extract, whole wheat flour, potato meal, corn oil, soy sauce, mushrooms, dextrose, L-lysine, monohydrochloride, salt, niacin, thiamin, iron, sage extract, vitamin B-6, riboflavin, vitamin B-12.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Note: This is the second earliest known vegetarian "burger" (with the word "Burger" or "Burgers" in the product name) made America.

Special Foods. 1945. Wholesale price list. Feb. 15. "Protein foods (Alternates for meat): Choplet-Burger. 1 lb. 14 oz. $5.60 doz."

Ad in *Health* magazine. 1947. Feb. p. 2. "Good foods for every occasion. A photo shows Choplet Burger and other early Worthington Foods' products.

Chopletter (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods." April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include Choplet Burger.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Chopletburger contains 20.10% protein, 0.10% fat, and 10.99% carbohydrate. Not listed in 1965 *Diet Manual.*

Jimmie Joan Thurmon, compiler. 1969. Adventures in vegetarian cooking: Over 200 meatless main dish recipes. On pages 121-22 Choplet Burger, made by Worthington Foods, is listed under the category "Gluten Burgers."

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned steak or burger-like product based on wheat protein.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 175. The ingredients in "Choplet Burger (Worthington)" are listed.

Interview with James Hagle. 1983. The Choplet Burger was the company's first product and meat analog with soy as a main ingredient. Sold in 30 oz. cans it had a texture like hamburger. It could be shaped into patties and fried.

Worthington Foods. 1989. "The Tradition of Healthy Choices." April. A photo (p. 17) shows a can of "Choplet Burger." Though no details are given in the text, the product's famous predecessor, Choplets, are discussed in detail.

1088. *Business Week.* 1945. Is it oleo, or not? Soya butter subject to a jumble of conflicting rulings. April 21. p. 95-96.
• ***Summary:*** "Soya butter is bringing lots of business and plenty of grief to W.G. Barnard of Cleveland [Ohio], whose vegetarian Natural Foods Institute has developed a thriving business distributing this butter substitute.

"Margarine or not?: The Bureau of Internal Revenue has ruled that soya butter is oleomargarine, that Barnard must have a $480 wholesaler's license, a $48 retail license, and must collect a 10¢-a-pint tax from his customers. But the U.S. Food & Drug Administration holds that soya butter is not oleomargarine and that to label it as such would be misbranding, inviting penalties." The sole manufacturer of this product is Butler Food Products Co. of Cedar Lake, Michigan.

1089. *Soybean Digest.* 1945. Ohio ruling on soya butter. May. p. 14.
• ***Summary:*** "Federal Judge Robert N. Wilkin of Cleveland, Ohio, has ruled that the soya butter produced by Butler Foods products of Cedar Lakes, Michigan, is not taxable as margarine nor should it carry the margarine label...

"The Bureau of Internal Revenue has ruled that soya butter is margarine, subject to federal tax and license fees. But the Food and Drug Administration holds that the product is not margarine and to so label it would be misbranding."

1090. *Soybean Digest.* 1945. A.S.A. supports bill to define soya butter. June. p. 15.
• ***Summary:*** "The board of directors of the American Soybean Association has gone on record in support of a bill in Congress to define soya butter as being distinct from margarine.

"The bill would lift soya butter, an all vegetable product made from soy oil and other soybean derivatives with added carrot oil to give it a bright yellow color, out of an amazing tangle of federal and state rulings that have hampered or prevented its sale altogether.

"Manufactured by Butler Food Products of Cedar Lake, Michigan, soya butter is being sold in that state under a restraining order pending the outcome of a suit by Bureau of Internal Revenue to collect the 10 cents a pound federal tax levied on colored margarine. The manufacturer also has obtained a court order preventing enforcement of the state's margarine laws against soya butter."

1091. *Madison Survey* (*Madison, Tennessee*). 1945. Madison health foods. 27(16):63. Aug. 29.
• ***Summary:*** "A letter written some weeks ago from Addis Ababa, Ethiopia, by Mrs. Della Hansen, housekeeper in the Emperor's palace, addressed to Madison Foods, says:

"'His Majesty, the Emperor of Ethiopia, has seen your advertisement in *Life and Health,* and has asked me to write requesting a sample of each of your products.'

"Samples of Zoyburger, Yum, Vigorost, Soy Cheese [tofu], Stakelets, Not Meat, and Soy Koff were sent to the Emperor via the Ethiopian minister in Washington [DC].

"Never before in the history of the food manufacturing department of Madison has there been such evident interest

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in foods that meet the protein needs of the family dietary."

Note: This is the earliest document seen (Aug. 2009) concerning soybean products (canned meatlike products from Madison Foods) in Ethiopia. This document contains the earliest date seen for soybean products in Ethiopia (1945); soybeans as such had not yet been reported by that date.

1092. Arnold, Julean. 1945. Soy–China's Cinderella. *Soybean Digest.* Sept. p. 36-37, 69.

• ***Summary:*** In the summer of 1937 masses of Chinese refugees poured into Shanghai in frantic efforts to escape Japanese armed forces. The immediate problems were food and shelter. One relief agency, China Child Welfare, Inc., with which the author worked, helped to establish 220 refugee camps to accommodate 250,000 people. Since tofu is too concentrated for infants, the group turned to soybean milk. "Fortunately the Peking Union Medical College of the Rockefeller had several decades earlier carried on extensive research with the soybean under the direction of a Russian scientist Dr. A. A. Horvath. He became a great enthusiast on the nutritive properties of the soybean. He found that by adding a certain amount of calcium lactate, sodium chloride [table salt] and sugar to the soybean milk, it would be possible to produce a substitute for cow's milk, and at a fraction of the cost of cow's milk. Chinese trained under him carried on research experiments.

"Thus when we were interested in preparing a scientific, sanitary, and standardized soybean milk we looked for assistance to Doctors Ho and Tso who were trained at the P.U.M.C. but later came to Shanghai to join the Lester Institute where they continued their work on soybean nutritive products. So we impressed them into service. We also secured much aid from Dr. W.S. Fu, who supervised a Chinese children's hospital in Shanghai. He gave us accommodations for setting up a small plant for the manufacture of soybean milk in one of the court-yards of his hospital." A description of the equipment and process used is given. After boiling the soymilk for 20 minutes, calcium lactate, sodium chloride, and sugar were added. The soybean milk was served hot to the children in the camps. The plant was managed by Miss Nellie Lee, a Chinese who graduated from Mt. Holyoke College and had studied dietetics and social science.

After taking the milk from the soybean, there is a residue [okara] very rich in protein. We found by adding 40 percent coarsely ground wheat flour which is also plentiful in China, plus the other ingredients above mentioned, we could make a biscuit which when baked in an oven proved to be very palatable. It represented probably the greatest food value for the cost obtainable. A Chinese department store baked them for us. We distributed millions of them to the refugee camps.

"In order that our committee might take the fullest possible advantage of the very able assistance we received from Chinese scientists, doctors and others we organized the China Nutritional Aid Council with Chinese and American members for the express purpose of popularizing a properly prepared soybean milk and other soybean nutritional products." This council, backed by China Child Welfare, Inc. of New York, launched a campaign to share with people in other parts of China "the advantages of our experiences in providing soybean milk for from 25,000 to 37,000 children daily in the refugee camps in addition to several millions of soybean biscuits furnished the refugees."

"Another American medical missionary, Dr. H.W. Miller, went much further in his experiences with soybean milk products. He became so enthusiastic about their possibilities that he set up a modern plant in Shanghai for their manufacture, with facilities for producing qualities acceptable to those whose palates rebelled against the ordinary types of soybean milk."

After the Japanese bombing of Pearl Harbor, the China Nutritional Aid Council and its soymilk plant moved to Chung-king [or Ch'ung-ch'ing, a city in southern Szechuan province; the Kuomintang made it the political capital of China from Oct. 1938 until the end of World War II]. Nellie Lee has worked for 5 years "spreading the gospel of soybean milk for the great masses in that country."

"When John D. Rockefeller Jr. came to Peking about 25 years ago to dedicate the Peking Union Medical College of the Rockefeller Foundation, he told me that he found it harder to spend money than to make it." A large photo (p. 36) shows a Chinese mother feeding her children "soy milk and soy cakes at a food shop where highly nutritious foods are made and sold at cost prices."

Note 1. This is the earliest document seen (July 2012, one of two) that uses the word "Cinderella" in connection with the soybean. The author, however, does not elaborate on this idea. This is the earliest document seen (July 2012) with "Cinderella" in the title.

Note 2. In the winter of 1937 K.S. Lo of Hong Kong, age 27, happened to be in Shanghai on other business. There he attended a talk by Julean Arnold titled "Soya Bean: The Cow of China." This talk inspired Lo to establish the Hong Kong Soya Bean Products Co., Ltd. in March 1940. This company later made the world-famous Vitasoy soymilk. If the date and title of this talk are correct, this would be the earliest date seen (Aug. 2002) for the use of the term "Cow of China." Address: Berkeley, California.

1093. Butler Food Products. 1945. Nutritive value of the soybean (Ad). *Soybean Digest.* Sept. p. 58.

• ***Summary:*** The company's main product is Butler's Soya-Butter [a non-dairy margarine made from soy oil], which contains 97.2% fat, 1.8% carbohydrates, and 1% protein. "Non Fattening: The fat of soybeans is of a particular quality and it is not stored in the body as is animal fat, therefore you

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may eat freely of Butler's Soya-Butter without the fear of putting on additional weight... No Contamination: There is no animal product of any kind in Butler's Soya-Butter..."

Other Butler Foods: Butler's Vegetarian Chops. Butler's Soya-Nut Loaf. Butler's Vegeburger. Butler's Meatlike. Butler's Soy-Nut-Cheese. A photo shows H.O. Butler. Address: Cedar Lake, Michigan.

1094. International Nutrition Laboratory. 1945. Soyalac (Ad). *Soybean Digest.* Sept. p. 40. [1 ref]
• ***Summary:*** This full-page ad is mainly for bottled "Soyalac: A spray dried infant food." It notes that this company also makes "* Miller's Soya-Malt. A malted soya milk mostly used as a beverage milk. * Miller's Chocolate Soya-Malt. Also a tasty beverage milk. * Miller's All-Purpose Soyalac. A natural soya milk for both beverage and cooking purposes. Packed in 1-lb., 4-lb., and 20-lb. containers." Three photos show 1-lb glass jars of "Soyalac: A spray dried infant food." On each jar is a photo of a seated baby. Address: Mt. Vernon, Ohio.

1095. *Madison Health Messenger* (*Madison, Tennessee*). 1945. Madison Foods–Madison College, Tennessee. 7(1):4. Undated.
• ***Summary:*** See page after next. A full-page photo shows the following canned products, with a brief description of each and the price: Stake-Lets (a combination of gluten and soy beans). Not-Meat (a meatless loaf for cutlets, roasts, patties, croquettes, salads, etc.). Yum (a mild Bologna flavor. Contains soy beans, wheat gluten, and seasonings). Zoyburger (excellent for sandwich spreads or served like a steak with onions). Vigoroast (a vegetable steak). Wheatasoy (an alkaline breakfast food, ready to eat. Contains rich grain malt, whole wheat, and soy-bean flour). Zoy-Koff (Prepare like coffee. No trace of caffeine. No nerve stimulants. Two grinds–regular and fine). Kreme O'Soy (a soy milk for those allergic to cow's milk and for special diets. A liquid not concentrated). Soy Cheese (soy curd (tofu) seasoned for croquettes, salads, sandwich spreads, etc.).

A separate photo across the top of page 1 of this issue shows a ground-level view of the "Madison College Campus, Home of Madison Foods."

1096. *Madison Survey* (*Madison, Tennessee*). 1945. Food-manufacturing industry. 27(19):76. Oct. 17.
• ***Summary:*** "Again Madison Foods has made a carload shipment of nearly 65,000 pounds to the Pacific Coast, to distributors in Los Angeles [California] and Seattle [Washington]. This car contained Zoy Koff, the cereal drink, 350 cases of Kreme O'Soy Milk, and 1,350 cases of the protein foods-Vigorost, Yum, Zoyburger, Not Meat, Stakelets, and Soy Cheese."

"It is now an established fact that we are not dependant on flesh foods for the protein content of the daily rations." After discussing an article about soybeans in *Reader's Digest* titled "How we can help feed Europe's hungry" (Sept. 1945, p. 50-52), the *Madison Survey* concludes: "Madison is fortunate at such a time as this to be able to manufacture and market products that are helping in the solution of the greatest food problem the world has known."

1097. Holman, Ross L. 1945. A chemurgic fantasy. *Yale Review* 35(2):282-91. Dec. Condensed as "New riches from farm synthetics" in Science Digest. 1945. 17:53-55. March.
• ***Summary:*** The farm chemurgic movement, started in 1934 to find industrial markets for surplus farm crops, has begun to grow. W.J. Hale is the founder of the present chemurgic movement. "There is no farm crop that the test tube has turned into more industrial products than soy beans. It is surprising to see what the soy bean can become in the hands of a chemical juggler. To offset war scarcities it can be processed into many things, from gunstocks for guns to a good substitute for butter; from vitamin K for our blood to a handkerchief for our tears.

"America's industrial pioneer number one with soy beans is Henry Ford. With a staff of chemists, a laboratory, and several thousand acres of soys he is turning these beans not only into a large variety of things to eat but into something to wear and ride, to keep the rain off and to doctor our liver troubles. We may recall how extravagant Ford sounded to us in the Twenties when he said that some day we would be able to dispense with the farm cow and drink synthetic milk [See *New York Tribune*, 9 Feb. 1921]. This fantastic prophecy made rich material for newspaper reporters and cartoonists. There were comic caricatures of a robot cow pouring out synthetic milk to be churned into a synthetic butter. Today reporters and cartoonists know that the joke has backfired. Ford's chemists have been getting milk from soy beans for years. The milk has been shown to have important food values. The list of Ford's soy foods includes meats, cheese, breakfast foods, macaroni, bread, crackers, sweet milk, buttermilk, and coffee."

Reichhold Chemical Corporation and one or two other companies are producing soy-bean rubber at the rate of 25,000 tons a year.

The author also discusses how Henry Ford uses soy beans to make synthetic wool. "Ford himself frequently wears a soy-bean suit, and experiments seem to prove that it can be manufactured at less cost than any other textile fiber. Two Japanese scientists processed a wool from soys before the war and insisted that wool for a whole suit of clothes could be manufactured for less than a dollar."

"The climax of Ford's pre-war chemurgic achievements was the manufacture of a car with a all-plastic body. The body, made largely of soys, was 1,000 pounds lighter than a similar car with a steel body... Just about the time it was ready to go into production Pearl Harbor stalled the manufacture of cars for the duration.

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SOYALAC

★ A time-tested and medically approved nonallergic infant food.

Miller's Spray-Dried Soyalac is a soluble soya milk modified and reinforced with proper proportions of essential oils, carbohydrates, minerals, and all required vitamins except vitamin C.

While Soyalac is the distinctive Distinctive Values in Infant Feeding

and only soluble spray-dried, completely modified vegetable milk offered to replace either mother's or cow's milk, and intended for babies and children of early years, other types of spray-dried soya milk are available for general family use. All these contain the equivalent of cow's milk in food value and calcium.

★ **Miller's Soya-Malt.** A malted soya milk mostly used as a beverage milk.

★ **Miller's Chocolate Soya-Malt.** Also a tasty beverage milk.

★ **Miller's All-Purpose Soyalac.** A natural soya milk for both beverage and cooking purposes.

Packed in 1-lb., 4-lb., and 20-lb. containers. Priced on a level with cow's milk. If your druggist or health food store does not have Miller's Soyalac Infant Food, packed in 1-lb. glass jars, or other brands of Miller's Soya Milk, write to Box 388.

Rx NOTE TO PHYSICIANS: A manual on Soya Milk Infant Feeding is obtainable from the address below.

1. Ready preparation.
2. Easy digestion.
3. High protein availability.
4. A complete infant food requiring only the addition to the diet of vitamin C in form of orange or tomato juice.
5. Nonallergic; thus it can be substituted for cow's milk for children with eczema, regurgitation, dyspepsia, etc.
6. Nonconstipating.
7. Costs no more for baby's diet than prepared baby foods from animal milks.
8. Soya protein most readily assimilated. Since protein is the growing portion of the baby's diet, it is important that the child has the maximum intake it can utilize.

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"Madison College near Nashville, Tennessee, is an educational institution that has turned farm chemurgy into a bonanza... The chief crop handled here is the soy bean, which is manufactured into 30 foods ranging from meat to coffee." The students, working their way through college, make the foods and student nurses and boys taking pre-medical courses play a major role at the school's sanitarium, where "patients are nursed back to health on soy foods."

At Taftville, Connecticut, the National Dairy Products Corporation is now manufacturing 10 million pounds a year of Aralac, a wool-like fiber made from the casein in skim milk.

"America's pioneer chemurgist, who performed scientific miracles before chemurgy ever got its name, was the late Dr. George W. Carver, of Tuskegee Institute in Alabama. Dr. Carver's record of processing over 300 industrial products from the peanut and 120 from the sweet potato is too well known to need discussion here."

Note: This is the earliest document seen (April 2002) that mentions vitamin K in connection with soy.

1098. **Product Name:** Kellogg's Corn Soya Shreds (Breakfast Cereal). Renamed Kellogg's Corn-Soya by 1950.
Manufacturer's Name: Kellogg Company.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1945.
Ingredients: 70-80% yellow corn, 20-30% solvent extracted soybean flakes, sugar, salt, malt flavoring, vitamin B-1, niacinamide.
Wt/Vol., Packaging, Price: 7 oz. paperboard cereal box.
How Stored: Shelf stable.
Nutrition: 1 oz provides these percentages of the minimum daily adult requirements: Vitamin B-1 19%, riboflavin 3.2%, calcium 2.5%, phosphorus 6.9%, iron 18.4%. Plus 0.556 mg niacin and 5.10 gm protein (in Feb. 1951).
New Product–Documentation: See next page. Ad (full page). 1945. "Kellogg's Maizoy: Put it on your grocery list today. Kellogg's amazing new cereal." Below the large word "Maizoy" on the front of the 7-ounce box is written: "Toasted Shreds of Corn and Soya. Ribboned, milled corn and soy with sugar, salt and malt flavoring." "Brand-new!

Grand-new! Good-for-you!" A photo shows the front of the box. Note: The name Maizoy was used, starting in July 1944, only for test marketing in two U.S. towns.

Ad (full page). 1945. "Kellogg's Corn-Soya Shreds: Oh, what a wonderful breakfast. Dive into this crunchy cereal. Thrive on this extra nourishment." A photo shows the front of the box. An illustration shows a girl in pigtails holding a spoonful of the shredded cereal.

Ad (full page). 1945. "Kellogg's Corn-Soya Shreds: Another Kellogg triumph! We've found a perfect blending of flavor and nourishment." A photo shows the front of the box. An illustration shows a boy licking his lips and holding a spoonful of the shredded cereal. Ad (full page). 1945. "You've got a free treat coming. At last! a cereal made with Soya that's crisp, light, delicious." One illustration shows a postman delivering a small box to a smiling housewife. A second shows a smiling boy holding a bowl filled with the shredded cereal. A photo shows the front of a 7-ounce box of Kellogg's Corn-Soya Shreds. "Brand-new! Grand-new! Good-for-you!"

Ad (5½ by 8½ inches). 1945. "Brand-new! Grand-new! Good-for-you!" A photo shows a bowl of Corn-Soya

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at last! a cereal made with SOYA

that's CRISP LIGHT DELICIOUS

Another Kellogg triumph! After 20 years of experiment, we think we've hit upon the perfect blending . . . corn, full of flavor and food energy . . . with soya, richer in body-building proteins than any cereal. Vitamins and minerals, too. Corn-Soya Shreds are crunchy, golden-toasted, tasty and crisp!

What's more, this new cereal is ready in an instant . . . no cooking, no pots or pans to clean. Get ready to smack your lips over a brand-new, wonderful flavor! Just pour these tempting shreds into bowls, serve with milk and sugar or fruit . . . you and your family will revel in their tasty goodness. Your grocer has Corn-Soya for you now in full-size, economical packages.

THE PROTEIN VALUE of one ounce (about ⅔ cup) of Corn-Soya Shreds with four ounces of milk equals that of one egg with three slices of bacon. Buy some today!

Brand-New! Grand-New! Good-For-You!

You've got a free treat coming

Your FREE sample package of Corn-Soya Shreds (enough for 4 servings) will be delivered to your door in a day or two. And . . . no matter what your experience with soya products has been before . . . YOU'RE IN FOR AN EXCITING SURPRISE! We're so proud of this new cereal that we're bringing it to you now, inviting you to try it at our expense . . . *and we think you'll love it!* It's gloriously delicious! It's extra nourishing! It stays crisp! See for yourself what a taste thrill a cereal made with soya can be.

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Shreds topped with 5 strawberries. "Because soya is such a wonderfully nutritious food, hundreds of people have tried for many years to prepare it so you would really like it. And now, Kellogg's have done just that. Created a tantalizing new blend of corn and soya that combines crispness, flavor and nourishment in a way that's different from any cereal you ever tasted!"

Sales Card (5½ by 8½ inches). 1945. "Kellogg's special news flash. The brand-new, grand-new, good-for-you cereal is here!... Kellogg's Corn-Soya Shreds."

Sales Card (5½ by 8½ inches). 1945. "Kellogg's special news flash. Women say–'Give us more ready-to-eat foods.' Millions of women working during the war have learned the great value of ready-to-eat foods–and they want more of them. Kellogg's delicious new Corn-Soya Shreds meet this need."

Sales letter sent with samples. 1945. "There's never been a cereal like Corn-Soya Shreds before!" A photo shows a 7-ounce box of Kellogg's Corn-Soya Shreds which "are the triumphant result of 20 years of experiment to combine tip-top nourishment with exciting flavor and crispness! Nobody except Kellogg's ever dreamed of blending corn and soya, with their energy and protein–in a miraculous new way not found in any other cereal on the market.

"We're sending you this free sample because we sincerely feel that no matter what your experience with soya products has been in the past... you'll have a delightful surprise when you try Corn-Soya Shreds. Taste for yourself how wonderfully crisp and lively and delicious this new cereal really is!

"Your grocer has full-size packages ready for you and your family to enjoy."

Soybean Digest. 1946. June. p. 24. "Corn-Soya Shreds, made of ribbon milled corn and soya with sugar, salt and malt flavoring. The product is crisp and tastes like Corn Flakes, is packaged in Kellogg's usual red and green carton."

Penty. 1947. U.S. Patents 2,421,216 and 2,421,217. Describe process and product.

Soybean Digest. 1947. May. p. 28. "Corn-Soya Cereal" "Texas and Florida have been chosen as the starting points for an introductory campaign for W.K. Kellogg's new breakfast cereal, Corn-Soya, reports *Food Field Reporter.* Sampling, dealer service, and advertising are under way in the two areas. Previously tested markets were Harrisburg, Pennsylvania; Charlotte, North Carolina; Sioux City, Iowa; and Sacramento, California. The drives now under way in Texas and Florida are the beginning of the 'big push' to put Corn-Soya on a national distribution basis."

Soybean Digest. 1948. Aug. p. 33. "Nationwide sales: Kellogg's Corn-Soya Shreds." "Over the past 2 years 15 million samples have been distributed." A large illustration shows the front of the box.

Ad (full-page, color) in Life magazine. 1950. Oct. 16. p. 25. Sweetheart of a breakfast! Extra nourishing! Extra good! And the freshest Corn Flakes of all! (Ad). Shows a small package of Kellogg's Corn Soya in a 10-box variety pack of 7 cereal favorites.

Soybean Digest. 1950. Oct. p. 16-17. "Kellogg's Corn-Soya on Countless Tables." By 1945 a product was developed that passed all Kellogg's quality tests. "In the next 18 months it was subjected to sales testing in California and selected eastern markets. National distribution was completed in 1947." News release from Kellogg Co., Battle Creek, Michigan. 1950. "Facts about Kellogg's Corn Soya."

Soybean Blue Book. 1951. p. 90.

Ad (full-page, color) in Life magazine. 1951. Feb. 19. p. 60. "New protein food–helps you have a fine body!" A photo shows a box of "Kellogg's Corn Soya."

Rosenvold & Rosenvold. 1963. *Rx Recipes: A Manual of Healthful Cookery.* p. 148. Corn Soya Shreds are listed as a type of cereal containing soy, probably soy flour.

Robert Boyer. 1985. Reminiscences. p. 115. David Crippen recalls that Garry Moore, a popular entertainer for many years, was sponsored at one point by Kellogg's Corn Soya. He had a little jingle that he used to say: "Corn Soya, oh boya, how I enjoya, in the foya."

Letter (fax) from Rita Grandgenett of Kellogg Co. to Paul and Gail King of The Soy Fan Club's Drive-in. 2000. Oct. 20. This product was launched in 1945 and discontinued in 1959. Note: Thanks to the archives of the Kellogg Co. in Battle Creek, Michigan, for sending (Oct. 2001) copies of the many 1945 ads and sales sheets.

1099. **Product Name:** Loma Linda Soy Flour.
Manufacturer's Name: Loma Linda Food Co. (Marketer-Distributor).
Manufacturer's Address: 11503 Pierce Place, Arlington, California. Phone: Riverside 9217.
Date of Introduction: 1945.
New Product–Documentation: Wholesale price list. 1945. Today's Food. 1964. Autumn. p. 5. Wholesale price list. 1968. 16 oz. for $0.47 retail. Soybean Blue Book. 1949. p. 99. Loma Linda Food Co. in Arlington, California is a packer and distributor of soy flour.

1100. **Product Name:** Loma Linda Soy Sauce.
Manufacturer's Name: Loma Linda Food Co. (Marketer-Distributor).
Manufacturer's Address: 11503 Pierce Place, Arlington, California.
Date of Introduction: 1945.
New Product–Documentation: Wholesale price list. 1945; Soybean Blue Book. 1949. p. 103. Also listed in 1955, 1960, 1970. They were not a manufacturer. Today's Food. 1964. Autumn. p. 5. Wholesale price list. 1968. Sold in 4 oz., pint, and gallon sizes.

1101. Lager, Mildred. 1945. The useful soybean: A plus

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factor in modern living. New York and London: McGraw-Hill Book Company, Inc. xii + 295 p. Illust. General index. Index of recipes. 22 cm.

• ***Summary:*** One of the most important and innovative books on soyfoods ever written. Contents: Preface. 1. Agriculture's Cinderella: America discovers the soybean, our wonder beans, soy as a food in the United States, soy in rehabilitation food programs, soybeans as an emergency crop, soybean terminology. 2. World-wide use of soybeans: A real antique, monarch of Manchuria, soybeans in mechanized warfare–Germany, soybeans in other countries (USSR, Italy, Spain, Belgium, Holland, Norway, Denmark, Sweden, Great Britain, Canada), soybeans in Lend-Lease and United States Agricultural Marketing Administration, Food for Greece, soybeans and the Mexican Indian, soybeans in Hawaii (Mr. C.G. Lennox). 3. Soybeans and industry: The versatile soy, uses of soybean in industry, soybean paint (from soy oil, incl. Duco finishing), soybean protein (used in making plywood, plastics, water paints, paper sizing, leather finishes, and insecticide sprays), Henry Ford and soybeans, soybean glue (I.F. Laucks and the firms he has licensed turn out some 30,000 tons of soybean glue annually), rubber substitute (Norepol), paper industry (Glidden), plastics, soy-cotton helmets, firefighting compounds, lecithin, fertilizers. 4. Nutritional nuggets: Food value of soybeans and soy products (vegetable or edible types of soybeans, protein, fat & carbohydrate, minerals, vitamins, lecithin, alkaline ash, economy, exaggerated claims), principal uses of soybeans and soy products (meat substitutes, meat enrichers, fortifying foods with soy flour). 5. From soup to nuts: Green beans, dry beans, frozen beans, roasted soybeans, sprouted soybeans, the cow of China–soy milk, the meat without a bone–tofu or soy cheese, the little giant among protein foods–soy flour, soy grits, puffed grits, soy oil, miscellaneous soy products (soy butter [soynut butter, p. 99-100], sandwich spreads, malts, coffee substitutes, soy sauce, soy albumen–a new product, greatly improved during the past two years, is now used to "replace egg albumen in candy manufacture" [as in marshmallows]).

Note 1. This is the earliest English-language document seen (March 2001) that refers to tofu as 'the meat without a bone.' In 1938 Horvath called tofu 'the meat without the bones.' Note 2. This is the second earliest document seen (Aug. 2002) in which the soybean is called the "cow of China."

Note 3. This is the earliest English-language document seen (Aug. 2003) that uses the term "soy albumen" (or "soy albumens") to refer to isolated soy protein as a product.

6. The blazed trail: Introduction (history and pioneers), our tardy acceptance, food pioneers (health-food stores, Dr. W.D. Sansum of Santa Barbara and soy bread, allergy studies, vegetarians, Seventh-day Adventist food companies, meatlike products, Madison College of Tennessee, Loma Linda Food Co., the International Nutrition Laboratory and Dr. H.W. Miller, special dietary concerns and diabetic diets), establishing soybeans in the kitchen (The Edison Institute and Henry Ford, the USDA and the U.S. Bureau of Home Economics, the Agricultural Marketing Administration, U.S. railroads, the Soy Products Division of the Glidden Co., the Soy Flour Association). 7. The challenge of nutrition: The dangers of hidden hungers, nutrition and health, corrective nutrition, starch-restricted diets, meatless diets, allergy diets, bland diets, building diets, reducing diets, acidophilus culture, lecithin. 8. Our wonder crop: Jack and the beanstalk, early history, new varieties, aids to the industry (Regional Soybean Industrial Products Laboratory, American railroads, American Soybean Association, Fouts Brothers of Indiana, *Soybean Digest* and George Strayer in Hudson, Iowa, Soy Flour Association with Edward Kahl as first president, Soya Kitchen in Chicago (Illinois) opened in Jan. 1943, National Soybean Processors Assoc., National Farm Chemurgic Council), educational program, restrictive regulations. 9. Soybeans and the farmer: Varieties, sources of information, seeding and inoculating, harvesting, grading, soybean diseases, crop rotation, damaged beans. 10. Tomorrow: Acreage and production, soybeans on the farm, soybeans in nutrition, postwar industrial uses, future improvements. 11. A few suggestions for better living: Kitchen diplomacy, personal opinions, soybeans for everyone. Recipes: Green soybeans, dry soybeans, sprouted soybeans, roasted or toasted soybeans, meat-substitute dishes, soy-enriched meat dishes, soy noodles, macaroni, spaghetti, sauces and gravies, soups, salads, dressings, soy spreads, soy milk, tofu or soy cheese, soy butter, soy cereals, soy desserts, soy candies, soy beverages, soy-flour recipes, bread and muffins, pancakes and waffles, soy gluten recipes, baking-powder biscuits, pastry, cookies and doughnuts, cakes.

Contains recipes for "Soy milk molasses shake (p. 238). Soy puddings. Soy ice cream (p. 250; "Soy milk may be used in place of regular milk in ice-cream recipes... adding whipped cream"). Soy fruit ice cream. Soy chocolate dessert (Eggless) (p. 250-51). Soy shake "(p. 254, made in a "liquefier or mixer").

The story of Allied aid to Greece [p. 24-26] is one of the great mercy stories of World War II. Starting in March 1942, as many Greeks were starving, the first mercy ship sailed to Greece with food and medicine. Up to Nov. 1943, the United States through Lend-Lease sent 82 million pounds of food to Greece. A number of these foods (including soup powders, stew mixes, and spaghetti) were based on soy flour and grits, and specifically developed to suit Greek tastes.

Concerning Henry Ford (p. 35-38), his "first experiments were made in a laboratory in connection with the Edison Institute in 1930. In these experiments, several tons of wheat were used, also several thousand bushels of carrots; sunflower seeds, which have a high oil content; cabbages; onions; and cornstalks. It was not until December, 1931, after a long series of experiments with the soybean,

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that Mr. Ford and his chemists felt that they were at last approaching a solution to the problem of finding a basic farm material from which the ordinary farmer could develop a commercially profitable product."

Note 4. This is the earliest published English-language document seen (Sept. 2013) that uses the term "Soy ice cream" (p. 250).

Note 5. This is the earliest document seen (July 2007, one of two) that uses the word "Cinderella" in connection with the soybean. The author, however, does not elaborate on this idea.

Note 6. This is the earliest English-language document seen (Nov. 2013) that contains the term "soy-flour"–however it is used as an adjective. Address: Southern California.

1102. Lager, Mildred. 1945. Madison College (Document part). In: Mildred Lager. 1945. The Useful Soybean: A Plus Factor in Modern Living. New York and London: McGraw-Hill Book Company, Inc. xii + 295 p. See p. 106-07.
• ***Summary:*** "There are several large and small Seventh-day Adventist food concerns in this country that manufacture a complete supply of soy products, most of which are cooked and ready to use.

"As pioneers, all these Adventist concerns have done considerable research on soybeans, and most of them employ chemists who have had firsthand experience with the beans in China. These men know the food value of the bean, what it has meant nutritionally elsewhere, and they strive to perfect formulas for well-balanced and complete vegetable protein foods to take the place of meat. Most of these concerns also manufacture soy milk, fortified to equal dairy milk in food value. Their meatlike products at first were for the use of their own people, their hospitals and institutions; but demands for vegetable protein have brought them into health-food stores and food specialty shops. Sales on these products have been steadily increasing with a rapid rise in the last 3 years, climaxed by meat and cheese rationing..."

"Perhaps the best known of the pioneer institutions is Madison College, Tennessee. It is doing an outstanding job in maintaining a self-supporting college and a sanitarium and in developing a complete line of soy products that are being sold on an international scale. Madison's curriculum includes 27 campus industries run by the students to support the college and themselves. A 900-acre college farm is operated entirely by student labor and is also self-supporting. The student canning factory was started when the college was in its infancy, almost forty years ago; and several years of research in food chemistry have resulted in many new products built around the soybean. Madison College is largely responsible for making soybeans appetizing. They have developed a soy milk that has received world recognition; observers have come from Africa, India, and other countries where milch cows are scarce, to study the methods of Madison's soybean dairy. They also make soy cheese [tofu] and several meat substitutes, as well as a soybean beverage. These foods are now well distributed over the United States and some foreign countries, including South Africa."

Note. This is the earliest English-language document seen (Aug. 2013) that uses the term "soybean beverage" to refer to soy milk. Address: Southern California.

1103. Lager, Mildred. 1945. Loma Linda Foods (Document part). In: Mildred Lager. 1945. The Useful Soybean: A Plus Factor in Modern Living. New York and London: McGraw-Hill Book Company, Inc. xii + 295 p. See p. 107-08.
• ***Summary:*** "The Loma Linda Food Company of California was originally established to supply nutritious vegetarian foods to institutions and hospitals, but it soon outgrew that field. Its sales in the last 3 years has grown by leaps and bounds. The first 6 months of 1943 almost double 1942; and today the company has national distribution of a complete group of soy products including canned beans, soy milk, cheese, several meat substitutes, a soy coffeelike beverage, and soy-fortified cereals." Address: Southern California.

1104. Lager, Mildred. 1945. Preface (Document part). In: Mildred Lager. 1945. The Useful Soybean: A Plus Factor in Modern Living. New York and London: McGraw-Hill Book Company, Inc. xii + 295 p. See p. vii-ix.
• ***Summary:*** "We of the occidental world are just discovering that soybeans are indeed nuggets of gold in our modern civilization. During the last twenty-five years [i.e., since 1920], they have mushroomed from an almost unknown forage crop to one of our most important cash crops, vital to the fields of agriculture, commerce, nutrition, and industry. Nutritionally soybeans have become a vital food for a world at war and a postwar world at peace. Industrially they are a challenge to the chemists' flasks and test tubes; for more than two hundred commercial products have been made from the little beans. Hence soybeans and soybean products are indeed destined to be a vital plus factor in our world of tomorrow.

"Food has always been my hobby. When Fate, that unseen hand that sometimes guides us to our rightful groove in life, gave me firsthand experience with the miracles of proper diet, teaching fundamental facts on nutrition became my goal. I have tried to pass on the message of better eating via the platform, the printed page, and the radio, and for the last dozen years have enjoyed the unusual opportunity of occupying a vantage point on a busy crossroad of nutrition. I have seen, too, the value of soybeans in the so-called 'corrective regime,' and it has convinced me of their rightful place in the average diet.

"I experimented with soy as a food, secured special soy products for special diets, made up recipes, and in my classes taught the cooking of soybeans when they were practically unknown, when soy was eaten because it was soy and regardless of taste or palatability. In 1942, when soybeans

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became prominent as a war emergency food, a collection of these recipes was published under the title of '150 Ways to Use Soybeans.'"

"Because my main interest in soybeans and soy products is nutritional, the purpose of this book is to help bridge the gap from the unusual to the usual. I have tried to present the story of Asia's ancient food in a true, authentic manner–to give credit where credit is due. I am not a vegetarian, not affiliated with any organization or group advocating a meatless diet. I believe that proper nutrition and common-sense living are man's best medicine."

"I want to acknowledge the material, encouragement, and help that I have received from the men and women of medicine, research, industry, and business as well as homemakers and friends. I am especially grateful to

"Edward J. Dies, Soy Flour Association, Chicago, Illinois.

"E.L. Rhoades, Soy Flour Association, Chicago, Illinois.

"Kent Pellett, Soybean Digest, Hudson, Iowa.

"Edward Kahl, Los Angeles, California.

"National Soybean Processors Association, Chicago, Illinois.

"Dr. Walter C. Alverez, Mayo Clinic, Rochester, Minnesota.

"Dr. Francis Pottenger, Jr., Monrovia, California.

"Dr. Irving D. Ewart, Hollywood, California.

"Dr. J.A. LeClerc, U.S. Department of Agriculture, Washington, D.C.

"W.J. Morse, Department of Agriculture, Washington, D.C.

"Dr. Louise Stanley, Chief, Bureau of Home Economics, Washington, D.C.

"Donald S. Payne, Chief of Soya Products Section, Food Distribution Administration, Washington, D.C.

"Dr. Clive M. McCay and Mrs. Jeanette McCay, Cornell University, Ithaca, New York.

"Dr. H.W. Miller, International Nutrition Laboratory, Mount Vernon, Ohio.

"Col. Rohland A. Isker, Quartermaster Corps, Chicago, Illinois.

"Prof. Oscar Erf, The Ohio State University, Columbus, Ohio.

"National Farm Chemurgic Council, Columbus, Ohio.

"Agricultural Experiment Station, University of Illinois, Urbana, Illinois.

"Agricultural Experiment Station, Iowa State College, Ames, Iowa.

"Purdue University, Lafayette, Indiana.

"College of Agriculture, University of California, Berkeley, California.

"Department of Home Economics, University of Illinois, Urbana, Illinois.

"Bureau of Home Economics, U.S. Department of Agriculture.

"A.A. Levinson, Glidden Company, Chicago, Illinois.

"H.A. Olendorf, Spencer Kellogg & Sons, Inc., Decatur, Illinois.

"James L. Doig, Floya Milling Company, Montreal, Canada.

"J.A. Audiss and L.E. Bauer, Loma Linda Food Company, Arlington, California.

"Russell G. East, The Pennsylvania Railroad, Richmond, Indiana.

"Ollie Jones, Los Angeles, California.

"Madison College, Madison College, Tennessee.

"Ford Motor Company, Dearborn, Michigan.

"The Fox Valley Canning Company, Hortonville, Wisconsin.

"The Michigan Paper Company, Plainwell, Michigan.

"I.F. Laucks, Inc., Seattle, Washington.

"The Baltimore & Ohio Railroad, Baltimore, Maryland.

"John Deere, Moline, Illinois.

"Hawaiian Sugar Planters' Association, Honolulu, Hawaii.

"Maren Elwood, Hollywood, California (for her help in editing the manuscript).

"Ellender McGraw, my secretary." Address: Southern California.

1105. **Product Name:** Sovex.
Manufacturer's Name: Sovex Co?
Manufacturer's Address: Marin County, California.
Date of Introduction: 1945?
Ingredients: Incl. nutritional yeast and soy sauce.
How Stored: Shelf stable.
New Product–Documentation: Talk with Craig Klatt, manager of the Seventh-day Adventist Book Center in Pleasant Hill, California. 1990 July 19. The original Sovex product, which was in existence by 1945, was a seasoning based on hydrolyzed or autolyzed nutritional yeast made by a Mr. Sampson in his garage in Marin County, California, where Craig grew up. It was a paste sold in quart mayonnaise jars, and used more as a spread on bread than as a soup base. It was always based on nutritional yeast.

1106. International Nutrition Laboratory. 1946. Dealers order blank. P.O. Box 388, Mount Vernon, Ohio. 1 p. Catalog. Jan.
• ***Summary:*** Lists 14 Soyalac products (all-purpose in 4 sizes, malt flavor in 4 sizes, chocolate in 3 sizes, infant food, natural liquid, and chocolate liquid), Giant Green Soya Beans in 3 sizes, Giant Select Soya Beans, Soya Beans with Tomato Sauce in 2 sizes, Soya Spread, Chili Con Carne (Vegetarian; with wheat gluten, no soy), Chop Suey (Mein Jing, Vegetarian, with soy sprouts), Cutletburger (Vegetarian; with wheat gluten, no soy), and Cutlets (Vegetarian, 4 sizes, no soy). Address: Mount Vernon, Ohio.

1107. Marchbanks, Modane. 1946. Story of the peanut:

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Know your oilseeds. *Soybean Digest.* Jan. p. 11-13, 33.
• ***Summary:*** "Back in 1890, Dr. J.A. [sic, J.H.] Kellogg of the Battle Creek (Michigan) Sanitarium decided the dietetic values of peanuts for invalids could be increased by reducing them to a smooth paste. The result, of course, was peanut butter.

"At first the paste was made exclusively for ailing persons. But it was not long before it gained a wide reputation and acceptance. Today, scores of factories are devoted solely to making peanut butter" (p. 13).

"The peanut journeyed from its birthplace in South America through Europe and Africa before it reached North America." Peanuts were grown in South America long before Columbus sailed to America. When Spanish adventurers and conquerors landed in South America, they took home peanuts as part of their booty; soon the new plant was cultivated in Spain. When the Spaniards moved on to Africa, they took the peanut with them, and soon it was cultivated in Africa. Then when slave traders made their long voyages from Africa to North America, peanuts helped their shackled human cargo to survive the terrible voyage.

The first peanut market in the United States was established during the last century at Mill Swamp, Virginia, by one Lemuel Womble, who appears to have 'engaged in trading in' the peanut yield of a small number of farms–a few bushels–and shipping to Norfolk, Virginia.

"Not long afterward, Thomas Rowland, of Norfolk–'The Father of the Peanut Industry'–set up the reputedly first peanut business. The peanut developed into a sizable and growing industry during the Civil War, and boomed after it. The first real spurt seems to have been touched off by the taste Union soldiers developed for the Southern legume. They brought it back to their homes.

"In the 5 years preceding 1870, peanut production swelled as high as 300 percent, and it was given a further boost in 1870 when a man with a thick voice sold bags of peanuts at a circus staged by one P.T. Barnum. It was not long before the peanut was a favorite American delicacy, and the colorful street vendor was whistling his way to prosperity and tradition.

"Modern advance: However, on a relative basis, the industry was still small, held down by a lack of machinery for picking, cleaning, shelling. The inception of modern plants containing such equipment was the catapult that sent the industry toward its present heights.

"The first cleaning plant was built in 1876 in New York City, then the leading market, another rose in Norfolk the same year. By 1890, modern peanut-handling plants were not an uncommon sight. Mills were operating as far north as St. Louis [Missouri] and Cincinnati [Ohio]. The industry's most rapid growth was in Georgia, Texas, Alabama, and Florida.

"The boll weevil caused it.

"In 1905, this pest, one of the few to which a monument has been erected with affection, destroyed so much cotton that all farm entries were in red. The farmers faced ruin. Peanuts promised a ready market at shelling and crushing mills and hog packing plants. They were a source of fine quality hay. The farmers turned to peanuts.

"Before World War I, peanut acreage had extended South and West. When that conflict began, there came a growing demand for vegetable oils–and acreage mushroomed. At that time there were no shelling plants in the GFA (Georgia- Florida- Alabama) area, and peanuts had to be crushed in the shell or shipped to the Virginia- Carolina district for shelling. Quickly, shelling and processing plants were built in the area–and have prospered since.

"The South's present 5 million peanut-growing acres yield some 2,500,000,000 pounds of peanuts a year.

"So vast did the industry beocme that in 1940 the men in it found it practical to create the National Peanut Council, Inc., which set out to better peanut products and the industry in general. The Council sponsors agricultural, nutritional and utilization research, and cooperates with all institutions engaged in research, among other activities."

Photos show: (1) Workers feeding vines into a peanut picker; nuts fall into a tub at the rear. (2) Miss Marchbanks. (3) A woman standing in experimental peanut plots. Address: National Peanut Council.

1108. *Soybean Digest.* 1946. Rules soya butter is oleomargarine. Jan. p. 33.
• ***Summary:*** Howard O. Butler, owner of Butler Food Products of Cedar Lake, Michigan, filed a petition for a permanent injunction to restrain the Bureau of Internal Revenue from assessing the federal margarine tax against soya butter. When the petition was denied in December 1945 by federal judge Edward J. Moinet of Detroit, the company had to stop making soya butter. Previously the U.S. Food and Drug Administration (FDA) had ruled that soya butter was not margarine and to so label it would be subject to penalties.

1109. *Madison Survey* (*Madison, Tennessee*). 1946. Fitting students to meet life's problems at Madison College: A training center for Christian self-supporting workers. 28(12):50-56. June 30.
• ***Summary:*** A good overview of Madison College ("Nashville Agricultural Normal Institute"), with 15 photos. One photo shows E.A. Sutherland, Dr. Perry Webber, and two other men (probably students) standing in a field of soybeans examining a soybean plant. The caption: "Madison's food manufacturing plant, utilizing vegetable protein as meat alternates, is an attractive phase of the industrial program of the college. In these times of flesh food shortage, men are learning that nature grows protein foods in the open field. One of the most promising of these is the soybean.

"Madison Foods, operated on the college campus, gives employment to students in training."

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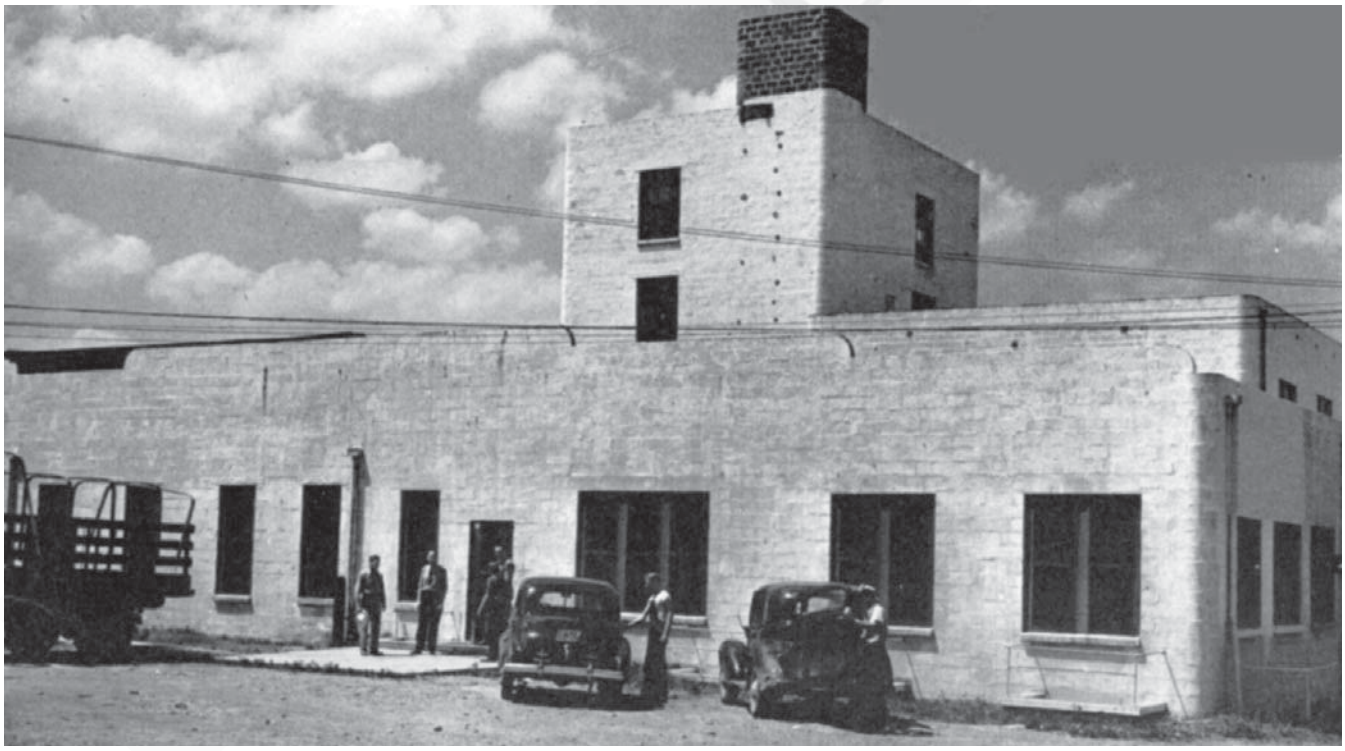

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A second photo (p. 56) shows the food manufacturing plant, apparently under construction.

Note: This is the earliest English-language document seen (Nov. 2003) that contains the term "meat alternates" (or "meat alternate"–with any combination of quotation marks).

1110. *Soybean Digest.* 1946. Grits and flakes... from the world of soy: Recently introduced on test markets by the Kellogg Co., Battle Creek, Michigan, are Corn-Soya Shreds,... June. p. 24.
• ***Summary:*** "... made of ribbon-milled corn and soya with sugar, salt and malt flavoring. The product is crisp and tastes like corn flakes, is packaged in Kellogg's usual red and green carton."

1111. Worthington Foods, Inc. 1946. Dealer order blank. Worthington, Ohio. 1 p. Catalog. Aug. 1.
• ***Summary:*** See next page. Products include: Mung bean sprouts. Soy beans in tomato sauce. Beta Broth. Tastex. Tastex food yeast. Protein foods (Alternates for meat): Choplets (vegetable fillets packed in savory sauce). Choplet-Burger (vegetarian ground meat with a texture like hamburger). Proast and Numete (dark or light vegetable meatloaf). Soy sauce (table). Wheatlets (Delicious whole wheat cooked breakfast cereal). A fairly detailed description of each product is given. Address: Worthington, Ohio. Phone: 2-5359.

1112. McWethy, John A. 1946. Soybean success: War boom continues as many plants expand, bring out new products. Examples: Meat flavor, wool-like fibre, bottle cap adhesive, soymilk cheese. St. Louis meeting draws 400. *Wall Street Journal.* Aug. 31. p. 1.
• ***Summary:*** This article is about the 3-day meeting of the American Soybean Association in St. Louis, Missouri. The soybean industry thrived during the depression, more than doubled in size during World War II, and is now continuing to grow. The A.E. Staley Manufacturing Co., America's largest soybean processor, has just started construction of a new $1 million plant that will turn soybeans into monosodium glutamate (MSG), making one million pounds a year. MSG has been previously made on a small scale in the USA from wheat, but Staley's plant will be the first to make it on a large scale from soybeans.

The Drackett Co. in Cincinnati is putting the finishing touches on a commercial plant that will make a wool-like fibre from soybeans. Robert A. Boyer, the firm's research director, said the new fibre will be used mostly for blending with rayon. He thinks it may sell for less than wool.

ADM, one of America's four largest soybean processors, earlier this year completed a plant to make a "whipping agent" from the versatile soybean; it can replace egg albumin, which is much more expensive.

Dr. Harry W. Miller, president of the International Nutrition Laboratory (Mt. Vernon, Ohio), "started making soybean products in Shanghai, China, in 1935. Bombed out in 1937 by the Nips [Nipponese = Japanese], he came to this country and began making similar products here in 1939. Now his firm does a $500,000 a year business and could do a lot more if sugar and other ingredients used with soybeans were available." His most popular items are [soy] milk, cutlets, and canned green soybeans. He says the milk tastes "rather like malted milk and is especially good for infants and others allergic to animal milk. His company has also developed a cheese made from soymilk, a prepared mix for ice cream from the soymilk, and "albumen sheets" [yuba], which are very popular in China.

These sheets aren't much thicker than a piece of paper and are used in China to make the layers of a loaf filled with mushrooms. The Chinese also use soybeans [yuba] to make products that taste like both fish and chicken. In American kitchens, an excellent substitute for butter can be made "by combining soya oil, soya milk," carotene oil for color, and salt.

One big American breakfast cereal maker is said to be planning to introduce a "soya flake cereal soon, similar in appearance to cornflakes. Another may soon market a puffed soyabean cereal, a third may introduce a cooked cereal made from soybeans, oats and wheat."

General Mills is building a factory for producing a synthetic resin from soybeans–a product developed at the Northern Regional Research Laboratory in Peoria, Illinois. Dr. G.E. Hilbert, NRRL's director, says this new resin shows "considerable promise as a protective coating and as a heat-sealing and moisture-proofing agent.

During the past few years, soybean processors have been switching to the solvent extraction systems, from the expeller system, for obtaining oil from soybeans. Most newer plants use hexane solvent. The advantage of the solvent system is that it removes all but about half of one percent of the oil, compared with 3½% to 5% left in the meal when expellers are used. The meal currently sells for 3 cents/lb compared with 11.75 cents/lb for the oil.

NRRL has recently developed a process that uses alcohol instead of hexane. This yields superior "soyflour." Before the war, production of soyflour was 25 million lb/year; this year it is expected to top 400 million lb. Roth Products Corp. of Chicago has already used 6 million pounds of soyflour this year in its dehydrated soups, baked goods, pancake flour mixes, and sausage filler.

The soybean industry (especially the NRRL) is also working to make soybean oil more stable. It "has a tendency to develop a grassy or painty flavor on standing." A process obtained from Germany "goes a long way toward preventing the development of these objectionable flavors."

The Lincoln soybean variety, developed at the U.S. [Regional] Soybean Laboratory at Urbana, Illinois, and first made available to farmers during the war, is playing a major

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WORTHINGTON FOODS:

Every one of the items offered under the Worthington label is guaranteed to be pure, wholesome, and of superior quality. Worthington Foods are famous for their distinctive taste appeal!

You can speak with confidence when you tell your customers, "There's worth in Worthington Foods"!

SOY BEANS IN TOMATO SAUCE:

Select quality soy beans, cooked and packed in delicious tomato sauce. Serve like baked beans. Excellent for either lunches or dinners.

BETA BROTH:

Instant broth at its finest! Full-bodied, meat-like flavor, but meat free. Made from Brewer's yeast and vegetable extract. It's granulated to dissolve instantly. Makes an excellent gravy stock!

TASTEX:

Tastex makes wonderful gravy, bouillon, soup. TASTEX keeps indefinitely without refrigeration, has a definite meatlike flavor, and is made in a concentrated paste form. It's rich in the Vitamin B complex. Economical!

TASTEX FOOD YEAST:

Many cooked dishes, as well as pastries and baked goods, can be enriched by adding a small amount of this pleasant tasting yeast. Contains all the natural B complex as found in yeast and averages 42-46% protein. Send for a sample.

CHOPLETS:

Delicious, high protein, vegetable fillets packed in savory sauce! Easily prepared in numerous ways and economical, too. They provide the sturdy main course which is so often lacking in vegetable plates. Recommended for meatless diets, Friday menus, Lenten dishes, vegetable plates, sandwiches. Choplets never fail to satisfy!

CHOPLET-BURGER:

This product answers the many calls for a vegetarian "ground meat." It's coarse in texture, like hamburger, and can be shaped into patties for frying. With the popular Choplet flavor and the convenient "burger" style, this item meets hearty approval of customers.

PROAST AND NUMETE:

For a delightful vegetable "meat loaf," your customers will appreciate Proast (dark) or Numete (light). Both are distinctive in flavor and rich in pure, nutritious protein. They are excellent sandwich fillers, or can be diced and used in salads.

SOY SAUCE:

The finest available soy sauce, packed attractively in a convenient table-size bottle.

WHEATLETS:

A toasted, whole wheat cereal which can be quickly cooked for a wholesome, healthful breakfast dish!

DEALER ORDER BLANK

WORTHINGTON FOODS, INC.

WORTHINGTON, OHIO
TEL. 2-5359

Amount Enclosed
Cash _____
Check _____ Date _____
M. O. _____ Your Order No. _____

SHIP TO:
Name _____
Street _____
City _____ State _____

Freight charges prepaid via cheapest way on orders of $20.00 or more. Claims for loss or damage in transit not honored without delivery receipt signed by driver indicating loss.

Name of Product	Size	No. in Case	Price per doz.	Quantity Desired	Total Cost
MUNG BEAN SPROUTS	1 lb.	12	1.92		
SOY BEANS in Tomato Sauce	1 lb. 1 oz.	12	1.92		
BETA BROTH	3 oz.	12	3.60		
BETA BROTH	10 oz.	12	10.00		
TASTEX	2¾ oz.	12	3.60		
TASTEX	5½ oz.	12	6.80		
TASTEX	11 oz.	12	12.40		
TASTEX	18 oz.	6	19.20		
TASTEX FOOD YEAST	5½ oz.	12	5.20		
TASTEX FOOD YEAST	1 lb.	12	12.00		
CHOPLETS	1 lb. 3 oz.	24	3.92		
CHOPLETS	1 lb. 12 oz.	12	5.20		
CHOPLET-BURGER	1 lb. 4 oz.	24	3.92		
CHOPLET-BURGER	1 lb. 14 oz.	12	5.60		
PROAST	1 lb. 3 oz.	24	3.36		
PROAST	1 lb. 14 oz.	12	4.40		
NUMETE	1 lb. 3 oz.	24	3.36		
NUMETE	1 lb. 12 oz.	12	4.00		
SOY SAUCE (TABLE)	4½ oz.	36	1.52		
WHEATLETS (full cases only)	1 lb. 6 oz.	18	2.16		
TASTEX FOOD YEAST minimum	50 lb.		.80 lb.		
TASTEX—bulk, 50 lb. drums only			.95 lb.		
BETA BROTH—bulk, 25 lb. minimum			1.00 lb.		

Total Amount of Order _____

_____
Dealer's Signature

_____
Name of Firm

_____
Address

There's Worth in Worthington Foods

August 1, 1946

Prices subject to change without notice

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role in increasing yields. Today farmers in the corn belt are getting 25-30 bushels/acre with Lincoln, compared with only 15-16 bushels/acre in the early 1920s with varieties then available. Moreover, today's soybeans contain 20-21% oil compared with only 15-17% about 20-25 years ago.

1113. Miller, Harry W. 1946. Feeding the world with soya. *Soybean Digest.* Sept. p. 56, 58, 61.

• ***Summary:*** Soybean production has extended so rapidly during the past decade "into many corners of the world, that encouraging a worldwide dependence on it nutritionally may not seem presumptuous."

For years the world has been facing acute nutritional shortages, with millions of people either starving or half-starving. Even in peace time millions showed signs of being undernourished or died of malnutrition "because of the lack of satisfying portions of protein. There is no more weakening and disease inviting situation than that observed among people robbed of essential protein. It is the first requisite of nutrition." Protein is essential for growth, tissue repair, fortification of the body against bacterial invasion, and the maintenance of all organs of the body in harmonious balance and action.

"Loss of protein in the diet cannot be supplanted by either oils or starches, no matter in what abundance they may be found." "Well prepared soya foods" are an excellent source of protein in the diet. Soybean protein excels that of corn and wheat in both quantity and quality, and it is less expensive.

"Present prices of vegetable protein average about 40 cents a pound, oil 15 cents a pound, and starches or carbohydrates 5 cents a pound." These "figures give a nutritional value of $285 per acre for soybeans, while an acre of wheat will yield $132.75 and an acre of corn $201.25. Yet the yield of corn is almost double that of wheat or soybeans, so the premium crop for the farmer today is corn.

"Vegetable protein vs. animal protein: Vegetable protein (as from soybeans) is much less expensive than animal protein–such as meat, milk, or eggs. The reason for this becomes clear when we realize that animals live on feed consisting vegetable proteins." For example: "Taken on average, a cow will eat 800 pounds of food units in order to yield 100 pounds of nutritional units in the form of milk solids. To produce meat it requires between 1,100 and 1,200 pounds of feed to yield 100 pounds of tissue storage in the animal made available as food.

"I am going into these facts and figures somewhat to call attention to the economic losses in time of food scarcity in feeding the nutritious legumes and grains to livestock to get small nutritional returns."

"It is possible that these facts that I have given were in the mind of the Secretary of Agriculture when he issued a few months ago a request to the American people to send their wheat and corn to the starving people of other lands rather than feed them to pigs and cows and sheep of this country.

"Processed soya foods: In the third of the world's population not accustomed to soya foods there is a psychological prejudice to overcome. I am glad to say today it is solved.

"Many companies, recognizing the unpopularity of the word 'soya' worked on the plan of incorporating it into other foods, particularly soy flour used in various products in order to enrich and extend them. Defatted and whole soy flour has been incorporated with wheat flour by bakers and housewives into bread, biscuits, cookies, crackers and other bakery products such as cakes and pie crust. In 10 to 20 percent proportions, it has yielded improvement in quality and added to its nutritive value." Note: This is the earliest English-language document seen (Nov. 2013) that contains the term "whole soy flour."

"One of the latest breakfast foods, which bids fair to become one of the most popular, is made by a 50-50 combination of soy flakes and corn grits run through a shredder and toasted. Its crisp and nutty flavor recommends it as an appetizer as well as a decided improved nutrient. This cereal has nearly 20 percent protein.

"Soy flour has become very successful in the manufacture of noodles. It has been used as an extender for bologna, hamburgers, sausage and incorporated in a very large number of recipes for meat loaves. In all these instances a little soya adds better flavor and higher nutritive yield. For all of these products the ordinary field variety of the soybean can be readily used.

"It also can be announced today that the newer

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methods of manufacture and the better understanding of the utilization of the soybean enable us to adopt many of the field varieties into the edible group. In fact, most of the types of soybeans that have the white hilum can be readily utilized for edible purposes. It is commonly believed that further experimentation will enable soybean food producers to take the ordinary varieties of soybeans and make tasty foods very similar to those now processed from the edible group.

"Other foods: We have a still much larger list of foods that today are made directly from the soybean. In these the soybean must stand on its own merits and it has proved acceptable to 90 percent of people sampling it. The large edible soys are now becoming available the world over. The canned mature beans, when properly processed and flavored by a suitable vegetable bullion or with tomato sauce, are very acceptable. It must be remembered that soybeans contain three times the quantity of protein and nine times the amount of oil found in either peas, lima beans, lentils or the ordinary navy bean." Continued. Address: M.D.

1114. Miller, Harry W. 1946. Feeding the world with soya (Continued–Document part II). *Soybean Digest.* Sept. p. 56, 58, 61.

• ***Summary:*** Continued. "The green edible soybean offers an additional line for canneries and freezing plants packing peas, lima beans, corn and other vegetables. It also offers another tasty item to the cook to adorn the dinner plate.

"Green soybeans can be canned with exactly the same equipment that all canneries have and can be shelled with the same sheller that is used for peas. The canning season is not in conflict with that of any other product unless it be sweet corn. The varieties can be planted so that they will not seriously interfere with this product. There is nothing we can put into the cans exported to other countries and for the areas of large population of our own country that will give people greater returns nutritionally than the immature green soybean. It has a nutty flavor and does not in any way harbor the beany taste that lingers in the minds of some people who think of soy foods.

"Canned sprouts: Canneries could develop a very fine winter industry by canning soybean sprouts. Or the frozen food people could very well add a package of frozen soy sprouts to their lines. These could very nicely come into our markets as a fresh vegetable along with Brussels sprouts, lettuce and other raw foods, to be incorporated into salads and cooked dishes. The sprouting of the soybean again removes the characteristic taste and gives a nice vitamin-yielding food, along with its rich content of minerals. Any good field variety may be used for sprouting.

"There is much to be learned from the Orient regarding usages of soybeans in the diet, in the many forms in which they prepare them. They first make a water extraction of the protein, curdle it and make cheese [tofu]. With this bean they can make foods simulating milk, fish, fowl and meat in appearance and taste.

"Already, in this land hundreds of infants have been started from birth using modified soy milk. A very large group of others who are allergic to animal milk are substituting soy milk for the dairy milk. It is being made into varieties of delicious cheeses, and has possibilities in the cheese industry the equivalent of cow's milk curd. The lactic acid soy milk is the most pleasing beverage. The acidity of the milk covers wholly any semblance of the characteristic beany flavor.

"Albumen sheets: We now have albumen powder made from the soy extraction flakes utilized like egg powder by the big candy industry in ever increasing amounts. The soy albumen sheets [yuba], because of their labor and painstaking requirements, have not been made in this country as they are in China. However, we are finding ways of providing for their manufacture.

"A halt has been made on the production in Michigan of a competitive margarine called soy butter. Still, there is available to every housewife a method of making a butter with far less work than churning cow butter. Such a butter is made from soy oil and soy milk which is colored with carotene oil and salted to taste.

"Dry mature soybeans can be readily transported to any part of the world without requiring refrigerator space. They are a form of concentrated nutrition the world can easily be taught to use. Seventeen dollars worth of soybeans at 5 cents per pound will supply enough protein for a family of five for an entire year.

"In a paper such as this it would seem to be in place to give a few concrete suggestions on what might be done to help solve the world food shortage.

"1. Encourage more soybean production in America. This could be done if soybeans were given their proper economic value.

"2. Forward seed to various countries in the world, encouraging its production through helpful instructions in growing, processing and using. There are very limited areas where soybeans have proven entirely unsuccessful when given a fair trial.

"3. We should devote more time on experimental work in cooking and preparing the food and overcoming any objectionable features that seem to prevent its widespread use. The feeble efforts that have thus far been put forth have really done wonders in furthering the adoption of the soybean in the diet.

"In closing, allow me to say that with the present world yield of soybeans, if used exclusively to relieve human starvation, relief could come to all the destitute areas of the world." Address: M.D.

1115. Kellogg Company. 1946. Facts about Kellogg's Corn Soya: The brand new–grand new–good for you cereal (News release). Battle Creek, Michigan. 2 p. 22 cm.

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• ***Summary:*** This pioneering news release follows a question and answer format. What are Kellogg's Corn-Soya Shreds? Why are we putting this new cereal on the market? What have been the results of Taste Tests? Do Corn-Soya Shreds stay crisp? What are the keeping qualities of Corn-Soya? Is this new cereal satisfying? Is there anything special about the Corn-Soya carton? Will Corn-Soya be sampled? What advertising support will there be? Will Corn-Soya be a volume seller? Address: Battle Creek, Michigan.

1116. **Product Name:** Soy Sauce.
Manufacturer's Name: Worthington Foods, Inc. (Marketer-Distributor).
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 2-2539.
Date of Introduction: 1946.
Wt/Vol., Packaging, Price: 4.5 oz glass dispenser.
New Product–Documentation: Wholesale price list. 1946. Aug. 1; Ad in Health Magazine. 1947. 14(2):2. Feb. "Good Foods for Every Occasion." Interview with James Hagle. 1981. Probably made by La Choy. Sold in 4.5 oz. table dispenser bottles.

1117. Worthington Foods, Inc. 1947. Good foods for every occasion (Ad). *Health* 14(2):2. Feb.
• ***Summary:*** Ad for Choplet Burger, Beta Broth, Soy Sauce, Soy Beans, Tastex, Choplets, Numete, Proast, Tastex food yeast. Photos show each package and ready-to-serve product. Address: Worthington, Ohio.

1118. *Soybean Blue Book.* 1947. Edible soybean growers and distributors. p. 89.
• ***Summary:*** In this section, published in the first issue of the *Soybean Blue Book,* the varieties grown are listed alphabetically. Under each variety is the name and address of the grower or distributor offering that variety. The edible soybean varieties are: Aoda (2 growers), Anwei (1), Bansei (28–by far the most popular), Chuku, Easycook, Emperor, Etum, Funk Delicious, Giant Green, Higan, Hokkaido, Imperial, Jogun, Kirin, Kanro, Mendota, Sac, Sanga (70210-1), and Willomi.

The companies growing these varieties include: Associated Seed Growers, Inc. [Asgrow] (New Haven, Connecticut; or Indianapolis, Indiana), Burpee (W. Atlee) Co. (Clinton, Ohio), International Nutrition Laboratory (Mt. Vernon, Ohio), LaChoy Food Products (Archbold, Ohio), Soybean Johnson (Richmond Heights, Missouri), Strayer Seed Farms (Hudson, Iowa), and Wood (T.W.) & Sons (Richmond, Virginia).

Note: This is the earliest document seen (May 2009) that mentions the soybean varieties Chuku or Kirin. Both came from LaChoy Food Products in Archbold, Ohio. Note: They could be "sprout types" and this could be further evidence that LaChoy grew and sold soybean sprouts–at least during World War II and the 1940s.

1119. Loma Linda Food Co. 1947. Hey kids! Get a plastic boomerang! (Ad). *Los Angeles Times.* April 28. p. B21.
• ***Summary:*** This large display ad shows a photo of the front of a box of Ruskets–Vitaminized whole wheat, flaked, toasted breakfast cereal, and a bowl of Ruskets with sliced bananas and milk. "The West's favorite cereal." "Hurry! Be the first in your neighborhood to get your own plastic boomerang." Address: Arlington, California.

1120. Penty, William P. Assignor to Kellogg Company. 1947. Process of making ready-to-eat food. *U.S. Patent* 2,421,216. May 27. 6 p. Application filed 11 June 1943. [9 ref]
• ***Summary:*** Kellogg Co., Battle Creek, Michigan, a corporation of Delaware. This product is a mixture of about 20-30% by weight of solvent extracted soybean flakes with 70-80% of yellow corn. The corn is first cooked alone, the cooking interrupted for introduction of the soybean flakes, and the mixture cooked further. The cooked corn-soybean mixture is shredded under pressure to produce a homogeneous product. The resulting shreds are then toasted to a brown and slightly puffed condition. The final product is highly palatable and nutritious. Address: Battle Creek, Michigan.

1121. Penty, William P. Assignor to Kellogg Company. 1947. Ready-to-eat food product. *U.S. Patent* 2,421,217. May 27. 3 p. Application filed 28 Oct. 1943. [8 ref]
• ***Summary:*** Describes a cooked, ready-to-eat breakfast cereal containing corn and defatted soy grits, meal, or flakes. Address: Battle Creek, Michigan.

1122. *Vegetarian Messenger and Health Review* (*Manchester, England*). 1947. The late Professor Irving Fisher. Aug. p. 154.
• ***Summary:*** Prof. Fisher was best known to the world as a brilliant economist, but he will be remembered by vegetarians for the endurance tests that he conducted in the early 1900s. The results of these tests were published in March 1907 under the title "The Influence of Flesh-eating on Endurance" in the *Yale Medical Journal.* Shortly after his appointment at Yale University, he acquired tuberculosis, which left him debilitated and able to work only a few hours each day. Although he consulted several leading American physicians, it was not until he visited Dr. John Harvey Kellogg (a vegetarian at Battle Creek Sanitarium in Michigan) that his condition was largely cured, giving him a busy and useful life for the next 50 years. This experience gave Prof. Fisher a special interest in natural methods of living, and he devoted much of his time to writing and lecturing on the subject, in addition to his duties as Professor of Political Economy.

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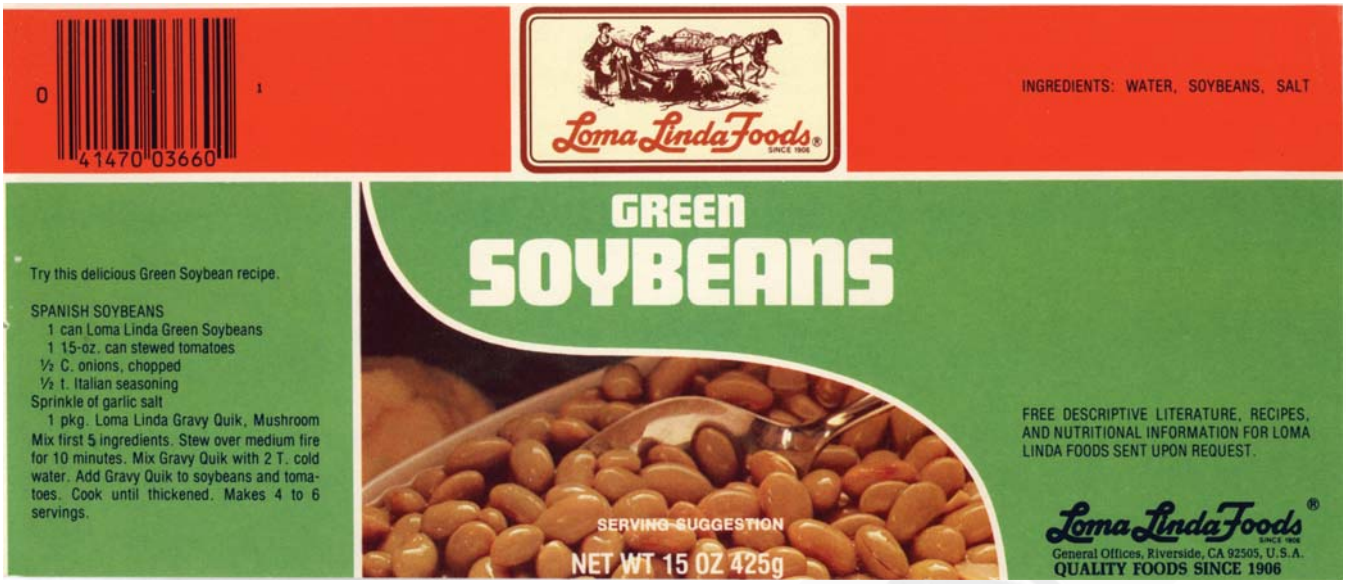

1123. Gehrke, Charles; Weiser, Harry H. 1947. Comparative studies on the growth and biochemical activity features of microorganisms grown in cow's and soybean milk. *Food Research* 12(5):360-64. Oct. [3 ref]

• ***Summary:*** "The introduction of soybean milk to the American people has occurred within the past few years. Attempts are being made to manufacture this milk in the form of a powder; it has been used with good results in bread and cakes, in creaming vegetables, in custards, in chocolate or cocoa, and in several other food products as a substitute for cow's milk. The high nutritive value of soybean milk and its many potential uses indicate that this product will continue to rise in importance in the human diet."

A table (first published in 1937 by the Battle Creek Food Company, Battle Creek, Michigan) compares the composition of soybean milk and cow's milk. Soybean milk contains more protein and 5 times more iron, as well as only 38% as much fat but only 22% as much calcium (though it is comparable to the calcium content of human milk).

The soybean milk used was obtained from Dr. Harry Miller, Director of the International Nutrition Laboratory, Mt. Vernon, Ohio. The method used for the preparation of soybean litmus milk was similar to the method employed in the preparation of cow's litmus milk." Both kinds of milk were inoculated with the following bacteria: *Lactobacillus bulgaricus, Lactobacillus acidophilus, Streptococcus liquefaciens, Streptococcus lactis, Aerobacter aerogenes,* and *Escherichia coli.* During incubation, periodic measurements were made (for each bacterium) of pH, and the rate and extent of coagulation, reduction of litmus, acid production, and peptonization. A table shows the results.

"Soybean milk serves as a excellent culture medium for the propagation of the organisms studied." After 48 hours the pH for soybean milk was lower (more acidic) than that for cow's milk when cultured with the following organisms: *L. bulgaricus* (3.85 vs. 4.60 at 37ºC), *S. lactis* (4.13 vs. 4.30 at 21ºC), *A. aerogenes* (5.0 vs. 5.10 at 37ºC), *L. acidophilus* (3.60 vs. 4.10 at 37ºC). The cell size of *L. acidophilus* was larger in soybean milk than in cow's milk. "Growth of *L. bulgaricus* in soybean litmus milk showed that coagulation occurred more rapidly, whereas in litmus milk acid production and litmus reduction were more pronounced." Address: Dep. of Bacteriology, The Ohio State Univ., Columbus, Ohio.

1124. **Product Name:** Loma Linda Green Vegetable Soybeans (Canned).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: 11503 Pierce St., Riverside, California.
Date of Introduction: 1947.
Ingredients: Water, soybeans, salt.
Wt/Vol., Packaging, Price: 15 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: National Canners Association. 1947. Canners' Directory; Soybean Blue Book. 1948. p. 80. Soybean Blue Book. 1958. p. 82. "Loma Linda Food Co., Eastern Div. P.O. Box 388, Mt. Vernon, Ohio. Home Office, Arlington, California."

Today's Food (Loma Linda Foods, Arlington, California). 1960. Spring. p. 4. Loma Linda's commercial food products include: "Loma Linda Green Soy Beans."

Soybean Digest. 1969. Nov. "Canned green vegetable soybeans. 11503 Pierce St., Riverside, CA 92505."

Loma Linda Foods. 1979. "27 Meal-Maker Recipes." A color photo can of "Green Soybeans" and a recipe for using them appears on p. 14. Manufacturer's catalog. 1987, undated. "Provides an excellent source of protein right from the can or in a favorite recipe."

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1947.

Talk with Ron McDermott of Worthington Foods.

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1998. Oct. 7. Ron worked for Loma Linda for many years and he is certain that from 1947 until several years before it was discontinued (probably in the late 1980s), this canned product was made with fresh green vegetable soybeans. A pea viner was used to harvest them. The soybeans were grown locally under contract. Ron remembers it as quite a good product, but the canning process gave it more of a canned pea flavor which was not a tasty as a fresh, uncanned product. Several years before the product was discontinued, the grower had some kind of problems–with the crop itself, or with equipment or yields–so for about 2 years Loma Linda had to make the product from dry, green-seeded soybeans. At that time, the name was changed to "Green Soybeans" and the ingredients to water, soybeans, salt (see red and green label).

1125. *St. Louis Globe-Democrat* (*Missouri*). 1948. $213,000 peanut crop had origin as slave food. March 1.
• ***Summary:*** Peanuts came to America in slave ships, but they originated in Peru. The conquistadores found the Incas munching on them between meals. The Spaniards took these peanuts in their treasure galleons back to Spain, where they flourished. Then they took them from Europe to Africa, where they became involved with the slave trade. "The slavers fed them to the natives because they were cheap and easy to grow. The natives called them 'goobers.' When the slavers crammed the natives into holds and began the long journey to America they used the peanuts as slave food. Upon landing, the slaves built crude cabins, and planted peanuts near their cabin doors. Gradually peanuts spread through the south and changed from a slave to a money crop. They continued as a southern specialty until the civil war."

"In the 1890s a doctor at Battle Creek, Michigan, named Kellogg thought peanuts possessed excellent dietary qualities for invalids. This was the fabulous era when corn was being flaked, and oats and other grains exploded into breakfast cereals. Kellogg crushed the nuts into a creamy mass and called it peanut butter. He said it was more easily digested by sick people this way."

The late Dr. George Washington Carver played a major role in the development of peanuts in America. "He perfected dozens of extracts from peanuts, including peanut coffee and peanut milk and cream. At one point in his career he experimented with peanut oil as a massage for after-treatment of infantile paralysis."

Peanuts are now a price-supported crop. Georgia is the largest peanut-producing state. Peanut yields are now decreasing because peanut farmers have used backward methods and not replenished the soil. Some authorities believe the soybean has come to the front because of these backward methods.

1126. Roberts, F.G. 1948. The return of the edible soya bean. *Nature's Path to Health* (*Melbourne, Australia*). Feb/March. p. 22.
• ***Summary:*** "The Soya Bean is a complete vegetable protein containing all the Amino acids in assimilable form; one pound of Soya Beans equals the protein value of two pounds of beef, which is much more expensive." Soybeans are an alkaline food with a wonderful chemical content.

"We are doing our best to encourage the growing of Soya Beans in Australia, we have promised the farmer a fair margin and we hope to distribute many tons of Grade 1 Soya Beans through our many branches, and other grades will be used for making Soya Flour, Soya Bean oil, Soy nut roast, Soy milk compound, Soya Bean and Soya Beans in Tomatoes."

Note: This is the first article about soy to appear in this periodical (published by F.G. Roberts and wife) since Aug. 1940, a gap of more than seven years. Hence use of the word "Return" in the title. Address: Reg. Dietitian, Australia.

1127. *Chopletter: The Magazine of Worthington Foods News and Views.* 1948-1969. Serial/periodical. Worthington, Ohio: Worthington Foods, Inc. Vol. 1, No. 1. April 1948. Quarterly.
• ***Summary:*** See next page. By April 1960 the circulation was about 65,000. Beneath the title on page 1 was written: "The Magazine of Worthington Foods News and Views." Worthington bills itself as "Makers of Famous Choplets." The editor is Opal Hoover Young. It is published quarterly. The last issue was March/April 1969. The title changed in May/June 1969 to *Tomorrow's Foods for Today's Homemaker.* Address: Worthington, Ohio.

1128. Gehrke, Charles W.; Weiser, Harry H. 1948. A comparative study of the biochemical activity of *Streptococcus lactis, S. citrovorus*, and *S. paracitrovorus* when grown in cow's milk and soybean milk. *J. of Dairy Science* 31(4):213-22. April. [17 ref]
• ***Summary:*** These three microorganisms are widely used to culture butter. "Soybean or vegetable milk is used extensively throughout Japan and China for infant feeding as well as for adults." The introduction of soybean milk to the American people has occurred only recently. Soybean milk has been manufactured in the form of a powder. It has been used with good results... especially in those countries that find it cheaper to use a vegetable milk... The development by butter organisms of diacetyl [which is partially responsible for the aroma of butter] and related compounds in vegetable milk and products made from it may be desirable from a commercial standpoint."

The butter cultures were obtained from the Department of Dairy Industry, Iowa State College, Ames. The soybean milk was obtained from Harry Miller, Director of the International Nutrition Laboratory, Mt. Vernon, Ohio. Cow's milk and soybean milk were inoculated and incubated, then measurements of the following were taken at regular intervals up to 216 hours: pH, titratable

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Chopletter

THE MAGAZINE OF WORTHINGTON FOODS NEWS AND VIEWS

Published by WORTHINGTON FOODS, INC., Worthington, Ohio, Makers of Famous Choplets - Editor, Opal Hoover Young

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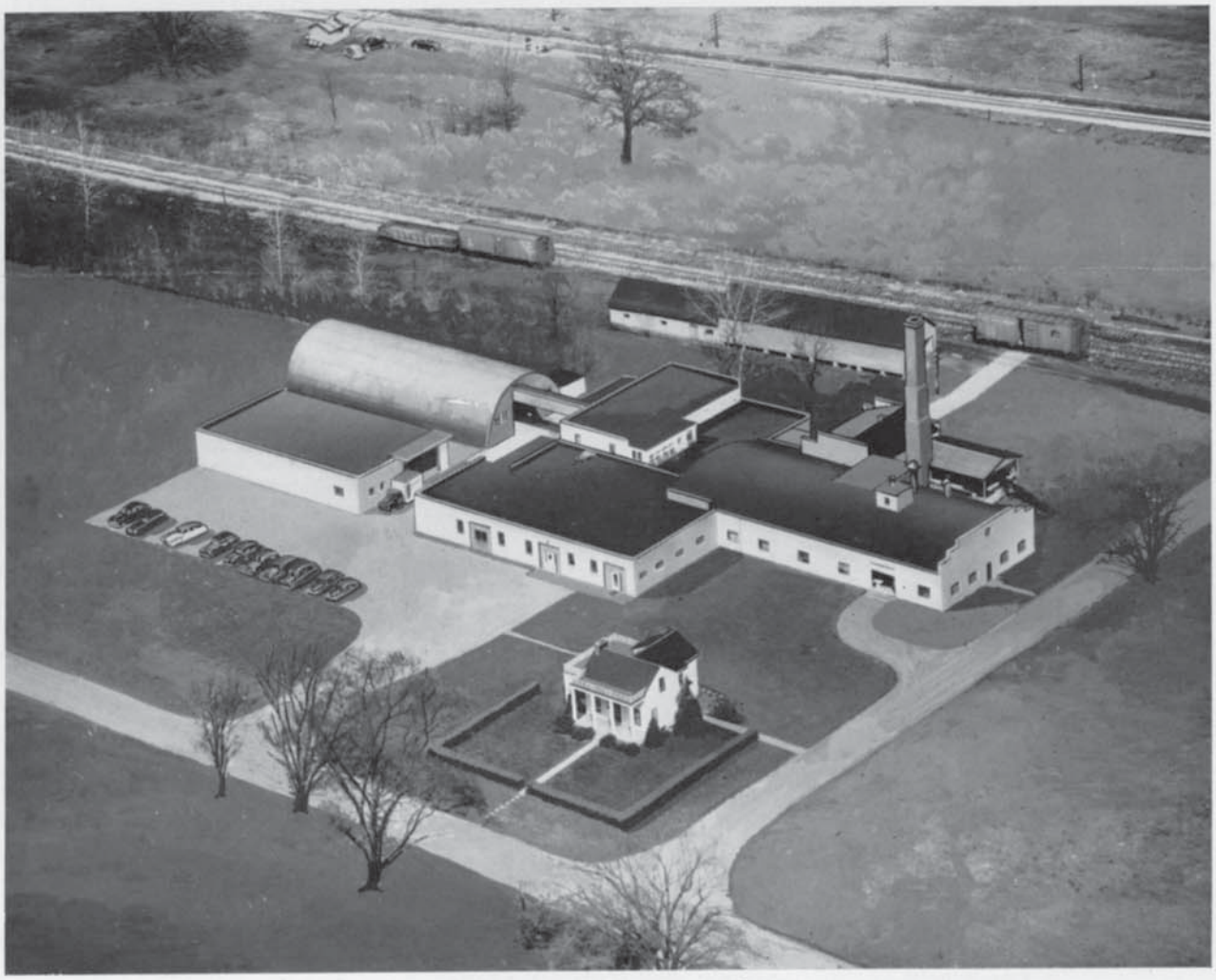

Aerial View of Worthington Foods Factory

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acidity, volatile acidity, and Mg Ni salt. The production of acetylmethylcarbinol (AMC) and diacetyl in soybean milk by butter culture organisms was not evident until after an incubation period of 48 hours; however, upon incubation of cultured soybean milk for 168 to 216 hours, larger amounts of the flavor and aroma compounds were produced in soybean milk than in cow's milk. "The values obtained for the titratable acidity in cow's milk and cow's milk to which 0.15 per cent citric acid had been added were nearly twice as great as those secured for the soybean milk. Address: Dep. of Bacteriology, The Ohio State Univ., Columbus, Ohio.

1129. Miller, H.W. 1948. Survey of soy foods in East Asia. *Soybean Digest.* June. p. 22-23.
• ***Summary:*** The primary objective of Miller's company "was to develop a milk built up to formula for babies, children, and adults that could be utilized by Oriental populations where animal milk is not available, and which for economic reasons can never be a dependable source of food supplies for the masses.

"Before the war the Laboratory had branches both in Manila, Philippine Islands, and Shanghai, China. The war saw the plant in Shanghai completely demolished and the equipment destroyed. In Manila, the building was left, but all the equipment was removed. Therefore we have been busy since the end of hostilities in restoring these plants.

"In 1946 and 1947 and during this last January and February the writer made trips and spent time in connection with these institutions. I am glad to report that on my last visit to the Philippine Islands I was able to see the plant there start its operations. The machinery and equipment are practically restored.

"At the present time there are no soybeans under cultivation in the Philippine Islands... though certain parts are very well adapted to the growth of the southern type of soybeans.

"The Manila plant is interested in marketing bottled 'Soyalac' (soy milk) both in natural and chocolate flavors, and also in entering the production of soy ice cream–we are permitted to call it that in the Philippines.

"From Manila I went to Hongkong where 8 years ago a small company known as the Hongkong Milk Factory made a beginning in homogenizing a constituted soy milk. On this last trip to Hongkong, K.S. Lo, the manager, took me through their plant. He informed me that they are now serving to each of the school children a half-pint bottle of the soy milk, both in the natural and the chocolate flavors, at their noon lunch.

"The Hongkong Milk Factory is in reality a soybean dairy. As you view the equipment including the bottle filling machine and the refrigerating unit, you would not know you were not in an American dairy. Mr. Lo informed me that if they had refrigeration they could be putting this soy milk out in many of the other cities of China on a very large scale.

"The firm obtains it beans from China, mostly from the province of Chang Tung, though some come from Manchuria. The beans are not of a very fine quality."

At Shanghai there were two soybean enterprises that particularly attracted my attention. The one for which we helped secure the machinery and equipment is being run under the name of the International Nutrition Products Co., Ltd. It is to be run very much like the Manila plant in the manufacture of liquid soy milk. The company will develop along with it a soy margarine and soy spread in the form of a mayonnaise dressing.

"The other enterprise is being undertaken by the government. The Chinese Army Quartermaster Department has purchased a property where ice cream, dried eggs and butter, and also candy were made. This large property has a splendid group of buildings with refrigeration." Here the Chinese Army intends to run a "soybean factory and a vegetable dehydration plant.

"The Chinese Army has secured the help of my son, Harry Willis Miller, Jr. He is there at the present time erecting this plant. It is perhaps the largest soy protein processing plant we know of at present. The firm has bought equipment for large-scale production of a spray-dried soy milk powder. This is to be included in other rations of a dehydrated character for use of the Chinese Army."

In Japan, the author found the people to be "greatly undernourished, especially in regard to protein. Soybeans are scarcely to be had... Bean curd plants are all closed down... I know of nothing that the Japanese nation needs worse than soybeans... I found the Japanese people, even to the advisor to the Emperor, whom I met, pleading with us to establish a plant similar to that which we have in China and the Philippines. However we have no financial interest in those plants. They are carried on wholly by local capital. Our part is simply the 'know-how' in setting them up and transmitting the processes to them."

Note: This is the second earliest document seen that uses the term "soy foods" in the title. Address: International Nutrition Lab., Mt. Vernon, Ohio.

1130. *Soybean Digest.* 1948. Nationwide sales: Kellogg's Corn-Soya Shreds. Aug. p. 33.
• ***Summary:*** The caption reads: "Pictured above is the package of the newest cereal of the Kellogg Co., Battle Creek, Michigan. Kellogg's Corn-Soya Shreds have had splendid acceptance by consumers throughout the country. Over the past 2 years 15 million samples have been distributed, and the product has sold immediately on its taste. Most daily newspapers are now carrying advertisements on Corn-Soya, which has now achieved national distribution."

1131. Fairchild, David. 1948. Early experiences with the soybean. *Soybean Digest.* Nov. p. 14-15. [2 ref]
• ***Summary:*** "It was not until 1897 that I first saw soybeans

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growing... I found my friend Merton B. Waite had been trying to grow soybeans on his farm outside Washington [DC, in Maryland; see Fairchild, Oct. 1948], but with little success. They had been sent in by some American consul or missionary, I believe. At about the same time Dr. George T. Moore [who by 1903 was Physiologist in Charge of the Lab. of Plant Physiology, Bureau of Plant Industry, USDA, working on soybean root bacteria] in working on the root nodules of leguminous plants had discovered that the nodules contained bacteria. Waite and I talked over the matter of the failure of his soybeans and wondered if they might require special bacteria, so I wrote out to Japan and imported several pounds of soil from a soybean field.

"We made a little experiment, planting alternate rows of soybeans with and without the addition of this Tokyo soil. The effect of the imported soil was immediately apparent as the plants grown in it made a far better growth and had their roots covered with bacterial nodules, whereas the control were practically without any.

"Photographs had yet to come into any general use as records of agricultural experiments, but Waite had taken up photography as a hobby and made excellent photographs with his stand camera. So at harvest time he pulled up an equal number of soybean plants from the soil-treated rows and from the controls, and the only photographic record in existence of this little experiment (the first of its kind, I suppose, in the world) is this negative taken by Waite in the autumn of 1897.

"Although these experiments did not at the time lead to more extensive trials, they indicate the awakening of our interest in soybeans.

"In that fall of 1897 it was my privilege to organize the office of plant introduction in the Department of Agriculture. We began introducing a great number of different kinds of plants, among them, as I see from our inventories printed at the time, occasional small collections of soybeans from China and Japan. They were obtained mostly through correspondence with missionaries and consuls stationed there.

"At that time the Department had no testing ground near Washington where we could grow miscellaneous vegetables, including these soybean collections. It was not until several years had passed that facilities were provided on the so-called 'Potomac Flats' [in Washington, DC] and James H. Beattie, an enthusiastic young horticulturist, took over the planting of our introduced seeds.

"The soybeans did well and Beattie soon had on his hands a quantity of seeds. But we didn't know just what to do with these strange beans. When cooked in the way other beans were prepared they had a strange flavor that nobody seemed to like...

"It was not, I think, until the office of forage crop investigations was organized and C.V. Piper took charge that the soybean as a forage crop attracted attention and Beattie's experiments came to be looked upon as important. We planted larger patches of soybeans on a tract of land near Bethesda, MD...

"And then we ran into the difficulty of harvesting the soybeans. P.H. Dorsett of the office, one of the most ingenious and most indefatigable workers I have ever known, and his friend Rankin, who was running the little experimental farm, put their heads together and adapted a bean picker then in use–in California I think–and discovered that it was perfectly possible to harvest soybeans mechanically...

"I went out exploring again and my travels with Mr. Lathrop this time took me into the soybean fields of Japan. The tremendous importance of the crop as I saw it there made a great impression on me. Also the almost universal use of soy sauce, which Americans were just beginning to appreciate, fixed my interest...

"Dr. Yamei Kin, an extraordinary Chinese woman whose acquaintance I had made on the boat returning from Japan, made a visit to Washington and captivated us all by her enthusiasm over soybeans. She introduced us to 'tofu,' a delicate cheese which has not even yet attracted the attention it deserves from the American public.

"In 1903 A.J. Pieters came to me one day and told me of an amazing young Hollander who had been a gardener of the great geneticist, Hugo de Vries. He was then on his way back from a trip on foot to Mexico, and I wired him to come to Washington. For 13 years, as agricultural explorer of our office, Frank N. Meyer tramped from village to village over much of China. He gathered soybeans whenever he saw them, for he felt it was important to secure all the local varieties he could for our plant breeders before they should have disappeared as the result of the spread of standard varieties he thought was bound to come.

"The importance of getting as many as possible of these local varieties and these, or selections from them, form, I believe, the basis of the very extensive soybean breeding that has been done by the various plant breeders of America."

Note: According to Vivian Wiser of the USDA and to the Washington D.C. Historical Society (13 Feb. 1991; phone 301-785-2068, Mrs. Offut), in 1897 Merton Waite lived in downtown Washington, D.C. in a built-up area. There is no record of his owning a farm outside Washington D.C., but he may have owned the farm as a sort of summer home or he may possibly have worked with the group at the USDA farm at Somerset, Montgomery County, Maryland. He was a plant pathologist and physiologist, in charge of diseases of orchard fruit trees, especially pears and peaches. There is a collection of David Fairchild's materials at Coconut Grove. His personal residence, The Kampong near Coconut Grove, is still (as of 1998) well preserved and open to the public. Address: "The Kampong," Coconut Grove, Florida.

1132. *Madison Health Messenger* (*Madison, Tennessee*).

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1948. King Cotton welcomes King Soybean: American soybean convention highlights. Fall. p. 1-2, 5-6.

• ***Summary:*** The American Soybean Association held its 28th annual convention on 13-15 Sept. 1948 in Memphis, Tennessee (on the banks of the Mississippi River in southwestern Tennessee) at the historic and famous Peabody Hotel. Nearly 1,000 people attended, representing 28 states and 9 foreign countries. Madison College is in Tennessee, so representatives attended.

Memphis became the largest spot cotton market in the world, the largest cotton seed products market in the USA, and (at one time) the largest mixed feed center. In 1884 the Memphis Merchants Exchange was organized.

"Early in the twentieth century, experiments were made in this market in the use of blackstrap molasses, then a worthless by-product, mixing it with alfalfa hay and grain. It proved to be an excellent animal feed and was placed on the market as commercial mixed feed. Memphis can probably claim the honor of originating the mixed feed business that was the forerunner of the scientifically prepared stock feeds that now comprises one of our nation's largest industries." The feed industry created an enormous demand for protein which was largely derived from cottonseed meal. That source, however, proved inadequate, and so 'Necessity being the mother of invention' the soybean was introduced into American agriculture and began to be produced in considerable quantities about 1920.

"Having about the same protein content as cottonseed meal it has practically doubled the supply of protein available for mixed animals feeds. Geographically Memphis is the center of the production of high protein vegetable meals. The crops of cottonseed and peanuts of the Mississippi Valley in the South, blend here with The soybean crops of the North Mississippi Valley states. Memphis, therefore, is the natural location for the world's only protein futures market. The price of cottonseed meal and soybean meal established by this open market is recognized throughout this country, as well as abroad, as the basis price for trading in both commodities.

"Barge lines on the Mississippi River now handle a vast tonnage of merchandise and bring millions of bushels of grain and soybeans to Memphis for distribution throughout the South and for export via barge to the Port of New Orleans. So important is the Port of Memphis that millions of dollars are being spent to improve and enlarge its facilities for handling an ever increasing tonnage while 'Old Man River He Just Keeps Rolling Along.'

"Convention highlights: The Soybean Conventioners were welcomed royally by Mayor Pleasants, President Williams of the Memphis Commercial Exchange, and the friendly staff of Peabody Hotel. Ladies of the Memphis Commercial Exchange entertained the ladies attending the convention and it seemed from the gardenia corsages given to all the ladies (100 attending) by the Memphis Commercial Exchange, the luncheons, parties, tours. and the annual banquet, planned for the guests, that King Cotton himself and all Memphis bent their efforts to make Kong Soybean their honored guest. The conventioners were profoundly impressed with the beautiful city of Memphis and its never-to-be-forgotten genuine warm hospitality. With every exhibit space in the large hall taken with interesting displays of soybean products, machinery, supplies, and technical services offered, it was obvious that the industry was well organized and integrated to meet the heavy demand put upon its young shoulders.

"Efficient President Walley and aggressive Secretary Strayer of the American Soybean Association gave every evidence of providing the unusual leadership required for the development of a national organization to serve the soybean industry in the United States.

"President Walley reported fresh from his summer stay in Europe where he studied conditions relating to the interest and needs of the people with respect to the potential possibilities of supplying soybeans to aid in the recovery program. He said in part, 'From The best available information, France could use oilseeds equivalent to at least 10 or 15 million bushels of soybeans per year at the present time... soybeans have become more popular and more appreciated by the French.' In Italy it is about the same story. 'I was particularly impressed with the fine work being done by CRALOG (Christian Relief Organizations Authorized to Operate in Germany), cooperating with German food manufacturers in preparing soybean products in the most palatable form.' Large quantities of soy flour are being flown to Berlin over the blockade. Belgium processors were pleased with the quality of America soybean varieties. 'In England I found many friends of soybeans and much progress has been made in the use of soy products in food.' 'One of the principal paint companies of England is very enthusiastic about the use of soybean oil in paint and is doing everything it can to encourage the growing of soybeans in South Africa in order to augment its needed supplies.'

"'... let us take the cost of protein for human consumption in Germany. At the time I was there 40 grams of protein purchased at the store in the form of full fat soy flakes cost only one-third to one-sixth as much as 40 grams of protein secured through any animal product and that cost was figured on the basis of soybeans being worth between $8 and $10 a bushel in Germany.' Here is a large fertile opportunity market that can mean much to the American soybean grower.

"'Gentlemen, in my opinion, this "cold war" is hotter than you think. Today national security is our most important business."

"'As producers of a potent weapon in that war [soybeans] let us carry on, keeping this in mind: a continued and assured production of soybeans in the United States can have much to do with the preservation of individual

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liberty here and abroad–a treasure more important than any immediate consideration of price or profit.'

"Two films, *Progress in Products*, the margarine film produced jointly by the American Soybean Association and the National Cotton Council, and the Allis-Chalmers film, *The Soybean Story,* were shown and, as you might surmise, Madison Foods comprised a part of the section of the story on the screen showing foods produced from soybeans.

Soybean milk experiment: Dr. Sasanka S. De of the Indian Institute of Science, Bangalore, India, and now a research fellow in the Department of Food Technology, Massachusetts Institute of Technology (MIT), reported on his experimental work with soybean milk. He found "that it was possible to prepare a fortified soya milk that would have a high supplementary value in the Indian diet comparable to that of cow's milk and without increasing the cost greatly... In the human experiments, nearly 6,500 infants, children and youth were used as subjects in Welfare Centers, Orphanages, and Schools."

"Visit to the world's largest cotton plantation: The last day of the conference was set aside for a field day in the rich Arkansas delta at the Arkansas Agricultural Experiment Station, Clarkedale, Arkansas, and at Wilson, Arkansas, to see the world's largest cotton plantation. In this rich northeastern section of Arkansas the flooding mighty 'Old Man River' deposited layer upon layer of black loam silt until it reached the incredible thickness of 1,200 feet (the average topsoil depth around the world is seven inches).

"At the Clarkedale experiment station the staff prepared test plots for this field day showing all the named commercial varieties of soybeans in the U.S. Flame weeding was also demonstrated..."

Over 500 guests attended the Soybean Banquet in the Ball Room of the Peabody Hotel. Madison Stakelets and Zoy-Koff were served. "Dr. Morse, father of the soybean, Chief Agronomist of the Department of Agriculture said, 'I always enjoy Madison Soybean Foods, especially Zoy-Koff for it takes the place of coffee which I do not use.' Dr. De of India, previously mentioned, said 'I liked your Stake-Lets very much and ate them with intense interest. Both the flavor and texture are so much like meat.'"

1133. *Madison Health Messenger* (*Madison, Tennessee*). 1948. Soybeans–A wonder food: Madison College works with the soybean. Fall. p. 1, 3-4.
• ***Summary:*** The soybean originated in China. However this "food of the ancients now seems destined to turn its antiquity into one of the most valuable foods in the modern world.

"The first actual mention in the literature of this wonder bean is recorded in Emperor Chen Nung's Materia Medica, written under date 3838 B.C. In the Legendary period of China the story of bandits attacking a merchant caravan has been handed down through generations in which it is said that the miracle wonder food, soybeans, were the lifesavers of some merchants, who, being surrounded and besieged by bandits until their own provisions were exhausted, noticed a vinelike plant bearing a legume which they had never seen before from which they made flour and baked cakes. Energized therewith, they fought off the enemy until help came. So the legend goes, soybeans became the staff-of-life in the great nation of China which still ranks first in population in all the world."

Soybean "oil is used extensively in Margarine in which it is used up to 80% in certain brands (Sure Good, sold by A. & P., and Nu-Maid, sold by Kroger)." Many brands of margarine contain 20-80% soybean oil.

Discusses the work of Henry Ford with soybeans and soyfoods. "His research staff made soybean milk and cheese, soybean-nuts, canned green soybeans, soybean sprouts, and a hundred other things."

"With the knowledge of widespread disease in the animals used for food by man, the founders of Madison College adopted a vegetarian diet supplemented with dairy products and eggs. For over 44 years this has been strictly adhered to in the food preparation for the students, faculty, workers, and patients at its 165 bed sanitarium and hospital... For over 30 years [since 1918 or before] Madison has been growing soybeans. They have occupied a place of prominence in its menus for many years." Then Madison began to manufacture soybean food for the public. More and large equipment was added. "In 1941 a new plant was started and today Madison Foods are produced in a fine daylight plant of modern design and construction..."

A list of Madison's foods is given, together with the weight of the can or bag in which each is sold: Kreme O'Soy, Zoy-Koff, Stake-Lets, Yum, Zoyburger, Vigorost, Not-Meat, Soy Cheese [Tofu].

1134. *Madison Health Messenger* (*Madison, Tennessee*). 1948. A unique food developed [Kreme O'Soy]. Fall. p. 3.
• ***Summary:*** "Realizing the need of a milk substitute for infants and adults who could not tolerate cow's milk, Madison turned to the soybean and made an emulsion so near in appearance that even the choosy cat drinks its and licks its chops. Manufactured exclusively by Madison Foods and sold under the registered trade name of Kreme O'Soy, this creamy homogenized emulsion of soluble soybean protein fortified with dextrose, calcium phosphate, and soybean oil, is compounded to take the place of human and animal milk in human nutrition.

"In thousands of cases Kreme O'Soy has been used to replace human and cow's milk in feeding infants, children, youth, and adults, and the infants develop normally, children make the usual gains, and adults maintain normal weight and health. It contains less calcium than cow's milk because the human organism requires less calcium than the calf for which the cow's milk is obviously intended. However it contains almost twice as much iron as cow's milk and forty times as

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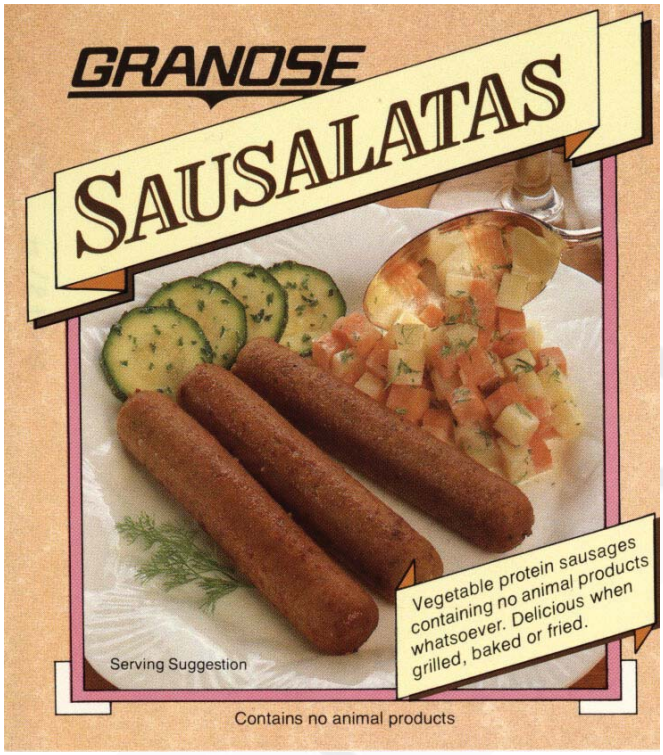
much copper.

A black-and-white photo shows a can of Kreme O'Soy. The text reads: "A tasty milk-like drink. Homogenized. Shake well." Two large photos show healthy babies raised on Kreme O'Soy. A table compares the composition of Kreme O'Soy, human milk, and cow's milk. A list of ingredients is given on p. 4: Soybeans, soy oil, dextrose, calcium phosphate, and sodium chloride.

1135. **Product Name:** Granose Sausalatas (Meatless Sausages Canned in Brine) [Plain, or Smoked].
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1948.
Wt/Vol., Packaging, Price: Can.



New Product–Documentation: *The British Vegetarian.* 1960. Sept/Oct. p. 249. Granose makes Sausalatas, which contain wheat protein, mixed nuts, rusk, wholemeal flour, vegetable oils, yeast extract, onion, and seasoning.

Manufacturer's catalog. 1980. April.

By 1980 the product had been reformulated to include textured soy flour.

1136. **Product Name:** Miller's Vegetarian Cutletburger [Regular, or Smokene Flavors].
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: P.O. Box 388, Mt. Vernon, Ohio.
Date of Introduction: 1948.
Ingredients: Incl. wheat gluten.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Soybean Blue Book. 1948. p. 84. Ad in *Soybean Digest.* 1949. Aug. "Miller's Cutletburger for Picnics, Too!" This canned product is sold in Regular and Smokene flavors. Note: The product is gluten-based. Smokene was apparently derived from T.A. Van Gundy's Smoein. This is the earliest document seen that mentions "Smokene."

1137. **Product Name:** Loma Linda Soyagen. Soy Beverage Powder for Adults [Liquid, or Powdered; All-Purpose/Plain, Malt, or Carob].
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: 11503 Pierce Place, Arlington, California. Phone: 714-687-7800 (3/88).
Date of Introduction: 1948.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable.
New Product–Documentation: Today's Food. 1964. Autumn. p. 5; All purpose or malt available. Today's Food. 1966. Carob flavor now available; Wholesale price list. 1968. Soyagen Liquid sold in 17 oz. and 30 oz. cans for $0.36 and $0.42 retail respectively. Powder sold in 1 lb or 4 lb cans for $1.05 or $3.61 retail respectively. Label for a can, 8 by 10 inches, color. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. "Vitamin & Mineral Fortified." Ad (full page, color) in Bestways. 1988. March. p. 11. "Soyagen. Good-tasting and so good for you too." Available in 3 flavors–All purpose; no-sucrose (with no cane or beet sugar), and carob. Photos show cans.

Burnett (1951, p. 998) notes that a 1948 label for liquid canned Soyagen, made by Loma Linda Food Co., gave the following composition: Water 88.6%, protein 3.03%, fat 3.48%, carbohydrates 4.53%, ash 0.36%. Vitamins (all in units per liquid quart): vitamin A 2000 USP, thiamine 500 mcg (micrograms), riboflavin 1000 mcg, vitamin D 500 USP. More sophisticated versions of the same product with the same name appeared in 1963 (All Purpose), 1965 (Carob flavor), and 1977 (Plain).

1138. Smith, Allan K. 1949. Oriental use of soybeans as food: Notes on Oriental farming practices. II. China. *Soybean Digest.* March. p. 26-28, 30, 32, 34.
• ***Summary:*** Contents: Soy sauce in China. Sweet flour paste–Tien Mien Chang [Chiang]. Soy or vegetable milk (incl. Willis Miller, yuba). Soybean curd or tofu (incl. use in Buddhist restaurants to look like meat, poultry, or fish dishes).

Soybean cheese [fermented tofu]. Fen-t'iao from mung beans (vermicelli). Fermented soybeans [fermented black soybeans] (made from small black soybeans). Vinegar fermentation process.

Concerning soy milk: "The Chinese National government has taken an active interest in soy milk for

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use by its army, Willis Miller, with offices and business connections in the Henningsen Produce Co. in the Dollar Building at 51 Canton Road, Shanghai, has just completed building a soy milk plant for the Chinese government. The process is patterned after that of the International Nutritional Laboratories [Dr. Harry W. Miller] at Mt. Vernon, Ohio, for making a powdered or spray-dried milk. Mr. Miller is also supervising the installation of a vegetable canning plant for the same purpose." Address: Northern Regional Research Lab., Peoria, Illinois.

1139. Manners, Marian. 1949. Day made better by good breakfast: Vigor for fatigue. *Los Angeles Times.* May 9. p. B4.
• ***Summary:*** Contains a recipe for Corn-soy nut bread (with 1 cup corn soy shreds, and ½ cup broken nuts).

Note: Kellogg's Corn Soya Shreds (a breakfast cereal) was launched in 1945.

1140. *Madison Health Messenger* (*Madison, Tennessee*). 1949. Summer foods for health. Vol. 49-2. p. 1-3. Undated.
• ***Summary:*** Note: This issue of the *Madison Health Messenger* is smaller than its predecessors–only 20 cm (vs. 28 cm) tall but still 6 pages. Some recipes are featured–as for Zoyburgers. New products include Yum (made from soybeans, gluten, and soy cheese [tofu]) and Bite-Size Stake-Lets (made from gluten and soybeans). A chemical analysis of 8 Madison products is given.

1141. **Product Name:** Miller's Vegetable Cheese.
Manufacturer's Name: International Nutrition Laboratory.
Manufacturer's Address: P.O. Box 388, Mt. Vernon, Ohio.
Date of Introduction: 1949 August.
New Product–Documentation: Ad in *Soybean Digest.* 1949. Aug. "Miller's Cutletburger for Picnics, Too!" A photo shows a can of Miller's Vegetable Cheese.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Vegetable Cheese (the brand "Miller's" is not shown) contains 11.50% protein, ?% fat, and 12.10% carbohydrate. Not listed in the 1965 *Diet Manual.*

1142. Madison Foods 1949. Madison Foods featured recipes (Leaflet). Madison College, Tennessee. 2 panels each side. Each panel: 22 x 14 cm. Undated.
• ***Summary:*** "For real eating pleasure–Nu-Steak–Vegetarian." On the cover is a photo of a table setting with roses in a vase, food on 3 plates, a napkin and glass. On page 2-3 are recipes for using Madison Foods, which include: Nu-Steak or Steak-Lets. Mock Chicken. Madison Burger. Not-Meat. Cheze-O-Soy (tofu). Zoyburger. On page 4 are descriptions of 11 Madison Foods Products" Zoy Koff, Nu-Steak, Madison Burge4, Mock Chicken (all gluten chunks), Sandwich Loaf, Stake-Lets, Cheze-O-Soy, Not-Meat (with

TYPICAL ANALYSIS

	Calories Per Ounce	Protein	Fat	Carbo-hydrates	Ash
Zoy Koff Liquid 1 6-oz. cup	.1	.08	.004	.98	.12
Zoyburger	46.0	16.1	5.9	11.7	2.5
Stake-Lets	24.0	8.4	0.6	11.2	1.7
Not-Meat	76.0	15.5	18.8	9.0	3.0
Vigorost	52.0	12.7	8.0	15.6	2.8
Yum	46.0	18.6	5.9	9.2	2.8
Chez-O-Soy	59.0	15.2	16.0	1.2	2.6
Mock Chicken	19.0	11.1	0.5	4.6	1.1
Nu-Steak	30.0	11.7	4.4	4.2	1.2
Sandwich Loaf	59.0	14.5	8.5	18.0	3.1
Madison Burger	19.0	11.1	.05	4.6	1.1

peanuts ground to a meal, soy grits, and seasoning), Yum, Zoyburger, and Vigorost.

A table gives a nutritional analysis of each.

1143. International Nutrition Laboratory, Inc. 1949. Milk-equivalent nutrition for the whole family: The only spray-dried soya milk (Ad). *Soybean Digest.* Sept. p. 89.
• ***Summary:*** See two pages after next. A 2/3-page vertical ad. A large photo near the top shows cans of Miller's Soyalac Soya Milk (Spray Dried) in All Purpose and Malt Flavors and a can of Soyalac Infant Food.

The text reads: "Scoring again, the Soybean brings everyone, everywhere a delicious, palatable drink equaling cow's milk in nourishing qualities. This spray-dried all-vegetable milk is Different from liquid soy milks and is the only one which has been granted a U.S. Patent. It is an excellent, non-allergic protein beverage for the entire family. Available in two distinct flavors to suit most tastes–All-Purpose and Malt Flavor."

Note: This is the earliest English-language document seen (Aug. 2013) that contains the term "protein beverage," which probably refers to soy milk.

"Miller's Soyalac is thoroughly processed by being atomized into a sterilized chamber resulting in a quickly soluble powdered milk. Best of all it is easily digested because it forms a soft, fine curd in the stomach which speeds up absorption, giving fast fatigue-relief.

"Infant Food–Choice of doctors who know! Non-allergic and quickly assimilated by the most sensitive baby's stomach, Soyalac Infant Food assures the baby of healthy growth and balanced development. It is vacuum-packed and fortified with essential elements and vitamins. Babies love it–and thrive on it!

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MADISON FOODS

Featured Recipes

For Real Eating Pleasure — NU-STEAK

Vegetarian

MADISON FOODS

Madison College, Tenn.

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DESCRIPTION— INGREDIENTS

ZOY-KOFF—A coffee alternate used in place of coffee. Contains no coffee—no nerve stimulants. Two grinds—regular and fine. Prepare like coffee. Ingredients—soybeans, bran and molasses. Packed in 1-lb. paper bags.

NU-STEAK—An all-gluten vegetarian steak. So easily prepared. Uniform in size. Special process makes it one of the best. You will be delighted with its texture and flavor. Ingredients —Wheat glutten in tastily seasoned broth.

MADISON BURGER—This tender burger textured product is already a favorite with many. Can be used to form the base for so many of the Vegetarian protein dishes. Make your own Meat Balls—vegetarian—easily prepared and economical. Ingredients—processed Wheat gluten ground to burger texture, tastily seasoned.

MOCK CHICKEN—These all-gluten chunks with a distinct seasoning will surprise you. Can be fixed in a variety of ways—see recipes on can label. Ingredients—Wheat gluten in seasoned sauce.

SANDWICH LOAF—A tasty loaf, easily sliced. Ideal for sandwiches. Ingredients—Wheat gluten, garbanzos and seasoning.

STAKE-LETS—A combination of wheat gluten, whole wheat and soy flour prepared in meat-like sauce. These vegetarian steaks, uniform in size, are easily prepared. Ingredients—Wheat gluten, whole wheat and soy flour and seasoning.

CHEZE-O-SOY—An excellent diabetic food, low in carbohydrates. Nice for sandwiches and salads. Ingredients—processed soy beans, nicely seasoned.

NOT-MEAT—A smooth-textured loaf. This is well liked by many. Ingredients—peanuts ground into meal, soy grits, and seasoning.

YUM ZOYBURGER VIGOROST. These three high-protein foods are excellent body builders. Each has its distinct flavor. A favorite with many for years. Can be prepared in many ways to simulate meat. Ingredients—Wheat gluten, processed soy beans, peanuts, garbanzos, and seasoning.

TYPICAL ANALYSIS

	Calories Per Ounce	Protein	Fat	Carbohydrates	Ash
Zoy Koff Liquid 1 6-oz. cup	.1	.08	.004	.98	.12
Zoyburger	46.0	16.1	5.9	11.7	2.5
Stake-Lets	24.0	8.4	0.6	11.2	1.7
Not-Meat	76.0	15.5	18.8	9.0	3.0
Vigorost	52.0	12.7	8.0	15.6	2.8
Yum	46.0	18.6	5.9	9.2	2.8
Chez-O-Soy	59.0	15.2	16.0	1.2	2.6
Mock Chicken	19.0	11.1	0.5	4.6	1.1
Nu-Steak	30.0	11.7	4.4	4.2	1.2
Sandwich Loaf	59.0	14.5	8.5	18.0	3.1
Madison Burger	19.0	11.1	.05	4.6	1.1

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"Other Soya Bean Products we pack include: Green Soya Beans, Giant Select Soya Beans, Soya Beans in Tomato Sauce, Sandwich Spread and Vegetable Cheese."

A small illustration (line drawing) shows the outside of the plant in Mt. Vernon, Ohio. Address: Mt. Vernon, Ohio, Manila [Philippines], Shanghai [China].

1144. *Madison Health Messenger* (*Madison, Tennessee*). 1949. The story of Madison Foods. Vol. 49-3. p. 1-6. Undated.

• ***Summary:*** See next page. "Over 45 years ago [actually in 1904] a group of educators founded an institution in Madison, Tennessee, where special study was given to healthful living. They began by operating a school on a farm. Later a sanitarium was built. And, finally, a food production department was opened, now known as Madison Foods... People who came to the sanitarium were helped by the treatments and the plain wholesome food. However, because when they returned to their homes, they were unable to obtain some of the foods which proved helpful, many sent their orders to us for these foods. The popularity of the foods increased and now they are available in many stores throughout the 48 States."

"In 1941 a building program was started to completely rebuild the Madison Foods plant on the original site. Modern offices, adequate storage and shipping facilities, a five story production section, complete revamping of processing equipment, and a re-arrangement of the plant were realized step by step, and now the Madison Food plant, built of concrete, blocks, and steel, with tile and plastered interior, and a building of modern design for greater efficiency, stands as a monument to the devotion of its founders and the perseverance of those who carried the torch onward.

"A character builder: As part of the vocational training program at Madison College, Madison Foods is primarily concerned with building strong physical bodies and strong minds."

Photos show: (1) East side view of the new Madison Foods plant. (2) A can (with label) of Stake-Lets (the original gluten-soy product, a complete protein food, sold in 14, 20, and 30 oz sizes). (3) A young man standing next to a large autoclave used for cooking canned foods. (4) Four young ladies hand picking peanuts to insure quality. (5) Front view of the new Madison Foods plant ranging from 2 to 5 stories in height. (6) A can of Yum (14 oz, made with grains, legumes, and vegetables). (7) A young man operating an homogenizer that is homogenizing Kreme O'Soy. (8) A student operating a machine that is labeling cans.

Page 5 contains a description of the various products, with their ingredients, made by Madison Foods: Zoy-Koff–

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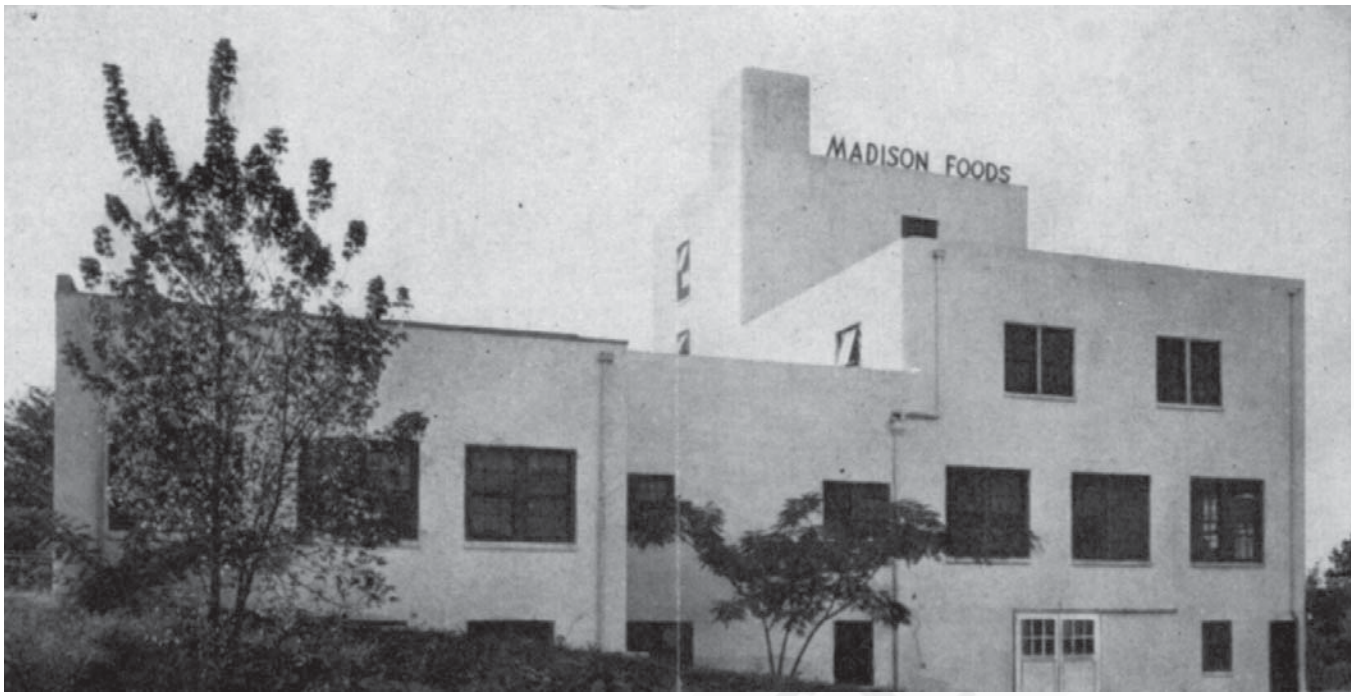

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an alkaline beverage used in place of coffee. Contains no coffee–no nerve stimulants. Two grinds–regular and fine. Prepare like coffee. Ingredients: Soybeans, bran, brown sugar. 1 lb bag.

Kreme O'Soy–a rich-bodied, homogenized soy beverage. May be used in place of milk. Ingredients: Soybeans, soy oil, dextrose, calcium phosphate, sodium chloride. 20 oz cans.

Zoyburger–excellent for sandwich spread, serve like steak with onions. Ingredients: Soybeans, gluten, raw peanut meal, vegetable seasonings. 14 & 20 oz cans.

Stake-Lets–a combination of gluten and soybeans sliced in meatlike sauce. Ingredients: Gluten, soybeans, soy sauce, seasonings. 14, 20 & 30 oz cans.

Not-Meat–a smooth-textured loaf for vegetable roasts, salads, sandwiches, etc. Ingredients: Whole peanut meal, soybeans, and seasonings. 14 & 20 oz cans.

Vigorost–a fibrous-textured vegetable steak used like meat. Also for sandwiches, salads, etc. Ingredients: Gluten, soy cheese, whole peanut meal, seasonings. 14 & 20 oz cans.

Yum–a mild bologna-like-flavored, meatless loaf, used hot or cold. Ingredients: Soybeans, gluten, soy cheese, whole peanut meal, seasonings.

Cheze-O-Soy–a curd made from soybean milk, to be used in salads, sandwiches, spaghetti, etc. Ingredients: Coagulated soybean proteins, seasonings. 14 & 20 oz cans.

Bite-Size Stake-Lets–gluten and soy bits in rich sauce simulating stewed bits of beef in rich gravy. A choice food. 20 oz cans.

"A statement of ingredients, use and recipes is on each package and can of Madison Foods."

1145. *Vegetarian News Digest* (*Los Angeles*). 1949. Vegetarian questionnaire. 1(10):14. Nov/Dec.
• ***Summary:*** Dr. M.G. Hardinge, assistant professor at the College of Medical Evangelists, Loma Linda, California, seeks vegetarians for his study.

1146. **Product Name:** Loma Linda Nuteena (Meatless Luncheon Loaf or Cold Cuts Prepared from Raw, Ground Peanut Butter and Soy Flour).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1949.
Ingredients: In 1971: Water, peanut meal, 100% wheat meal, soy flour, salt, yeast extract, onion, MSG, lepine, celery extractives.
Wt/Vol., Packaging, Price: 19 oz (538 gm) can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: 1988: Per ½ inch slice (2.4 oz–67 gm): Calories 160, protein 8 gm, carbohydrate 5 gm, fat 12 gm, cholesterol 0 mg, sodium 120 mg, potassium 200 mg.
New Product–Documentation: Loma Linda University, School of Dietetics. 1949. *Lesson Outlines in Nutrition & Cookery.* 2nd ed. Mountain View, California: Pacific Press Publishing Assoc. p. 119. Gives the nutritional composition of the product.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Nuteena contains 11.99% protein, 13.85% fat, and 11.00% carbohydrate.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. Lists the ingredients in "Nuteena (Loma Linda)."

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned peanut product resembling cold cuts. Can also be used in salads or sandwiches.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Nuteena (Loma Linda)" are "peanut meal, soy flour, corn flour, rice flour, dried yeast, salt, yeast extract, HVP, malt extract, L-lysine, DL methionine, celery extractives." Water, raw peanut butter, soy flour, rice flour, corn flour, natural (vegetable) flavors, salt, onion powder, L-lysine, DL-methionine, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).

1147. **Product Name:** Loma Linda Proteena (Meatless Peanut or Gluten Loaf or Cold Cuts).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1949.
Wt/Vol., Packaging, Price: 20 oz (567 gm) can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Loma Linda University, School of Dietetics. 1949. *Lesson Outlines in Nutrition & Cookery.* 2nd ed. Mountain View, California: Pacific Press Publishing Assoc. p. 119. Gives the nutritional composition of the product.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Proteena contains 19.06% protein, 8.00% fat, and 29.50% carbohydrate. See also 1971 version, which contains soy flour.

Patricia H. Black and Ruth L. Carey. 1971. *Vegetarian Cookery.* 5 vols. This set of vegetarian cookbooks contains numerous recipes calling for "Proteena" which is sold in 14 oz cans.

1148. **Product Name:** Vegemeat Burger (or Vegemeatburger).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, California.
Date of Introduction: 1949.
New Product–Documentation: Loma Linda University,

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School of Dietetics. 1949. *Lesson Outlines in Nutrition & Cookery.* 2nd ed. Mountain View, California: Pacific Press Publishing Assoc. p. 119. Gives the nutritional composition of the product.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Vegemeatburger contains 17.10% protein, ?% fat, and 6.50% carbohydrate. Not listed in the 1965 *Diet Manual.*

Talk with Warren Hartman, who worked for Worthington Foods since early 1946. 1992. Nov. 5. He thinks that this product was made by Loma Linda Foods.

1149. **Product Name:** Vegemeat Steaks.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, California.
Date of Introduction: 1949.
New Product–Documentation: Loma Linda University, School of Dietetics. 1949. *Lesson Outlines in Nutrition & Cookery.* 2nd ed. Mountain View, California: Pacific Press Publishing Assoc. p. 119. Gives the nutritional composition of the product.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Vegemeat Steaks contain 13.80% protein, ?% fat, and 85.40% carbohydrate. Not listed in the 1965 *Diet Manual.*

Talk with Warren Hartman, who worked for Worthington Foods since early 1946. 1992. Nov. 5. He thinks that this product was made by Loma Linda Foods.

1150. **Product Name:** Soyloin Steaks (Meatless).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 2-2539.
Date of Introduction: 1949.
Ingredients: Incl. gluten, defatted soy grits or flakes.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Wholesale price list. 1950. July 31.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Soyloin Steaks contain 16.70% protein, 0.10% fat, and 5.95% carbohydrate. Not listed in the 1965 *Diet Manual.*

Letter from Allan Buller. 1981. Made by mixing ground gluten pieces not suitable for Choplets with defatted soy grits or flakes, then reshaping the mixture into patties. Sold in 19-oz. cans.

1151. **Product Name:** Wieners (Meatless; Renamed Veja-Links in 1954).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 2-2539.
Date of Introduction: 1949.
Wt/Vol., Packaging, Price: Canned.
New Product–Documentation: Wholesale price list. 1950; July 31. Letter from Allan Buller. 1981. April 29. Made of wheat gluten with soy flour or grits to complement the former's very low quality protein and to work as a filling and binding agent.

Ziemba. 1966. Food Engineering. May. p. 82-93. "Let soy proteins work wonders for you." Photo of package. American Soybean Assoc. 1974? "Soybeans: From America's fertile soils the world's versatile protein resource." A photo shows a can and a flat pack of Veja-Links.

1152. Loma Linda University, School of Dietetics. 1949. Lesson outlines in nutrition & cookery. 2nd ed. Mountain View, California; Brookfield, Illinois; Cristobal, Canal Zone; Omaha, Nebraska; Portland, Oregon: Pacific Press Publishing Assoc. 128 p. 20 cm. [13 ref]
• ***Summary:*** "Foreword: The purpose of this little book is to serve as a guide in the study of simple facts about nutrition and healthful cookery, primarily prepared to be used in community nutrition classes." The guidelines, in outline format, are also helpful in teaching the principles of healthful vegetarian nutrition and cookery.

Also discusses: Soybeans as a good source of high quality protein (p. 29). The meatless diet: Meat is not a nutritional necessity, disadvantages of flesh foods (animals are diseased; rich in nitrogenous waste products, which kidneys must eliminate. These act as a stimulant; poor source of most vitamins and calcium; expensive), importance of knowing how to make proper substitution when discontinuing a meat diet, protein content of average servings of some [non-flesh] foods (including soybeans) (p. 31-33). Homemade Vegex (with ½ pint soya sauce, p. 113). Protein foods (gives the composition of soybeans, p. 118). Loma Linda Foods (nutritional composition of their commercial products; Vegemeat Burger, Vegemeat Steaks, Nuteena, Proteena, Peanut butter, Vegex; p. 119). Calcium content of foods (incl. turnip greens, mustard greens, soy bean curd, kale, dry soybeans; p. 120). Iron content of foods (incl. mustard greens, soybean curd). Address: Loma Linda, California.

1153. Stevens, Henry Bailey. 1949. The recovery of culture. Ashingdon & Rochford, England: C.W. Daniel Co.; New York, NY: Harper & Brothers. xvii + 247 p. Illust. 22 cm.
• ***Summary:*** A trailblazing work about factory farming, and a cultural and social history that explains how humans became a meat-eating and war-waging species. Also discusses the role of fruit in human culture, and fruitarianism, Swedenborg, Johnny Appleseed, Tolstoy, Richard Wagner, Albert Schweitzer, Shelley, Gandhi, Bernard Shaw, John Harvey Kellogg (p. 158-64). The author was born in 1891.

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1154. *Soybean Digest.* 1950. Grits and flakes... from the world of soy: Kellogg Co., Battle Creek, Michigan, is plugging the protein content of its cereal, "Corn-Soya,"... April. p. 40.
• ***Summary:*** "... in an advertising campaign in national circulation magazines."

1155. Worthington Foods, Inc. 1950. Wholesale price list and order blank. Worthington, Ohio. 1 p. July 31.
• ***Summary:*** Products include: Beta Broth. Tastex. Soy sauce. Tastex food yeast. Lacto-psyllium. Protein foods (Alternates for meat): Soyloin Steaks. Meatless Wieners. Choplets. Choplet Burger. Proast. Numete. Veelets.

Worthington breading meal. Sav-Ree brown gravy. Honey bear peanut butter. Kel-jel.

Note: A wholesale price list dated 10 Dec. 1950 shows that Worthington was selling the following line of Miller's Foods products (purchased from Harry W. Miller of Mt. Vernon, Ohio): Miller's Cutlets, Miller's Cutlet Burger (regular and smoke flavors), Vegetable Stew.

Note: This is the English-language document seen (Jan. 2007) that contains the term "Cutlet Burger" (or "Cutlet Burgers"). Address: Worthington, Ohio.

1156. Kellogg Co. 1950. Sweetheart of a breakfast! Extra nourishing! Extra good! And the freshest Corn Flakes of all! (Ad). *Life.* Oct. 16. p. 25.
• ***Summary:*** See next page. This full-page color ad in prestigious *Life* magazine shows a large bowl of Kellogg's Corn Flakes, topped with grated coconut and a cherry. Above it is a small box of Kellogg's Corn Flakes. Behind that, in shades of tan, appears the head and shoulders of a lovely girl in a checkered bonnet standing in a field among ears of corn. Below the bowl, in the lower left corner, is a smiling man holding a variety pack–a choice of 7 favorite Kellogg's cereal in 10 small cartons. One of these is Kellogg's Corn Soya Shreds. Others include Rice Krispies, Shredded Wheat, and Pep.

Note: Thanks to Paul and Gail King of The Soy Fan Club's Drive-in for sending this attractive ad. Address: Battle Creek, Michigan.

1157. *Soybean Digest.* 1950. Kellogg's Corn-Soya on countless U.S. tables. Oct. p. 16-17.
• ***Summary:*** "Soy is now a valued ingredient in a surprising number of products. This article is the first in a series by the Soya Food Research Council."

The story of this breakfast cereal goes back some 35 years when W.K. Kellogg, a developer of food products, began studying the soybean firsthand in the Orient. "As he filled his notebooks, he also raked the broad stretches of China for different varieties of soybeans for experimental growing on the Kellogg farm." He later declared his cereal to be "richer in protein than any other well-known cereal."

By 1945 a product was developed that passed all Kellogg's quality tests. "In the next 18 months it was subjected to sales testing in California and selected eastern markets. National distribution was completed in 1947. To date Corn-Soya has earned itself a very loyal following with a fairly large percentage of American families."

Photos show: (1) A woman weighing cases of Kellogg's Corn-Soya Shreds on a roller conveyor before they leave the factory. (2) Shredding machines used in the Corn Soya processing line.

1158. *Madison Health Messenger* (*Madison, Tennessee*). 1950. List of Madison Foods. Vol. 50-1. p. 1. Undated.
• ***Summary:*** Eight products are listed. The Messenger has now shrunk to one side of a half sheet of paper. We can date this issue in two ways. In the upper right hand corner the following is typed: "You are cordially invited to attend the special demonstration of Madison Foods in the Cafeteria, Tuesday November 21, 11:45 to 6:30. Premiums will be on display and free samples will be offered." "Special premium offer on reverse side." These premiums are gifts that can be obtained for money + labels. For example an Eskimo Whiz-Mix blender ($39 value) is available for $17.50 + 24 labels.

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SWEETHEART of a breakfast!

Extra nourishing! Extra good! And the freshest Corn Flakes of all!

Ready in 2 shakes

A delicious hearty breakfast main dish!

Shake in . . . **Kellogg's Corn Flakes**
Shake on . . . **shredded coconut**
Trimmings . . . **maraschino cherry**
or . . . **dab of jelly or jam**
P.S. *Nothing to cook and mighty nourishing!*

Save-you suggestion: A "breakfast supply shelf" in a handy location—to keep cereals, jams, canned juices, coffee together. Saves time and trit-trot!

• • •

Enjoys tour. Mrs. June Regnier of Salem, Mass. is a bacteriologist (and now the bride of a physician). After her trip through the Kellogg plant, she writes, "My, you people are perfect housekeepers . . . a spotless factory!"

• • •

No breakfast is no-go for losing weight, says *Reader's Digest* reporting on tests with women university students. And the *hidden hunger* caused by skipping breakfast causes tired mind, body and nerves. You look better and feel better on a nourishing breakfast!

• • •

Mother! On the breakfast table, set up a tray with sugar bowl, salt 'n' pepper, silver, paper napkins. Spin-the-tray service helps everybody help himself!

• • •

Tops for topping. "For an extra-crisp top, bake lots of Kellogg's Corn Flakes on Tuna-Mushroom Casserole! My 3 children love it!" suggests Mrs. Bernice L. Brecke of Minneapolis, Minn. P.S. Marvelous on macaroni-and-cheese or any creamy-type baked dish!

• • •

No duds in Kellogg's VARIETY PACK. Your pick of 7 real favorites! And 9 out of the 10 boxes are Kel-Bowl-Pacs, which kids love to eat out of!

• • •

"Signature" Silverware goes with her sterling! "Harmonizes so beautifully, I want *more!*" writes Mrs. Betty Seemann of Whittier, Calif.

BEGIN THIS LOVELY SET—
your initial on each piece!
Get 4 "Signature" teaspoons of heavy silverplate for only 75¢ and *white-star end* from Kellogg's VARIETY. Package-insert describes offer. With teaspoons, you get a list of matching pieces and prices. Start your set now!

Sing a song of breakfast,
Of corn and rice and wheat—
Crispy packs of nourishment,
And all so good to eat!

10-box choice of 7 cereal favorites

Kellogg's Mother knows Best!

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It will be available after 1 Jan. 1951.

1159. *Soybean Digest.* 1950. Soy foods from a unique college [Madison]: This little Tennessee college has long been noted for its soy foods. Nov. p. 14-15.

• ***Summary:*** This is the second in a series of articles by the Soya Food Research Council. Photos show: (1) "Attractive packaging of soy foods which have been pioneered by Madison College." These include: Kreme O'Soy (sliced bread), Stake-Lets, Kreme O'Soy (canned soymilk), Cheeze-O-Soy, Zoy-Koff, Yum, Not-Meat, Zoyburger, Vigorost, Kreme O'Soy Muffins. (2) Dr. E.A. Sutherland, standing, writing in a notebook. (3) A young man operating an homogenizer that is homogenizing Kreme O'Soy.

"Down in Tennessee nearly a half century ago Dr. E.A. Sutherland was obsessed with an irrepressible idea. He believed that any boy or girl willing to work for a college education should not be denied the right. He set out to achieve that end and succeeded against overwhelming odds.

"Madison College, at that time styled Nashville Agricultural Normal Institute, had only these assets: 11 students, some tumbled down buildings, and 400 acres of tired, soil-depleted land. Those acres had been bought by Dr. Sutherland and a small group of teachers with their last dollars.

"Today Madison College at Madison, Tennessee, has 4O0 students from 40 odd states and many foreign lands. Without endowment, as such for operating expenses, it has poured almost a million dollars from its own earnings into buildings, lands and farm equipment. Down south it is referred to as 'the college with a soul.'

"Soy Spotlighted: Of course Madison College lacks some of the gay social activities and other distractions that drain time and energy of students in many big-name institutions of learning. But students at Madison enjoy life. They are a determined lot, dead set on acquiring an education. The curriculum includes a variety of campus industries, in which students cooperate to support the college and themselves. Soy has a spot-lighted place in the over-all program.

"Under the Madison plan as set up by Dr. Sutherland every student must work for at least half, and

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preferably all of his academic expenses. Two-thirds of the students enter the college with only the required fee of $50. They complete a 4-year college course for a B.S. degree and may graduate with the original deposit intact. In all that time the efficient hard-working student need receive no outside help. Moreover, he will leave the college well equipped to do more than a single job.

"Before launching his experiments at Madison, busy Dr. Sutherland had been president of two colleges. At the outset his chief problem was to provide an income for the new school. This he did by farming and establishing a sanitarium. This permitted the training of health workers as well as the care of ill students. To do the job right, he discovered, he should be fully qualified as a medical scientist. He had set a rugged course for his students–they work 5 hours and study 5 hours a day the year round–and he was even less considerate of his own schedule. On top of all other duties he studied medicine for 4 years at Vanderbilt University Medical School and the University of Tennessee Medical School and finally, at the age of 50, received his M.D. It is inspiring today to go through the Madison Rural Sanitarium and Hospital with its large staff of physicians, its patient capacity of 165 and its complete modern medical equipment. Much of the work of the institution is done by students who earn while they learn. The best hospitals snap up the graduate nurses. Many of its students have matriculated in medical schools, colleges and universities and have been awarded Baccalaureate, Masters, and Doctorate degrees.

"Of the foresighted Dr. Sutherland it has been said: 'In any field, in any land, he would have been a great success.'

"By Student Effort: His enthusiasm and determination were infectious. That helps explain how the many college and sanitarium buildings, cottages and dormitories on the 900-acre grounds have been built with students supplying much of the brawn and brain; how the biology class grows many of its excellent specimens; how physics students have built much of their own equipment; and why there are more student applicants than can be admitted.

"Madison is justly proud of its school farm, which is as important economically as its Sanitarium, with its sprawling acres of gardens, fruit trees, vineyards, its greenhouses of flowers for hospital rooms, and its fine dairy.

"Madison is also noted for its 27 years of practical research in special foods development. This research has distinguished the institution as a unique center and pioneer of soy food development primarily intended for human use.

"Long ago it became evident that the new foods being fashioned at Madison–where good health and strong bodies always have been a chief aim–were too useful to be confined to campus menus. Accordingly, Madison Foods was founded, and has grown steadily over the years.

"It came about in this way. Dr. Sutherland and his associates believed in a simple life. They were convinced that plain wholesome foods–such as whole wheat bread and whole grain cereals, fresh fruits and vegetables, nuts, dates, honey and soy protein–helped patients to early recovery and contributed to permanent good health. Many of these patients, after returning to their homes, ordered these foods in ever-increasing volume. Demand grew until it became necessary to put them into retail stores and now they may be purchased in all 48 states.

"Convinced long ago of the high nutritive value of soy protein, Madison food chemists experimented with more than 200 varieties of soybeans. They solved the taste factors, and went on with the creation of savory breakfast foods, bread, coffee substitutes, soy milk, various meat substitutes, and other products.

"Through measured scientific research they developed soy milk until now it is not only as economical as special formula cow's milk but, according to the American Medical Association Journal, better for some babies. From Africa, India, and other countries where dairy cows and cattle are scarce, observers have come to study the methods of Madison's soy milk 'dairy' and its 'vegetarian slaughter house.'

"Today many authorities believe that a properly prepared dry soy milk powder would help to solve the child feeding problems in protein-starved nations of the Orient and in Latin-American countries, and research to that end is in progress.

"More Frontiers: Food scientists at Madison, dipping deeper and deeper into the protein mysteries of the soybean, are convinced that new frontiers will be pierced, and that the astonishing progress already made is but a prelude to a much greater future.

"Meantime, 85-year-old Dr. Sutherland, the man who made a dream come true, has lightened his daily load, but still carries on many duties. He is president of the Layman Foundation, member of the board of directors of Madison College and of a half dozen other rural schools in the South which he was instrumental in developing.

"In Dixieland they say 'the college with a soul' is but the lengthened shadow of a great man, a man with the courage to fight for an ideal."

1160. **Product Name:** Lange's Chops.
Manufacturer's Name: Lange Foods.
Manufacturer's Address: Portland, Oregon.
Date of Introduction: 1950.
Ingredients: Incl. wheat gluten.
New Product–Documentation: Talk with Mr. Lange. 1981. This private company was in business from 1960 to 1968 in Portland, Oregon. Mr. Lange was a Seventh-day Adventist, and it was a one-man operation making Lange's Chops, Lange Breakfast Style Vegetable Links, and other gluten-based meatlike products, which contained little soy. In 1968 the food production business was sold to Cedar Lake, although it was still a wholesale food distributor in 1981.

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By 1971 the manufacturer of the former Lange products was "Nu Vita."

1161. **Product Name:** Wheat & Soy Muffin Mix.
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1950.

1162. Kellogg Co. 1950. Kellogg's Corn Soya Shreds "for a fine body." Corn–For flavor and energy. Soya–For body-building protein (Leaflet). Battle Creek, Michigan. 2 p. 36 x 27 cm.

• ***Summary:*** This oversized leaflet follows a question and answer format as follows: (1) "How many years of research were spent on the Corn-Soya Shreds formula?" They began in 1930 and by 1941 a satisfactory product was formulated. Three years later the product was perfected.

(2) "How were Kellogg's Corn-Soya Shreds tested for consumer acceptance?" "In July 1944, a test campaign was carried on for nine months in four towns situated in various parts of the United States. In two of the towns the product was marketed under the name of Maizoy, and in the other two towns under Corn-Soya. This was done to determine which name was suitable and popular. Extensive research indicated that the name Corn-Soya was preferable."

(3) "When did Corn-Soya Shreds go into production?" In 1945. National marketing started in California and moved eastward, and in Florida, moving northward as permitted.

(4) "How was Corn-Soya introduced?" "Before Corn-Soya was introduced into a territory and shipments of the product were made into that area, a series of 'teaser' cards was mailed to the grocers in the region, preparing them for the new product. After the product was placed on the shelves of the retail stores, billboard, newspaper and radio spot advertising on Corn-Soya Shreds was released. In addition, Corn-Soya samples were sent by mail to all homes in the area. It took over a year to complete distribution from California to Michigan, and from Florida to the Mason-Dixon Line. National distribution was accomplished during the latter part of 1948."

(5) "What is the present position of Corn-Soya Shreds?" "Both the distribution in stores and the consumer acceptance throughout the nation on Corn-Soya are good..."

(6) "How are Corn-Soya Shreds made?" By "blending corn grits and soya flakes." "The mixture is combined with a special Kellogg malt flavoring, sugar and salt, and is cooked approximately an hour under steam pressure, then dried, and run through grooved rolls to form shreds. The shreds are toasted the same as flaked cereals."

(7) "How do Corn-Soya Shreds differ from other ready-to-eat cereals?" They offer unique flavor and nourishment, making them "the body-building cereal."

(8) "What are the nutritional values of Kellogg's Corn-Soya Shreds?" "They contain 18% protein–more than any other cereal. Protein is the building material needed for growth and replacement of human tissue. They are also restored to whole grain levels by the addition of Vitamin B_1 (thiamine), niacin and iron as recommended by the U.S. Official Nutrition Food Rules."

(9) "What are cookery uses for Corn-Soya?" They are "delicious as a cooking ingredient in meat loaves, muffins, cookies, candies, and cake toppings; sprinkled over casserole dishes; buttered and toasted to serve with chop suey or rabbits; or crushed into crumbs for coating fish, chops and croquettes."

(10) How are Corn-Soya Shreds advertised?" "By television, newspaper, and magazine, all of which are pointed to the consumer–selling Kellogg's Corn-Soya Shreds as 'the body-building' cereal. Also there are attractive display pieces to help achieve the greatest point-of-sale elevation in all stores." Photos show: (1) A 1950 package and bowl of Corn-Soya Shreds on a dining table. (2) A small 1946 package of Corn-Soya Shreds against a background of shreds. (3) Two machines that are Corn-Soya shredding mills; each is manned by a worker. In the right background is a dryer

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which dries the cooked material preparatory to shredding. (4) A man tending the control panel of the Corn-Soya toasting oven. (5) A woman standing by a roller conveyor and scale weighing cases of Corn-Soya.

Location: Archives, Kellogg USA Inc., Battle Creek, Michigan. Note: This is the earliest commercial soy product seen (Oct. 2001) that was advertised on television. Address: Battle Creek, Michigan.

1163. **Product Name:** Loma Linda Soyalac Infant Powder (Soy-Based Infant Formula).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce Place, Arlington, California.
Date of Introduction: 1951 January.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable.
New Product–Documentation: H.F. Meyer. 1960. Infant foods and feeding practices. A photo (p. 82) shows this canned product. A photo of a baby's face appears on the front panel. See also p. 88 and 90. Page 121 gives a detailed analysis of the product. The powder, after being reconstituted, contains: Fat 3.2%, protein 2.85%, carbohydrates 5.4%. Calories per ounce: 18. Tablespoons per oz.: 4. Added vitamins and minerals: ferrous sulphate, calcium carbonate, dibasic calcium phosphate. Affected by terminal sterilization: No. How formulated or reconstituted: 1 vol. milk to 7 vols. water. Chemical definition and essential clinical uses: "Contains soya bean solids, dextrose, maltose, dextrins, sucrose, soya oil. A spray-dried soya food to serve the nutritional needs of the bottle-fed infant. Completely soluble and formulated to simulate human milk. Used for infants allergic to dairy milk." Meyer gives the manufacturer as International Nutrition Laboratories, but with two addresses: 11503 Pierce Place, Arlington, California, and Box 388, Mt. Vernon, Ohio.

1164. **Product Name:** Loma Linda Soyalac Infant Concentrate (Liquid Soy-Based Infant Formula).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce Place, Arlington, California.
Date of Introduction: 1951 January.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: H.F. Meyer. 1960. Infant foods and feeding practices. A photo (p. 82) shows this canned product. A photo of a baby's face appears on the front panel. See also p. 88 and 90. Page 121 gives a detailed analysis of the product. The liquid concentrate, after being reconstituted, contains: Fat 4.0%, protein 2.05%, carbohydrates 6.0%. Calories per ounce: 20. Added vitamins and minerals per quart: vitamin B-12–2 micrograms, vitamin A–3,0000, vitamin D 400, salt, calcium gluconate, calcium hydroxide, ferrous sulphate. Affected by terminal sterilization: No. How formulated or reconstituted: 1 can milk to 1 can water. Chemical definition and essential clinical uses: "Similar to Soyalac Infant Powder but in liquid form." Meyer gives the manufacturer as International Nutrition Laboratories, but with two addresses: 11503 Pierce Place, Arlington, California, and Box 388, Mt. Vernon, Ohio.

1165. Kellogg Co. 1951. New protein food–helps you have a fine body! (Ad). *Life* 30(8):60. Feb. 19.
• ***Summary:*** See next page. This full-page color ad in prestigious *Life* magazine (circulation now over 5.2 million) shows a large bowl of Kellogg's Corn Soya, topped with whole strawberries and milk. Above it is a girl running so fast her hat is flying off. Below it a photo shows a box of the product. The text reads: "Kellogg's Corn Soya–more body-building protein than any other well-known cereal–hot or cold... And protein is what life is all about. Protein is the stuff that every living cell depends on. Protein that helps build fine bodies. And protein that government authorities say we don't get enough of at breakfast!" A table shows that a standard 1-ounce portion of this product, when served with 4 ounces (½ cup) milk or cream, provides 13.36% of the recommended daily allowance of protein for an average man (154 lb) or 15.58% of the protein RDA for an average woman (123 lb).

The front panel of the cereal box reads: "High protein–helps you have a fine body. Ribbon milled corn and soya, with sugar, salt and malt flavoring, vitamin B-1, niacinamide added. 1 oz provides these percentages of the minimum daily adult requirements: Vitamin B-1 19%, riboflavin 3.2%, calcium 2.5%, phosphorus 6.9%, iron 18.4%, 0.556 mg niacin and 5.10 gms. protein." Address: Battle Creek, Michigan.

1166. *Soybean Blue Book.* 1951. Soybean growers and distributors. p. 143.
• ***Summary:*** This half-page section is divided equally into "Vegetable soybean seed" (11 companies listed alphabetically by company name; after each company name are the names of the vegetable varieties offered) and "Soybean seed–wholesale" (9 companies listed alphabetically by state). The following companies are listed: (1) W. Atlee Burpee Co. (Clinton, Iowa; Bansei). (2) Holmes Seed Co. (Canton, Ohio; Bansei). (3) International Nutrition Laboratory (Mt. Vernon, Ohio; Aoda, Bansei). (4) Lewis Olmer (Carthage, Illinois; Bansei). (5) John A. Salzer Seed Co. (La Crosse, Wisconsin; Bansei). (6) Wm. G. Scarlett & Co. (Baltimore, Maryland; Edible Yellow). (7) Strayer Seed Farms (Hudson, Iowa; Bansei). (8) Raymond Vail (Syracuse, Indiana; Bansei). (9) Vaughan's Seed Store (Chicago, Illinois; Bansei). (10) Buxton White & Co. (Elizabeth City, North Carolina; Bansei). (11) T.W. Wood & Sons (11 S. 14th St., Richmond, Virginia; Early Woods Yellow, Laredo,

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New Protein Food

—helps you have a fine body!

KELLOGG'S CORN SOYA—

more body-building protein than any other well-known cereal—hot or cold!

People tell us Corn-Soya is the most delicious cereal they ever ate. But there are other good-tasting cereals. Others that are rich in vitamins, minerals and energy value.

But not one—no other leading cereal—is so rich in protein. And protein is what life is all about. Protein is the stuff that every living cell depends on. Protein that helps build fine bodies. And . . . protein that government authorities say we don't get enough of at breakfast!

There are other good reasons why you should eat Corn-Soya. But do you need another?

BODY-BUILDING PROTEIN—RIGHT IN THE BREAKFAST BOWL!

Percentage of daily protein needs provided by a standard portion (1 ounce) of Kellogg's Corn-Soya when served with 4 ounces (½ cup) of milk or cream*

Average Man (154 lbs.)	13.36%	Child (78 lbs.—10-12 yrs.)	13.36%
Average Woman (123 lbs.)	15.58%	Child (58 lbs.—7-9 yrs.)	15.58%

*Recommended dietary allowance (revised 1948), National Research Council.

Silverware with your own initial!

Four initialed teaspoons for 75¢! See complete offer on Corn-Soya package.

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Mammoth Yellow, Mixed, Ogden, Pocahantas, S-100, Tokio, Virginia Brown, Wilson Black, and Wood's Late Yellow. Note that Wood & Sons offers by far the most varieties of vegetable soybeans).

The list of nine soybean seed wholesalers includes: (1) Robert L. Dortch Seed Farms (Scott, Arkansas): "State registered breeders." Dortch has a half-page ad titled "Soybean breeders" at the bottom of this page. (2) Jacob Hartz Seed Co. (Stuttgart, Arkansas): "Southern grown green and edible varieties for edible purposes." (3) Funk Bros. Seed Co. (Bloomington, Illinois): "Soybean seed." (4) J.A. McCarthy Seed Co. (Evansville, Indiana). (5) Farmer Seed & Nursery Co. (Faribault, Minnesota). (6) Cypress Land Farms Co. (Jaywye, Missouri). See ad p. 142. (7) Cypress Supply Co. (Portageville, Missouri). (8) Valley Farms (Merchants Exchange Bldg., St. Louis, Missouri). See ad p. 142. (9) T.W. Wood & Sons (Richmond, Virginia): "Breed, grow, distribute soybeans for seed and commercial use."

Note: This is the earliest document seen (Aug. 1999) that mentions the soybean variety Virginia Brown.

1167. Cooper, Lenna F.; Bryan, Mary deGarmo. 1951. Supplementing the school lunch. *J. of Home Economics* 43(5):355-56. May.

• ***Summary:*** The regular Type A lunch was supplemented by a soybean product, expeller-pressed Multi-Purpose Food, distributed by Meals for Millions Foundation of Los Angeles, California. The nutritive value of these fortified/enriched soybean grits is given. "It will be seen that 1 ounce of the soybean grits has a protein value of 12 grams, the equivalent in protein value of 1 3/4 cups of whole milk or two ounces of lean meat. The cost for expeller-processed and fortified soybean grits is about 2½ cents per ounce as compared with 8 cents for the equivalent in milk and 9 cents for the equivalent in raw beef. It will be noted also that by enrichment it contributes approximately one-sixth of the day's needs in calcium, iron, and important vitamins for a 12-year-old child.

"The product was used as an extender in meat loaves, hamburgers, soups, hot breads, and desserts." Address: 1. Consultant dietitian; 2. Prof. of Home Economics and Supervisor of Food Services, Teachers College, Columbia Univ., New York City.

1168. *Soybean Digest.* 1951. Accept "Soyalac" as infant food. July. p. 22.

• ***Summary:*** "'Soyalac,' a vegetable milk produced by the International Nutritional Laboratory, Mt. Vernon, Ohio, has been accepted as an infant food by the Council on Foods of the American Medical Association, Dr. H.W. Miller, the president announces.

"Miller began development of 'Soyalac' in China over 15 years ago. It is prepared from the valuable protein and oil of the soybean. Its carbohydrates are a combination of sugars and it is reinforced with minerals to build it up into infant food to care for nutrition problems from birth to weaning time.

"'In order to meet the requirements of the American Medical Association, a vast amount of experimental work was necessary, not only to produce feeding results with 'Soyalac' by leading child specialists, but to obtain records of the feeding of large groups of babies over a long period of time,' said Dr. Miller. 'These results were obtained in America, Japan, the Philippine Islands and China. 'Soyalac' was granted acceptance on the basis of its splendid record as a hypoallergic food.'

"International Nutrition Laboratory was recently purchased by Loma Linda food Co., Arlington, Calif., and is now being conducted as the latter firm's eastern division. Products manufactured by the Mt. Vernon plant will be almost exclusively derived from the soybean.

"The firm has set up the International Research Foundation in charge of Dr. Miller. The plan is to continue research into and investigation of soy products."

1169. Shopping Bag. 1951. Loma Linda Food sale (Ad). *Los Angeles Times.* Dec. 6. p. 20.

• ***Summary:*** Shopping Bag is a chain of "Busy, friendly food stores" in southern California. Part of this full-page ad is for Loma Linda food products. "Ruskets, 14-oz. package–17¢. Ruskets Flakes, 8-oz. package–16¢. Oven Cooked Wheat, 22-oz. package–29¢." Prices effective from Thursday, Dec. 6 to Saturday, Dec. 8. at all 17 Shopping Bag stores. Address: [California].

1170. *J. of the American Dietetic Association.* 1951. Editorial: 1951 Marjorie Hulsizer Copher Award goes to Lenna Frances Cooper. 27(12):1071. Dec.

• ***Summary:*** "'Lenna Frances Cooper is first in our hearts tonight. And as we survey the notable events in our profession's growth, inescapably she also assumes first place in our history. Undoubtedly it was she who originally proposed a national association of dietitians and followed through with that courage and drive which made it a reality. In this city of Cleveland on October 18, 1917, Lenna Cooper presided at the first national convention of dietitians and within two days she had calmly and determinedly whipped up a constitution and by-laws which served as swaddling clothes when the infant American Dietetic Association greeted a waiting world on Saturday, October 20, 1917.'"

"'Reams could be written of Miss Cooper's many achievements, within her beloved Association and in her own professional career. Popularly voted one of Michigan's ten most distinguished women of achievement (in science), she has received honorary degrees from Michigan State College and Drexel Institute. Although a prolific writer and author of numerous books–her best known is now in its twelfth edition and nationally and internationally accepted–

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perhaps the brightest star in her crown of fame represents her thousands of students. From Battle Creek College, where Miss Cooper organized and was the first Dean of the School of Home Economics, has come an amazingly capable and notable company of dietitians–a veritable `who's who` of distinguished women. And what is most striking of all, since this small college has long been closed, is the camaraderie so proudly evidenced by the alumnae.

"'It is my great privilege to confer on you, Miss Cooper, the highest honor our Association may grant, the 1951 Marjorie Hulsizer Copher Award.'"

Note: The award was present by Lillian Storms Coover, President.

1171. **Product Name:** Soy Flakes with Gluten.
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1951.
New Product–Documentation: Soybean Blue Book. 1951. p. 94. In 2 lb and 5 lb bags.

1172. **Product Name:** Soyvita (Roasted Full-Fat Soya Flour).
Manufacturer's Name: F.G. Roberts' Health Foods.
Manufacturer's Address: 40 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia.
Date of Introduction: 1951.
Ingredients: Soybeans.
New Product–Documentation: *Soya Bluebook.* 1981. p. 62; 1987. p. 75. Enzyme active full fat flour for bakery industry; heat treated soy flour for use in cakes, biscuits, doughnuts, confectionery, pies, sausages, and hamburgers.

Letter from Paul Smith of Soy Products of Australia Pty. Ltd. 1981. "Vincent R. Smith was a soyfoods pioneer in Australia. In 1951-52 he began to manufacture Australia's first whole (full-fat) heat-treated (debittered) soy flour." In 1956 he founded Soy Products of Australia Pty. Ltd.

Letter from Paul Smith. 1995. March 14. "Soyvita has only ever been used as a tradename for debittered full fat soy flour since 1951. Initially it was made using imported soybeans, but from 1954 it was made from Australian-grown soybeans. The tradename 'Soybake' was used for the same product packaged under the H.J. Langdon's name and address from 1955 to mid-1991, when it was abandoned due to a rationalisation of packaging and product lines. H.J. Langdon now buys the product in the 'Soyvita' packaging."

Letter from Paul Smith. 1995. April 11. Soyvita has never been used as a brand name for the retail health food products. It has only ever been used for the commodity type product which has been sold under the name and address of Soy Products of Australia Pty. Ltd. since September 1957. Prior to that the "Soyvita" name was used with/under the F.G. Roberts company name and address. "Soyvita" was only available to commercial users, therefore there was no point or interest in advertising it in *Nature's Path to Health.*

1173. Hardinge, Mervyn G. 1951. A nutritional study of vegetarians and non-vegetarians. PhD thesis, Harvard University School of Medicine. *
• ***Summary:*** This landmark study, which led to numerous follow-up studies and publications, examined the dietary habits and nutritional status of lacto-ovo-vegetarians, pure vegetarians [vegans], and non-vegetarians, each divided into three groups: older adults, adolescents, and pregnant women.

The data presented in this paper represent partial fulfillment of the requirements for the degree of Doctor of Public Health at the Harvard School of Medicine.

Note: This is the earliest document seen (Dec. 2013) concerning original health-related or medical research by or on Seventh-day Adventists.

1174. **Product Name:** Loma Linda Vege-Chee (Canned Tofu. Spelled Vegechee in 1960 and VegeChee by 1964) [Plain, or Pimiento].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce Place, Arlington, California.
Date of Introduction: 1951.
Wt/Vol., Packaging, Price: 16 oz can.
New Product–Documentation: 1938 Price List. "Vege Chee, plain or pimiento." Wholesale price list. 1951. "Vege-Chee." Soybean Blue Book. 1954. p. 106.

Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Vegechee contains 11.53% protein, 7.31% fat, and 3.31% carbohydrate.

Today's Food. 1964. Autumn. p. 5. "VegeChee."

Loma Linda Food Co. 1969. "Wholesale Price List." VegeChee is now sold in 16 oz cans, which retail for $0.52 each.

1175. Burnett, R.S. 1951. Soybean protein food products. In: K.S. Markley, ed. 1951. Soybeans and Soybean Products. Vol. II. New York: Interscience Publishers or John Wiley & Sons. xvi + 1145 p. See p. 949-1002. [125 ref]
• ***Summary:*** Contents: 1. Soybean flour, grits, and flakes: Introduction, early history, types of soybean flour–standard definitions, amount of soybean flour and related products produced, methods of manufacture, soybean flour in bread, soybean flour in other baked goods, soybean flour in the meat industry, soybean flakes in breakfast foods, soybean flakes and derived peptones as brewing adjuncts, miscellaneous uses of soybean flour. 2. Isolated and modified soybean proteins: Aerating agents for confections and related products, neutral spray-dried soybean protein [isolates], soybean protein in [whipped] toppings, soybean protein and flour in confections, soybean protein and flour in ice cream, soy sauce, monosodium glutamate from soybeans, soybean vegetable milk, tofu, miso, yuba, and other Oriental soybean

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foods (incl. natto and Hamanatto).

The soy flour industry in the U.S. has grown steadily in recent years. Deliveries of soy flour "from the years 1930 to 1940 averaged about 25 million pounds annually. The deliveries have increased considerably since 1940 partly as a result of an increase in domestic use and partly as a result of deliveries of soybean flour to various government agencies, largely for export. In 1941, Federal purchases amounted to about 10 million pounds of soybean flour. In 1943, the amount increased to 170 million pounds when large shipments were made to Great Britain and the U.S.S.R. under lend-lease. Purchases of soybean flour by the Federal government decreased for several years, but increased in 1946 to an estimated 200 million pounds under the UNRRA [United Nations Relief and Rehabilitation Administration] program. Total soybean flour deliveries for 1946 were approximately 380 million pounds. In the domestic market the bakery industry was the largest consumer. About 40% of the domestic sales of soybean flour were for bakery use. Since the Bureau of Animal Industry has legalized the use of soybean flour as a binder in meat products, about 20% of domestic sales are to the sausage industry. The balance is used in prepared dough mixes, macaroni, candy, and in institutional feeding.

"In 1947, domestic sales of soybean flour were over 60 million pounds. This amount, plus government purchases and exports, amounted to about 415 million pounds. Two-thirds or more of the present domestic consumption of soybean flour is by the bakery, meat processing, and pet foods industries."

Table 155 (p. 953) shows Bushels of soybeans used for U.S. soy flour production (1942-1947). In 1942-43, the amount of full-fat soy flour produced in the USA was roughly 40% of the amount of defatted. In 1944-45 it was about 49%, but thereafter the percentage dropped rapidly to only 5% in 1946-47.

Note: These statistics relate to Soya Corporation of America, Dr. Armand Burke, and Dr. A.A. Horvath.

Concerning soybean flakes and derived peptones as brewing adjuncts (p. 974-77): "Soybean flakes and grits have been employed by the brewing industry to improve the body and flavor of beer, to increase foam stability, and to stimulate yeast growth.

"Improvement in foam stability and flavor can also be attained by adding directly to the finished beer a hydrolyzed soybean protein which has been broken down to the peptone and proteose stage...

"The early history of the use of soybean products as whipping agents is of interest since this work stimulated the development of processes which eventually led to the production of the present soy albumens. In 1939, Watts and Ulrich pointed out that an active whipping substance could be prepared from solvent-extracted soybean flour in which the protein had not been heat denatured, by leaching it at the isoelectric point of the protein. This extract was found to whip more readily and to a much greater volume than suspensions of the original flour... The active principle in the whipping substance prepared by Watts and Ulrich was probably the nonprotein nitrogenous material present in the soybean flour which is soluble at the isoelectric point of the protein."

Tables show: (155) Soybeans used in the production of low-fat and full-fat flour and grits (1942-1947, 1,000 bushels). (156) Peroxide value of fat extracted from pastries stored at -17.8ºC. (0ºF.), containing different percentages of soybean flour for periods of 0-6 months. (157) Analysis of uncooked liverwurst emulsion and of processed (water-cooked) sausage containing added soybean flour and water. (158) Losses in cooking liverwurst containing added soybean flour and water. (159). Analysis of frankfurter emulsion and of smoked sausage made with 3.5% of various binders. (160) Losses in smoking frankfurters made with 3.5% of various binders and after consumer cooking. (161) Effect of the addition of soybean peptone on volume and life of foam on beer. (162) Composition and pH of soybean albumens. (163) Composition of ice creams containing soybean flour. (164) Comparison of soybean milk with cow milk. One sample of cow's milk is compared with 4 samples of soybean milk (probably Oriental) and 3 samples of modern U.S. soybean milk reconstituted (Soyalac for infants, all purpose Soyalac, Soyagen canned from Loma Linda Food Co., California).

Figures show: (199-201, p. 981) Comparison of whipping ability of egg albumen and soybean albumen in different proportions and combinations. (202) Flow sheet for the acid hydrolysis process used in making HVP soy sauce. Address: Protein By-Products Research, Research and Technical Div., Wilson & Co., Inc., Chicago, Illinois.

1176. Nichol, Francis David. 1951. Ellen G. White and her critics: an answer to the major charges that critics have brought against Mrs. Ellen G. White. Takoma Park, Washington, DC: Review & Herald Publishing Assoc. 703 p. See p. 370-72. Foreword by J.L. McElhany. 23 cm. *
• ***Summary:*** Ellen White, founder of the Seventh-day Adventists, expressed her views on vegetarianism after she was converted to this diet in 1864. See Bibliography p. 679-703.

1177. Nicolici, Dumitru. 1951. The original diet. New ed. 4th impression [printing]. Summer Hill, NSW, Australia: Printed by Religious Liberty Publishing Assoc. 151 p. Illust. 21 cm. [81* footnotes]
• ***Summary:*** Quoting extensively from Biblical scriptures and the writings of Ellen G. White, this Seventh-day Adventist book presents the principles of vegetarian nutrition, and gives details of the adverse effects on health and character from consumption of meat, dairy products, eggs, alcohol, spicy condiments, and stimulants of all kinds.

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Contains recipes for fruit, nut, grain, and vegetable dishes. The author was born in 1896.

Chapter 9, titled "Milk, Butter, Eggs & Cheese" is very critical of these products as foods, and suggests that they be dispensed with as soon as possible. "Thousands of infants die annually because of indigestion set up by the use of cow's milk." Cow's milk contains large numbers of germs, some of which produce diseases such as typhoid fever and tuberculosis. "Cheese must certainly be ruled off our tables as unfit for human food" since it contains large numbers of germs and microbes–"in every pound nearly twice as many as there are people upon the face of the earth."

Chapter 10, titled "The Soya Bean," provides an alternative to dairy products and meat. It begins: "The soybean has been referred to as the Wonder Food of the world... It is called the 'meat without bones.'" It is an "ideal source of protein." From soybeans can be made soya milk which is "entirely free from the disease germs that make milk a potential disease carrier." Soy-related recipes include: Mayonnaise without egg (p. 138). Soy-bean mayonnaise (with soy-bean milk, p. 138). Cooked dressing (with soy bean flour, p. 138). Soy-bean milk (p. 139). Baked soy-bean croquettes (with cooked, ground soybeans, p. 139).

1178. Pappas, B.B. 1951. A high protein food–the soybean. *Healthful Living* (*New York City*) 7:33-34.

• ***Summary:*** "The United States Department of Agriculture recognized its value and set up a separate Soy Bean Research Laboratory to find new dietary and industrial uses for this wonderful bean. It has now been proven that the protein of the soy bean can very well replace the protein of meat, eggs and dairy products, and many manufacturers have taken advantage of this knowledge to produce a fine group of soy bean foods. Today we have such foods as soy bean cookies, roasted soy beans (crunchy and delicious), soy bean milk powder, malt and soy drinks, soy flour, soy spaghetti, macaroni and noodles, soy bean bread, soya salad oil, soy sandwich spread, soy bean meat in cans, etc., etc. The number and variety of items now being made from the soy bean is extraordinary. The American people have come to a full realization of the value of this miraculous bean and are making it an integral part of their daily food.

"Soy bean cheese: The soy bean is used by the Chinese not only in place of milk but it is also made into cheese. Tofu, or soy bean cheese, is extensively used in China and has the advantage over cheese prepared from cow's milk in that it is not putrescent. This bean also serves as a substitute for eggs–containing as it does, protein and fat (including lecithin) equivalent to that supplied by the white and yolk of the egg. Kellogg says that Tofu omelette is more palatable and wholesome than an ordinary egg omelette.

"Most proteins are what is known as 'incomplete proteins' and therefore not capable of supporting life alone. The tests made by the United States Department of Agriculture show that soy bean protein appears to be as valuable as the casein in milk. Osborne and Mendel, two of the most famous investigators and research workers in nutrition in the world, show that the soy bean furnishes a 'complete protein' of high nutritive worth which may be used as a substitute for animal protein. This protein is highly digestible and has twice as much as meat, for example. The soy bean likewise has a high fat content but practically no starch.

"It resembles a nut more than a bean, and is superior to nuts as a protein because of its alkalinity. Most nuts are acid-forming.

"We have spoken of soy bean milk. This does not necessarily mean liquid milk, for a perfectly fine soy bean milk is made by mixing dry soy bean milk powder with water to get an excellent tasting beverage. This is superior to cow's milk because of its much greater capacity to counteract intestinal putrefaction. Soy bean milk is not only free from putrefactive bacteria but furthers the development of Bacillus Acidophilus which counteracts the putrefactive type of bacteria. It is certain that it will keep the intestinal tract of a child in a purer state than cow's milk.

"Please don't get the impression from this that soy bean powder is strictly an infant food. Far from it. That is only one of its many uses.

"Three thousand years before the Christian era millions of Chinese were living–and thriving–on a vegetarian diet that was based on the soy bean as its principal food. This miraculous oriental bean was used in place of meat, fowl, eggs, butter, cheese, fish and milk. Often in their long experience the Chinese were saved from starvation and extinction by the soy bean.

"Protein substitute: In the Orient the soy bean still replaces both the cow and the chicken, being used as a substitute for such proteins as milk, butter, cheese and eggs. As a matter of fact, a milk made from the soy bean is used for infant feeding because of its easy digestibility and its lack of putrefactive agencies. As the famous Rout said: 'The properties of soy bean milk and curd are similar to those of milk obtained from cows, and the action of the rennet, etc., is the same. Lactic ferments also act upon it in the same way, also the ferments of certain European cheeses. Throughout China, vegetable milk is extensively used for infant feeding, and is, bottled and delivered each day to regular customers. Investigators in America and Europe indicate that vegetable (soy bean) milk can be successfully used to replace cow's milk.

"A vitamin food: The soy bean is also high in alkalinity. The lima bean was considered a high alkaline food, or bean, but Becker has proved that the soy bean stands higher than all vegetables in this respect. The soy bean is also rich in Vitamin D, which is one of its many striking characteristics. Outside of egg yolk and cod liver oil very few foods have any of this valuable vitamin."

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1179. Ray, Georges. 1951. Technologie laitière. 2e éd. [Dairy technology. 2nd ed.]. Paris: Ed. Dunod. vii + 743 p. See p. 703-09. Illust. Index. 25 cm. [Fre]

• ***Summary:*** The chapter on "Milk substitutes" (p. 696+) contains a subchapter titled "Soymilk (*Lait de soya*)" (p. 703-09), which has the following contents: Introduction. General rules to follow in the preparation of soymilk. The North Vietnamese (*Tonkinoise*) method. Method of preparation used in dairies in the Far East: Castagnol process. Modern methods for the preparation of soymilk. Composition of soymilk. Properties of soymilk. Fermented soymilk (using *Bacillus acidophilus*, British patent No. 441,574, 22 Jan. 1936). Concentrating / condensing and drying soymilk (including yuba). Soymilk curds (*Caillebotte de soya*). The future of soymilk.

Contains two full-page ads by Alfa-Laval for dairy milk equipment.

Vegetable milks have certain advantages over animal milks. They are easily made in a state of microbial purity, free of tuberculosis bacteria. Their casein precipitates more rapidly than that of cow's milk and does not coagulate in the same manner in the stomach. And it can be sold at a lower price. Later: It contains no cholesterol, and makes better use of world food supplies. Disadvantages: It has a lower calcium content and many Westerners prefer the flavor of animal milks.

Here is a quick review of the processes for making soymilk, described at length in a monograph (written under the direction of G. Ray) by D. Kaltenbach and J. Legros [1936]. Precise information about the soya industry is assembled is a more recent work by A. Matagrin. Soymilk pioneer in France were [Li Yu-ying], L. Rouest, and H. de Guerpel (p. 703).

The Castagnol process was developed by Ray at the agronomic research Institute in Indochina (p. 704).

Starting in 1910, a Franco-Chinese society was founded for the study of the utilization of artificial milk from the soybean. The experiments were abandoned in 1912. In 1916 Prof. O. Laxa of Prague recommended for making soymilk on a small scale. Note: It is not important (p. 705).

In London, before World War I, a synthetic milk syndicate launched a type of [soy] milk adapted to European tastes. It applied the process of F. Goessel [of Germany]; 100 liters of soymilk were obtained from 10 kg of ground soybeans, 5 gm of sodium phosphate, 2.4 kg of lactose [milk sugar], 2 kg of sesame oil, 6 gm of salt, and 60 gm of sodium bicarbonate [also known as baking soda or bicarbonate of soda]. Melhuish, an Englishman, patented a process for enriching the [soy] milk with various oils that did not change its taste. Some years after World War I, Bertrand received a patent for the manufacture of deodorized soymilk. Among the American processes are those of Horvath and Kloss (p. 705).

In Germany, the Soyama factory in Frankfort makes a fresh soymilk very similar to cow's milk but with a different flavor. A table shows the nutritional composition of three different types of milk. After standing, the cream of Soyama soymilk separated. This soymilk has a more neutral and softer flavor than that of cow's milk. Bread made with this soymilk is excellent. In 1932 the French engineer Max Adler patented a process for soymilk without the characteristic flavor and odor (p. 706).

In China during World War II, soymilk was used extensively in refugee camps and saved many lives, especially those of children (p. 708).

The Annamites are fond of soymilk during the hot season. Each morning soymilk merchants can be seen circulating through the streets of the native villages of Hanoi. The product is consumed sweetened or unsweetened, cooked with rice, or added to various soups (p. 708).

Fermented soymilk: John H. Kellogg received a British patent for acidophilus soymilk. No. 41,574. 22 Jan. 1936. Yuba is the concentrated film of dried soymilk lipo-proteins (p. 708).

In France, Rene Jarre is specializing in the preparation of soyfoods (*produits alimentaires à base de soja*). Monahan and Pope (1915) added to powdered soymilk malt, cacao and chocolate–U.S. patent 1,165,199 of 21 Dec. 1915 (p. 709).

The future of soymilk: The main challenge now is to find a way to deodorize soymilk. Note: And to remove the flatulence factors (p. 709). Address: Honorary Prof. (Tunis, Rennes, Grignon), former Head of Technical Services, International Institute of Agriculture, Rome (Ex-Chef du Service Tecnique, a l'Institut d'Agriculture de Rome).

1180. White, Julius Gilbert. 1951. Abundant health: Expounding the Learn-how-to-be-well system of daily living. 5th printing. Pine Mountain Valley, Georgia: Health and Character Education Institute. xix + 477 p. Illust. 24 cm. See p. 367-82. [25 ref]

• ***Summary:*** About vegetarianism, diet, and hygiene. Note that the author was formerly (for 11 years) head of the Lecture Bureau at Madison College, a Seventh-day Adventist college and sanitarium. A portrait photo (p. vi) shows Julius G. White.

One chapter titled "The soybean: The wonder food of the world" (p. 367-82) discusses (with some recipes) the nutritional value of soybeans, Soybean milk and the pulp left after making it, soy flour, whole soybeans, vegetable meat (meat substitutes), soybean cheese [tofu], home-made soy butter (made from 4 tablespoons each soy flour and water, 1 cup of oil, a little salt and butter color if desired), soy mayonnaise, soy acidophilus milk, soy sprouts, soy sauce, soy coffee, and soy protein substitute for egg-white.

1181. *Time.* 1952. Diet and health. 59:72-73. April 21. *

• ***Summary:*** A study by Dr. Mervyn Hardinge, a Seventh-day

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Adventist, working toward a Harvard University degree in public health, found that vegetarians are as healthy as flesh-eaters.

1182. *Vegetarian News Digest* (*Los Angeles*). 1952. A vegetarian city! 2(8):36. Spring.
• ***Summary:*** Keene, Texas, populated solely by Seventh-day Adventists, is entirely vegetarian. Furthermore, the women wear no make-up, alcohol and tobacco are not sold, and there are no police, courts, or judges.

1183. *Soybean Digest.* 1952. Soya queen of 1952. Oct. p. 16.
• ***Summary:*** The first annual Soybean Festival at Gibson City, Illinois, on July 22-26, was very successful. There was a livestock tent, merchandise display, dog show, antique auto show, and a carnival. But the unusual feature was a tent designated Soybean Palace, which "had displays of foods made of soybean products. The food displays were furnished by Mrs. Tucker's Foods, Loma Linda Food Co., Madison Foods, and Chicago Dietetic Supply House.

"An elaborate display was provided by the National Soybean Crop Improvement Council. It was entitled, 'Research and the Miracle Bean.'

"The film, 'Soybeans, the Feature Story,' was shown each evening, and free literature on soybean production was available.

"A soybean queen was selected and a formal dance was given in her honor. She was Virginia McCormick, a senior in Gibson City Community High School. Old fashioned square dances were held two evenings."

Note: This is the earliest article seen with the word "queen" in the title in connection with soybeans or a soybean festival.

1184. Dunkel, Joan. 1952. The effect of vitamin B-12 on a certain vegetarian diet. *Walla Walla College Publications of the Department of Biological Sciences and the Biological Station* 1(4):59-64. Dec. 10. [18 ref]
• ***Summary:*** The introduction gives a brief history of the discovery of vitamin B-12 starting in July 1947. "Summary: A vegetarian diet [supplemented with vitamin B-12] has been developed which has produced five generations of rats, inferior to omnivores only in that their size was somewhat decreased. However, this diet was unable to sustain the animals beyond the seventh generation. Supplementing the diet with vitamin B-12, either oral or parenteral, did not result in any appreciable increase in the growth rate" (i.e. did not make the rats gain more weight in the same time). The five main ingredients in this diet were ground whole wheat (40%), rolled oats (10%), rye flour (10%), soy curd (10%), and brewer's yeast. This research was conducted in the physiology department of the College of Medical Evangelists, Loma Linda, California. Address: Walla Walla College, Washington.

1185. Miller, Harry W. 1952. Re: Infant feeding. Letter to Miss Dorothea VanGundy at 11784 Bonita Ave., Arlington, California, Dec. 14. 1 p. Typed, with signature. [1 ref]
• ***Summary:*** "Under separate cover I have mailed you a copy of the book 'Infant Feeding.' I am sure that you will be very interested in reading it through from cover to cover. It is written in very simple language and well within your vocabulary as a dietitian... It is a resume of the latest on infant feeding and familiarizes one with all of these various infants' foods. It also makes a very ready reference book in case any questions come up.

"I plan that you will have to do with a good deal of correspondence that comes in regarding infant feeding in the future... You will gradually get familiar with our Soyalac and its use... Of course, our scope of work goes way beyond infant feeding because we are working on the feeding of the masses of people, obtaining our nutrition from vegetable sources... Yours very sincerely, H.W. Miller, M.D., Research Director, International Nutrition Research Foundation."

Note 1. This letter is typed on the letterhead of the International Nutrition Laboratory, Inc. Above the Laboratory's name are printed: "Miller's Soya Foods. Soyalac–Sandwich Spread–Vegetable Cheese–Green Soya Beans–Cutletburger–Cutlets." Above that is hand-stamped: "International Nutrition Research Foundation, P.O. Box 388, Mt. Vernon, Ohio."

Note 2. In November 1952 Miss Dorothea Van Gundy began to work for Loma Linda Foods in Arlington, California, as a dietitian and food demonstrator. In August 1960 she was married (her first marriage) to Ed Jones, a health food salesman and distributor, who was 13 years older than she. Ed had previously been married to Mildred Lager. Address: M.D., International Nutrition Lab., Inc., P.O. Box 388, Mt. Vernon, Ohio. Phone: 1195.

1186. Battle Creek Food Co. 1952. Battle Creek Steaks: Get your proteins cheaper. Taste better than meat!! (Ad). *Diet Digest* (*Beverly Hills, California*) No. 42. Inside front cover.
• ***Summary:*** This full-page black-and-white ad shows illustrations of a can of "Battle Creek 'Steaks'–a vegetable product," and of a plate containing two of the steaks with a baked potato and vegetables. The text reads: "For nutrition and economy–steaks are unbeatable. New–tenderized. A tasty meat substitute. Used and recommended by the Battle Creek Sanitarium and the Miami Battle Creek Sanitarium" [Florida]. Address: Battle Creek 23, Michigan.

1187. Kordel, Lelord. 1952. Eat and grow younger. Cleveland and New York: World Publishing Co. 315 p. Index. 22 cm.
• ***Summary:*** The author's basic message: Eat more protein (especially complete proteins) and get plenty of vitamins and minerals. "One advantage of a high-protein diet is that

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you can eat less bulk, yet be well nourished..." There are no references and no "about the author" section. He is opposed to vegetarianism (high-starch dishes take the place of high-protein foods) which is a "fad" and believes (incorrectly) that vegetarians do not consume milk, dairy products or eggs (see p. 43-49, 114, 117, 120, 228, 261).

He mentions soybeans only in passing; they do not even appear in the index. For example: (1) The protein from lentils, legumes, soybeans and nuts is not complete and cannot counterbalance all the pure starches eaten to satisfy hunger (p. 43-44). (2) While soybeans, nuts, peas, and beans do contain protein, their protein content is "very low and incomplete when compared with meat, eggs, milk products and seed cereals" (p. 47). In a 4-page chart titled "Vegetable proteins" (p. 235-38) neither soybeans nor soyfood products are mentioned.

Contents: Part I: How to stay young. 1. Of course you want to stay young! 2. How old is "old"? 3. The secret of staying young. 4. Who is this fellow "protein"? 5. How much protein is "enough"? 6. "But I'm a vegetarian!" 7. Too much starch is dangerous. 8. These eight determine your age. 9. Six commandments for a long "young" life. 10. Seeds hold the germ of life: Millet, sunflower seeds, sesame seeds. 11. Best milks for humans. 12. Honey belongs on your table. 13. The sure way to good looks and charm. 14. Do your eyes look young? 15. Don't invite "old" hair and skin. 16. Your bones and muscles can be tattletales. 17. Your nerves must stay young, too. 18. Your blood can make you look younger. 19. Youth begins at breakfast. 20. What about food combinations? 21. Eating habits for longer life.

Part II: Your diet program. 22. Start now to eat and grow younger. 23. High-protein meats, poultry and fish. 24. Meat substitutes that are protein. 25. Egg and cheese dishes for every meal. 26. Eat plenty of seed cereals. 27. Salads are important. 28. Delicious baking with protein foods. 29. Sweets and treats that are "dividends."

Millet is the best of the seed cereals. Pythagoras praised its high nutritional value and advised his followers (all vegetarians) to adopt millet as the mainstay of their diets. Dr. John Harvey Kellogg said that millet is the only cereal capable of supporting life when used as the sole item in the diet. Millet is "a *safe* vegetable protein. Moreover it is almost a necessity in a vegetarian diet, because it can provide a *complete* protein without the need of eating a lot of bulk..." (p. 114-17).

Note: The popular website DrCoop.com lists Mr. Kordel (born in 1904) in its section on "Roots of modern food faddism." Court records state that he began producing and marketing supplements in 1941, operating under various trade names. In 1946 he was convicted of misbranding and fined $4,000. He had a brush with the Federal Trade Commission (FTC) in 1957 and two more with the FDA in 1961. In 1971 he was fined $10,000 and served one year in prison. Address: SC.D., author of *Health Through Nutrition*.

1188. Meyer, Herman Frederic. 1952. Essentials of infant feeding for physicians: A practical text for rapid reference. Springfield, Illinois: Charles C. Thomas. 252 p. Illust. 24 cm. [17 ref]

• ***Summary:*** Opposite the title page is a full-page photo showing many commercial milk products, both dairy and non-dairy, mostly canned. Soy-based Loma Linda Soyalac (made by International Nutrition Laboratory, Inc., Box 388, Mt. Vernon, Ohio; dry), Sobee (Mead Johnson Co.; dry), Mull-Soy (Borden; liquid), and Allerteen (Charles Kilgore Co.) are clearly visible. Pages 105-07 give details on each product and state that Allerteen (dry, made by Charles Kilgore Company of Yonkers 2, New York) is also soy based, while Almond-Lac (dry, made by Almond Lac Company of Chicago, Illinois) is based on almonds. Pages 124-26 describe Soyola and Protoban, both soy-based dietary supplements to infant feeding. Pages 196-97 give the prices of various infant food mixtures, including Sobee and Mull-Soy. Pages 231-32 contain a directory of proprietary infant food manufacturers, their products, and their addresses. Address: Assoc. Prof., Dep. of Pediatrics, Northwestern Univ. Medical School, Chicago, Illinois.

1189. Holman, Ross L. 1953. Utopia university. *Mechanix Illustrated.* May. p. 94-97. *

• ***Summary:*** About Madison College, located near Nashville, Tennessee. Contains at least six photos.

Note: "From its debut in 1928, it went through a number of permutations over the years, being called at various points in its life, *Home Mechanix, Modern Mechanics and Inventions, Modern Mechanix and Inventions, Modern Mechanix* and finally *Mechanix Illustrated"* (Source: Wikipedia at Mechanix Illustrated, Jan. 2013).

1190. Sandborn, William Cruzan. 1953. The history of Madison College. PhD Thesis, Dep. of Education, George Peabody College for Teachers, Nashville, Tennessee. 201 p. Aug. 28 cm. [75* ref]

• ***Summary:*** The first and perhaps the best, most detailed, and most objective history of the Nashville Agricultural Normal Institute (renamed Madison College in 1937), and of its food factory, both located in Madison (near Nashville), Tennessee. Madison, the only self-supporting college in America, was a remarkable experiment in education.

Contents: Summary. 1. From Battle Creek to Madison. 2. Years of faith, work, and frugality. 3. The school program. 4. Schools for men of the mountains. 5. The gospel of healthful living. 6. The A.B.C. of education. 7. The institutional plant. Appendix. Charter. Chronology. List of graduates. Bibliography.

The school land was located and the school founded in 1904 by Prof. E.A. Sutherland and P.T. Magan with the help of Mrs. Ellen G. White. The farm of 412 acres at Neely's

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Bend on the Cumberland River (known as the Nelson Place), was purchased in June 1904 from Mr. Ferguson for $12,723. In 1925 some 296 acres were added for a total of 708 acres. In its early years, Madison was neither a college nor a high school. "It was a special school [a normal school] organized for the purpose of training self-supporting missionary teachers and workers. The only entrance requirements were a mature mind and an intense interest in self-supporting missionary endeavor. The school was accredited as a high school in 1927 and as a junior college in 1928.

Prof. E.A. Sutherland had learned a great deal about health and sanitarium work from his contact with Dr. John Harvey Kellogg in Battle Creek, Michigan. A history of the Food Factory is given in a separate record.

Education: Ellen white believed and taught that agriculture should be basic to all other studies. The farm had a dairy (with 34 cows in 1930 and 115 in 1943; pasteurization of milk began in 1937), a fruit farm with over 3,000 apple and peach trees, and a poultry raising industry. "During the year 1937 the name of the school was changed from the Nashville Agricultural and [sic] Normal Institute to Madison College. This was the consequence of the school's obtaining a government post office which was called the Madison College Post Office, in order to avoid confusion with the village post office (p. 67). The years from 1930 to 1940 were the "Golden Age of Madison." The peak year for enrollment was 1940, with 458 students enrolled. The next decade might be termed the "Fateful Forties." The enrollment dropped during the period, reaching a low of 154 during the 1944-45 school year. In Feb. 1946 Dr. Sutherland resigned as president to accept another position. The school never had an organized athletic program.

Chronology: 1927–The school is accredited as a high school and in 1928 as a junior college. Efforts were made, without success, from 1929 to 1940 to have the school accredited as a senior college. 1930–C.H. Dye becomes sales manager for Madison Foods.

1932 July 27-Aug. 6–Health Institute held with J.G. White the leading speaker assisted by P.A. Webber.

1932 Aug. 1–Four students begin operating the Nashville Vegetarian Cafeteria on a project basis (Irma Rocke, Esther Sanford, Mrs. Karl Erickson, and Howard Davidson).

1935 Spring–*Food for Life*, by Francis Dittes, published.

1935 Sept. 15–Farewell for Dr. and Mrs. P.A. Webber who return to Japan. Address: George Peabody College for Teachers, Nashville, Tennessee.

1191. Sandborn, William Cruzan. 1953. History of the Madison Food Factory (Document part). In: W.C. Sandborn. 1953. PhD Thesis, Dep. of Education, George Peabody College for Teachers, Nashville, Tennessee. 201 p. See p. 123-27, 159. Aug. 28 cm. [1 ref]

• ***Summary:*** The Food Factory (formerly a "large flakefood factory" built at Edgefield, near what is now Edenwold) was purchased in 1917, dismantled, and in 1917-18 moved from Edgefield near Amqui, a nearby community, to its present location [Note: This food factory had formerly been operated by Jethro Kloss.] It began operation at Madison [Tennessee] in 1918 (p. 123; the 1918 date was verified by Elmer Bush who helped move the factory). Mr. and Mrs. Andrew Wheeler were in charge of the work, under the direction of Mrs. Druillard, who had had years of experience in other institutions. The principal foods manufactured are protein foods made from gluten, soy beans, and peanuts. "Some of the trade names today are Zoyburger, Yum, Mock Chicken, Nu-Steak, Not-Meat, Vigoroast, and Ches-O-Zoy. A cereal substitute for coffee is Zoy-Coff" [Zoy-Koff] (p. 124). The meatless protein foods serve as substitutes for meat in the diet of vegetarians. Both the College and the Sanitarium hold to a meatless diet. The College ran a successful vegetarian cafeteria in Nashville.

"Some of the men who played an important part in the later growth and development of the food factory were Joe Hansen, C.H. Dye, T.A. McFarland, Captain Calvin Bush, Edwin Bisalski, George Norris, Leslie Brooks, John Brownlee, H.M. Mathews and Frank Holland. Of this group, H.M. Mathews and John Brownlee played a very important part in experimentation and development of the foods. E.M. Bisalski was outstanding in the group as a promoter and sales-manager. It was during Mr. Bisalski's term as manager of the Food Factory that great expansion took place. A practically new plant, with one section four stories in height, was constructed in 1941. Shortly after, the sales began to drop off, and it has never been necessary to use the new building to its capacity. The Food Factory (now known as Madison Foods) is operating, on a much smaller scale than formerly, under the management of Mr. Frank Holland. The Madison Foods Company also operates a bakery, making whole wheat and soy bread. A daily bread route is served in Nashville.

"Another type of health work carried on by the Madison School was the operation of a treatment room and vegetarian cafeteria in Nashville, Tennessee. Workers drove back and forth each day from the School to Nashville to carry on the work. The work was started in 1917, in rented quarters. After five years, because of advancing rents, it was thought best to close down the work and build a new building on a permanent location at 151 Sixth Avenue, North. This was done at the end of the year 1922. The new location was occupied in the spring of 1923. [It opened on April 23.] A successful work was carried on in the new location for over a decade" (p. 125).

"The Food Factory was remodeled, in fact, practically a new structure was built, in 1942. The work actually started in November, 1941, and was completed in October, 1942. E.M. Bisalski was the prime mover in promoting the project, which cost between $30,000 and $40,000" (p. 159). Address:

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George Peabody College for Teachers, Nashville, Tennessee.

1192. *Soybean Digest.* 1953. Market all new soy margarine [Willow Run]. Dec. p. 9.
• ***Summary:*** This product is made completely from the soybean (soybean oil and soy milk) except for added salt and vitamin A. Manufactured by Shedd-Bartush Foods, Inc. of Detroit, Michigan, it is "made for those who want a product free of cow's milk or other animal foods. The present Willow Run Margarine is the outgrowth of a product [Soya Butter, developed and sold by Butler Food Products of Cedar Lake, Michigan, and introduced in Aug. 1944] which at one time was made exclusively for sale in Michigan through health food stores. It was not shipped interstate because the then existing standard of identity for margarine made no provision for a margarine made with soybean milk in place of cow's milk.

"With the lifting of coloring restrictions from margarine, and the change in the standard of identity to allow the use of soy milk, Willow Run Soy Bean Spread Margarine came into being. It is shipped everywhere in the U.S. and the carton has been designed to comply with various state laws."

A photo shows a carton of "Willow Run Oleomargarine."

1193. **Product Name:** The Versatile Soyabean in Tomato Sauce.
Manufacturer's Name: F.G. Roberts' Health Foods.
Manufacturer's Address: 40 Chapel St., St. Kilda (a beach-side suburb of Melbourne), Victoria, Australia.
Date of Introduction: 1953.
Ingredients: Incl. soybeans, tomato sauce or puree.
Wt/Vol., Packaging, Price: Tin-plated steel can.
New Product–Documentation: Letter from Paul Smith of Soy Products of Australia Pty. Ltd. 1981. Vincent R. Smith was a soyfoods pioneer in Australia. From 1953-54 to 1974-75 he canned soybeans in tomato sauce or puree. In 1956 he founded Soy Products of Australia Pty. Ltd.

Talk with Paul Smith. 1995. Feb. 20. The soybeans were soaked overnight, then pre-cooked in a steam-jacketed vessel. Then the cooked beans and tomato puree were put in can, the can was lidded, then the whole can was autoclaved, then labeled. Sanitarium Foods took a keen interest in this product, then copied the product from F.G. Roberts' Health Foods. Paul remembers how his company used to supply the product to the many Sanitarium retail health food stores. His father had a little creamy white Ford panel van with green stripes on the sides. They used it to deliver their products to places like The Original Nature, the first vegetarian restaurant in Melbourne, down in the basement in Little Collins Street. The restaurant served salads and grated carrots, and fresh squeezed carrot and celery juice, and fruit juices. They also made and served vegetarian burgers.

1194. **Product Name:** Loma Linda Tender Rounds (Meatless), and Tender Bits (Fish-like).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: 11503 Pierce Place, Arlington, California.
Date of Introduction: 1953.
Ingredients: In 1971: Wheat protein [wheat gluten], water, brown rice, vegetable oil, oat flour, soy flour, salt, yeast extract, MSG, onion powder, flavorings, lecithin, lysine.
Wt/Vol., Packaging, Price: 19 oz (1 lb 3 oz) can. Retails for $2.60 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Price list. 1953. "with soy."

Loma Linda Food Co. 1969. "Wholesale Price List." Tender Bits are now sold in 14 oz, 20 oz, and 50 oz cans.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Tender Bits (Loma Linda)."

Patricia H. Black and Ruth L. Carey. 1971. *Vegetarian Cookery.* 5 vols. This set of vegetarian cookbooks contains several recipes calling for "Tender Bits" which are sold in 20 oz cans.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. Tender Bits is a canned fish-like products based on spun soy protein fiber. Note that the product had been reformulated by 1973.

1195. **Product Name:** Loma Linda Linketts, Little Links, Big Franks (Meatless Hot Dogs).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: 11503 Pierce Place, Arlington, California.
Date of Introduction: 1953.
New Product–Documentation: Price list. 1953. "with soy."

Today's Food (Loma Linda Foods, Arlington, California). 1960. Spring. p. 4. Linkettes are used in a recipe. Loma Linda Foods has recently switched from using vegetable shortening in this product to using liquid corn oil (p. 7).

By 1979 this product was reformulated with textured soy protein.

1196. **Product Name:** Loma Linda Redi-Burger (Meatless Hamburger).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce Place, Arlington, California.
Date of Introduction: 1953.
New Product–Documentation: Price list. 1953. By 1979 this product was reformulated with textured soy protein.

1197. **Product Name:** Sovex.
Manufacturer's Name: Sovex Co?
Manufacturer's Address: Holly, Michigan.

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Date of Introduction: 1953.
Ingredients: Incl. nutritional yeast and soy sauce.
How Stored: Shelf stable.
New Product–Documentation: Talk with John Goodbrad, president of Sovex. 1980. Nov. 26. Sovex was founded in 1953 by the Hurlingers in Holly, Michigan. The company's original product was Sovex, a flavor concentrate paste, made from a mixture of brewer's yeast and soy sauce. In 1964 John bought the business [actually the formula and brand name] and moved it to Collegedale, Tennessee.

Note: This is the earliest solid record seen (March 2013) concerning Sovex.

1198. **Product Name:** Soymilk.
Manufacturer's Name: Taiwan Sanitarium.
Manufacturer's Address: Taiwan.
Date of Introduction: 1953.

1199. Kloss, Jethro. 1953. Back to Eden: A human interest story of health and restoration to be found in herb, root, and bark. 5th printing. Coalmont, Tennessee: Longview Publishing House. 671 + xiii p. Portrait. Illust. Index. 22 cm.
• ***Summary:*** A portrait photo of Jethro Kloss (wearing rimless glasses, a dark suit and white tie), first published in the *Washington Post* on 21 May 1933, appears as the frontispiece of this book (facing the title page). The copyright page states: "Copyright, 1939, by Jethro Kloss. All rights reserved. Fourth printing, 1952. Fifth printing, 1953, by permission of the legal heirs of Jethro Kloss, deceased."

The text is exactly the same and on exactly the same pages in this 1953 printing as it was in the original 1939 edition.

1200. Hardinge, Mervyn G.; Stare, Fredrick J. 1954. Nutritional studies of vegetarians. I. Nutritional, physical, and laboratory studies. *American J. of Clinical Nutrition* 2(2):73-82. March/April. [19 ref]
• ***Summary:*** "A comparative study of 112 vegetarian (incl. 86 lacto-ovo-vegetarians and 26 'pure' vegetarians) and 88 non-vegetarian adults, adolescents, and pregnant women is described. Most of the people studied were residents of Central and Southern California. They were "located through questionnaires circulated in commercial and sectarian magazines and among church and social groups." (Note: Thus many, but not all, were probably Seventh-day Adventists.) The results show that although the dietary intake of nutrients varied widely among individuals, the average intake of all groups, with the exception of the adolescent 'pure' vegetarian, approximated or exceeded the amounts recommended by the National Research Council. Non-vegetarian adolescents consumed significantly more protein than did lacto-ovo-vegetarian and 'pure' vegetarian adolescents. No evidence was obtained to indicate that a lacto-ovo-vegetarian diet failed to provide an adequate dietary for an expectant mother." The report concluded that it was actually quite difficult to eat a varied vegetarian diet that would not exceed protein requirements for the human body (p. 76).

Among the various groups studied, no significant differences in height, weight, blood pressure, childbirth, or hematological data were found. Pure vegetarians [vegans] weighed an average of 20 pounds less than lacto-ovo-vegetarians and non-vegetarians, despite similar caloric intakes and physical activity. Dietary intakes of all groups, except the adolescent pure vegetarians [vegans] approximated or exceeded the amounts recommended by the National Research Council.

The data presented in this paper represent partial fulfillment (by Hardinge) of the requirements for the degree of Doctor of Public Health at the Harvard School of Medicine. Address: 1. School of Medicine, College of Medical Evangelists, Loma Linda, California; 2. Dep. of Nutrition, Harvard School of Public Health, Boston, Massachusetts.

1201. Hardinge, Mervyn G.; Stare, Fredrick J. 1954. Nutritional studies of vegetarians. II. Dietary and serum levels of cholesterol. *American J. of Clinical Nutrition* 2(2):83-88. March/April. [19 ref]
• ***Summary:*** The subjects studied were the same as in part I of this study. Dietary cholesterol intakes and serum cholesterol levels were highest in non-vegetarians and lowest in 'pure' vegetarians [vegans]. Address: 1. School of Medicine, College of Medical Evangelists, Loma Linda, California; 2. Dep. of Nutrition, Harvard School of Public Health, Boston, Massachusetts.

1202. Boyer, Robert A. 1954. High protein food product and process for its preparation. *U.S. Patent* 2,682,466. June 29. 5 p. Application filed 6 May 1952. [6 ref]
• ***Summary:*** This landmark patent, which describes the preparation of textured foods from spun vegetable protein, started the spinning of soy protein filaments. The patent begins: "This invention relates to a food product and is a continuation-in-part of my copending application, Serial No. 118,445, filed September 28, 1949. In particular it relates to synthetic meat and to methods of producing synthetically foodstuffs which will have the flavor, coloring, taste and 'chewiness' of meat. By the term meat I mean to include not only the meat of mammals, but also the meat of fish, fowl, shell fish and crustaceans."

"The stumbling block up to this point has been in the reproduction of the texture and appearance of natural meat, the texture of course involving the factor of 'chewiness.' Vegetable chops using wheat gluten as a base have a certain amount of 'chewiness,' but they do not duplicate the fibrous character of meat; and they fail to give that satisfaction that comes from the breakdown in the mouth during the

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mastication of a piece of meat."

"Artificial textile fibers have been made synthetically from vegetable protein such as soy beans, corn, or peanut protein, as well as from animal proteins such as casein and keratin."

Filaments were prepared by dispersing the protein material, forcing the dispersion through a porous membrane such as a spinneret of the kind used in the production of rayon, coagulating the emerging streamlets in an acid bath, and stretching the oriented filaments to develop desired fiber strengths, each fiber commonly having an average thickness of about 20 micrometers / microns. One spinneret was capable for forming several thousand individual filaments or fibers which are very fine and which when taken together exist as a group having an overall diameter of perhaps one-quarter inch. "If a battery of spinnerets or dies as above outlined are provided, there will be a considerable number of bundles or groups of filaments which, when assembled together, may constitute what I have hereinafter called a 'tow' of filaments, which tow, depending upon the number of dies or spinnerets used, may be conveniently three to four inches in diameter."

The formed filaments are then placed in a salt solution to prevent them from dissolving. The pH of this solution is typically adjusted to be in the range of 5.6 to 6.4–the same as most meats. In this way a palatable food product can be produced without the use of binders or fats. The fibers are stretched in this salt bath using a take-away reel or godet wheel. "In practicing my invention with soy bean protein I have applied stretching tensions satisfactorily as high as 400%." To summarize: This is a process of preparing synthetic meat by preparing a quantity of filaments of protein material, such as "filaments of soy bean protein material." It is: "A meat-like product comprising oriented edible fibers" or "edible filaments."

Note 1. This is the earliest document seen (June 2013) concerning the spinning of soy protein isolates to make spun soy protein fibers for food use.

Note 2. This is the earliest English-language document seen (Nov. 2003) that contains the term "synthetic meat" (or "synthetic meats"–with any combination of quotation marks). The phrase "The process of preparing synthetic meat..." is used repeatedly in this patent.

Note 3. This is the earliest English-language document seen (June 2013) that uses the word "filaments" or the term "edible filaments" to refer to edible spun soy protein fibers.

Note 4. This is the earliest English-language document seen (June 2013) that uses the word "spinneret" (or "spinnerets") in connection with edible spun soy protein fibers.

Note 5. This is the earliest English-language document seen (June 2013) that uses the word "tow" (or "tows") in connection with edible spun soy protein fibers. The definition of a "tow" is given above.

Note 6. This is the earliest document seen (June 2013) concerning the etymology of textured soy protein isolates. Address: Cincinnati, Ohio.

1203. Van Gundy, Dorothea. 1954. Re: Mother broke her hip at age 81. Letter to "Dear Friends," July 6. 1 p. Typed, without signature.

• ***Summary:*** "It has been better than six months since we wrote last. So much has happened since that time, and you are such a large number that I just felt we should send out another bulletin to bring you up to date on the happenings of our clan. We have such a warm feeling inside when we think of you, our friends. How drab life would be without friends. We often think of you and remember you in our prayers.

"About a month ago Mother had the misfortune to fall on the living room floor and break a hip. We had surgery done–putting in a pin so she would not have the discomforts of a cast." Her hemoglobin before surgery was 100%. "Not bad for 81 years old."

"Since mother's accident we have moved next door to a larger house... We have had a wonderful young lady in our home this last year who has been accepted to Loma Linda for nurses' training this fall." Dorothea encloses a stamped addressed envelope encouraging family friends to help pay for the young lady's education.

"Aunty and Uncle Giddings are still going strong. They find it a little difficult to stay at home now as Uncle can no longer drive. Charlotte is fine. She and her family have recently moved to Idaho."

"May the Lord continue to bless you and guide you in all your comings and goings. With love." Address: 1176 Bonita Dr., Arlington, California.

1204. **Product Name:** Soy bread.
Manufacturer's Name: Hunza House (The).
Manufacturer's Address: 127 South Maple St. Escondido, California.
Date of Introduction: 1954 August.
How Stored: Shelf stable.
New Product–Documentation: Ad is *Let's Live.* 1954. Aug. p. 38. This ad (2¼ by 4 inches) states: "No white flour, white sugar, or preservatives of any kind used in our products. Obtainable in all Southern California health food stores."

On the same page (middle column) is a notice that H.E. Hicks has just been appointed general manager of the Pretoria Valley guest ranch, Escondido, California. "Hicks is prominent in the health field, formerly serving as western manager of the Butler Food Products Co. of Cedar Lake, Michigan. Just recently he was elected president of the Hunza Baking Corp., bakers of organic whole wheat and nutritional bread products, also of Escondido, and Hicks is national distributor and general sales manager of the Town Crier Co., of Vista, California, makers of soy lecithin and other health products."

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1205. Worthington Foods, Inc. 1954. Wholesale price list and order blank. P.O. Box 190, Worthington, Ohio. 1 p. Nov. 15. • ***Summary:*** New products include: Soyamel–soy milk. Entree (in tomato sauce or mushroom gravy). Veja-links.

Note: This is the earliest English-language document seen (Aug. 2003) that uses the term "links" or "Veja-links" to refer to meatless soy sausages. Address: Worthington, Ohio. Phone: 2-5359.

1206. **Product Name:** Tofu.
Manufacturer's Name: Loma Linda Food Co. Eastern Div.
Manufacturer's Address: P.O. Box 388 (Wooster Road), Mount Vernon, Ohio.
Date of Introduction: 1954.
New Product–Documentation: Soybean Blue Book. 1954. p. 106. No brand name is given. Also listed in 1965.

1207. **Product Name:** Sanitarium Health Foods Soya Beans in Tomato Sauce.
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: Sydney, N.S.W., Australia.
Date of Introduction: 1954.
Ingredients: Soya beans, tomato, sucrose, salt, onion, paprika.
Wt/Vol., Packaging, Price: 430 gm can.
How Stored: Shelf stable.
New Product–Documentation: Letter from Sanitarium Health Food Co. 1981. Label. 1980, undated. "A delicious protein-rich vegetable." Two recipes on label. Recipe brochure. 1981, undated. "Imagination in cooking... with Sanitarium." Photos show: Canned Soya Beans in Tomato Sauce, Vegetarian Rediburger, Bologna, Tender Bits. Label. "Delicious protein-rich vegetable." Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1954. Ingredients now read: "Soya beans, sauce, water added."

Note: This is the earliest known commercial soy product made by Sanitarium Foods in Australia.

1208. **Product Name:** Soyamel (Powdered Soy Milk).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 2-2539.
Date of Introduction: 1954.
Wt/Vol., Packaging, Price: 1 lb can.
New Product–Documentation: Wholesale price list. 1954. Nov. 15.

Ad (1/3 page) in *Let's Live.* 1955. Jan. p. 7. "New. Better tasting, all-purpose, all-vegetable soy milk." A photo shows a can of "Worthington Soyamel–All purpose." "Mix and use like milk." The text continues: It "is the perfect 'food beverage' for everyone who prefers or needs an all vegetable milk. You'll like its clean, white appearance and its clean fresh flavor. Better tasting. Keeps longer. Improved mixing. Not only does Soyamel taste better but it also remains completely in solution after mixing. There is no disagreeable raw bean flavor! No separation of solids from liquid to be stirred up from the bottom of the bottle!" A proximate analysis is given. "One ounce of Soyamel powder makes one 8 oz glass of soy milk containing 132 calories. Ask for Soyamel at your local health food store."

Chopletter (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods." April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include Soyamel.

Soybean Digest Blue Book. 1972. p. 110. "Subsidiary of Miles Laboratories Inc. Processing and packing powdered

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soy milk called Soyamel." Leaflet (4 panels each side. Each panel: 21.6 x 10 cm. Blue and tan on white). 1972? "Worthington Soyamel: Facts & recipes."

Letter from Allan Buller. 1981. April 29; Shurtleff & Aoyagi. 1984. Soymilk Industry and Market. p. 28. This was not an infant formula. It was sold in liquid form in 1 lb cans.

1209. **Product Name:** Entree [in Tomato Sauce, or Mushroom Gravy].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 2-2539.
Date of Introduction: 1954.
Wt/Vol., Packaging, Price: 20 oz or 4.5 lb can.
New Product–Documentation: Wholesale price list. 1954. Nov. 15. Sold in 20 oz or 4.5 lb cans.

Chopletter (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods." April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include Entree.

1210. **Product Name:** Veja-Links (New name for Meatless Wieners).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 2-2539.
Date of Introduction: 1954.
Wt/Vol., Packaging, Price: 19 oz can. Retails for $2.70 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: *Chopletter* (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods." April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include Veja Links.

Soybean Blue Book. 1965. p. 1121.

Letter from Allan Buller. 1981. April 29. Made of wheat gluten with soy flour or grits to complement the former's very low quality protein and to work as a filling and binding agent.

1211. Vollmer, Marion W. 1954. Food: Health and efficiency. Lessons in nutrition and healthful food preparation. Prepared for use in Home health education classes under the direction of the Medical Dept. of the General Conference of Seventh-day Adventists. Nashville, Tennessee: Southern Publishing Assoc. 111 p. 24 cm.
• ***Summary:*** This Seventh-day Adventist book on vegetarian nutrition (with recipes) mentions soy in several places. To help make breakfast a hearty meal, waffles may be "reinforced with soy" (p. 19). When cooking processed breakfast cereals, "they can be made more nutritious by adding wheat germ, rice bran, soy flour, etc." Soybeans are given as the first example of a high-protein food that should be eaten daily (p. 26), and soybeans, soybean products, and gluten are listed as good sources of protein (p. 31). A table showing the protein content of common foods includes Soyalac (dry soy milk), meat substitutes (commercial gluten steaks, Proteena or dark meat substitutes, Nuteena or light-meat substitutes), and soybeans (p. 32).

The following recipes are given: Baked soybeans (p. 34). Gluten (how to prepare and serve at home, p. 35-36). Gluten, mushroom, and potato pot pie (p. 36). Holiday loaf (with Vegemeat Burger or other ground gluten, p. 37). Mushroom dressing with gluten slices (p. 37).

A second edition was published in 1964.

1212. White, Ellen G. 1954. A call to medical evangelism and health education: Selections from the writings of E.G. White. Nashville, Tennessee: Southern Publishing Assoc. 47 p.
Address: USA.

1213. Crawford, R.E.; Bates, Floyd E. 1955. Until the day break: Obituary for Julius Gilbert White. *Southern Tidings.* March 30. p. 10.
• ***Summary:*** Julius Gilbert White was born in Jamaica, Vermont, on 23 Feb. 1878. He died on 3 March 1955, at age 77. On 28 July 1909 he was married to Alice Mabel Ware, who accompanied him in his work in China from 1916 to 1920. Sadly, his wife died on 19 Jan. 1922. Brother White collected and was very interested in the writings of Ellen G. White. He was especially interested in "the health phase of this message," and was "connected with the denominational health work in various capacities for approximately 40 years. He was a teacher in our medical school in Loma Linda, California, for five years prior to 1925, and later was engaged in institutional work and health lecturing under the sponsorship of Madison Sanitarium and other groups." He remarried on 10 Dec. 1942 to Jean Myrtle Aldeberg, who survives him.

1214. Walker, William Bentley. 1955. The health reform movement in the United States, 1830-1870. PhD thesis, Faculty of Philosophy, Johns Hopkins University, Baltimore, Maryland. 308 p. June. No index. 28 cm. [208 ref]
• ***Summary:*** Contents: Abstract of dissertation. Preface. Acknowledgements. 1. The genesis of sectarian medicine 1790-1830 (Dr. David Ramsay, Benjamin Rush, John Wesley, high level of scepticism toward systematic medicine in the USA and Europe, calomel and bleeding, the medical profession vs. "popular" medicine, the public is being "dosed and drugged" to death, decline of medical education standards, Andrew Jackson becomes president (1828) and the rise of the common man, many state legislatures

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repeal medical licensing laws in the 1830s and 1840s to allow complete freedom of medical practice, the rise of medical reform and popular sectarian movements, Elisha Perkins (1741-99), Samuel Thompson (1769-1843) and the Thomsonians / Botanics with materia medica, Samuel Hahnemann and homeopathy, rise of homeopathy in America from 1826, homeopaths and botanics are the two leading groups, reform movements and commutarian experiments, phrenology, Lorenzo and Orson Fowler).

2. A diet of 'bran bread' 1832-1837 (detailed biography of Sylvester Graham, temperance, first Graham boarding-house founded in New York in 1833, Dr. Reuben Mussey, chastity vs. sexual indulgence, Onanism, advocating a "purely vegetable diet," Treatise on Bread {1837} advocating unbolted wheat meal bread and "bran bread," bakers attack Graham, his obituary in *Boston Medical and Surgical Journal*).

3. The program of physical education 1832-1837 (detailed biography of Dr. William Andrus Alcott. Graduation from Yale [in Connecticut] as an M.D. in 1825; he wrote his graduation thesis on preventing pulmonary consumption. "It was Alcott's vegetarianism which first evoked hostile criticism. A Boston newspaper {Boston Recorder, 29 June 1838} stated: "That total abstinence from animal food is... demanded by the laws of our physical nature, is more than any man of sound mind will contend..." Prior to this his teachings had been virtually devoid of controversy. He was often at odds with the followers of Sylvester Graham and with the medical profession which was largely indifferent or even hostile to the progress of health reform. In 1835 he began publishing a periodical, the *Moral Reformer* to express his views on a comprehensive program for keeping good health, including disease prevention. He argued that a physicians role was to maintain health. Influence on Horace Mann).

4. The medical profession and personal hygiene 1835-1840 (Dr. Reuben Mussey of Dartmouth, Dr. Benjamin Rush (temperance and exercise), Dr. John C. Coffin, emphasis on hygienic reform, sectarian leader Sylvester Graham, Edward Hitchcock on diet (1831), Robley Dunglison (1798-1869), American Physiological Society (organized Feb. 1837 in Boston, Massachusetts; W.A. Alcott, president; major goals were attempting to enlist legislative action "in favor of the vegetable Graham system" and outlawing the use of medicines), phrenology, the Graham bran bread system, the second American Health Convention of 1839, Graham Journal of Health and Longevity (started 1837, edited by David Campbell), influence of Alcott vs. Graham, public ridicule, *American Vegetarian and Health Journal* (1853)).

5. Physiological reform 1837-1845 (Events at Oberlin College {Oberlin, Ohio}, David Campbell and S. Graham, biography of Isaac Jennings and Orthopathy, Mrs. Mary Gove (one of the first woman leaders of the health movement)).

6. The introduction of 'water cure' 1845-1850 (Priessnitz, Joel Shew, sitz baths, David Campbell, Mrs. Mary Gove, Fowlers & Wells, Orson Fowler, Samuel R. Wells, hydropathy, *Water-Cure Journal*, Dr. Russell Trall of New York {biography} and his synthesis).

7. The rise of the 'hygienic system' 1850-1860 (No. of water-cure houses rises from one in 1847 to 23 by 1851 to 62 by 1854, Dr. Conrad Wesselhoeft, *Green Mountain Spring*, New Lebanan Springs Water-Cure, David Campbell, Dr. Bedortha, Dr. James C. Jackson, Glenhaven and Dansville {from 1858; Livingston County, New York}, Dr. Russell Trall organizes American Anti-Tobacco Society of New York in April 1849, Rev. William Metcalfe of Philadelphia [Pennsylvania] and organization of the American Vegetarian Society in 1850, its history, public health and sanitary reform, Lemuel Shattuck, R.S. Houghton, Dr. J.C. Jackson and the National Health Convention {Dansville, Sept. 1859}, National Dress Reform Association, Miss Austin, Thomas Low Nichols).

8. The decline of the 'hygienic system' 1860-1875 (Death of Russell Trall severs one of last remaining links with an earlier generation of health reformers, effect of Civil War, Dr. James C. Jackson enters semi-retirement in 1871 at Dansville and dies in 1881, succeeded by his son Dr. James H. Jackson, need for American Health Reform Association, Dr. M.L. Holbrook, "as health reform became more prominently identified with physical culture, it gradually came to lose its identity as a system of medical practice," new discoveries in medical science by the 1870s, microorganisms, antisepsis and infection, the microscope, bacteriology, concept of immunity, reform in training procedures and licensing, reorganization of medical education from 1871 by president Eliot of Harvard, response of Botanics, Homeopaths, hygienists, three factors contributing to the decline of the health reform movement– economic weakness, the vogue of 'physical culture,' and the revival of scientific medicine, only the latter is decisive, health reform reduced to 'right living,' Dr. John Harvey Kellogg, hygiene movement lasted for 40 years, its legacy). 9. Aftermath; summary 1875-1880.

This is a good treatment of America's first health reform movement. Unfortunately, it has no index.

1215. *Madison Survey* (*Madison, Tennessee*). 1955. To the memory of Edward A. Sutherland–This issue of the Survey is affectionately dedicated. 36(7):1-8. July.

• ***Summary:*** Several inspiring tributes to the moving force behind Madison College for most of its early history. Page 7 contains a brief summary of his life. He was a doctor, a minister of the gospel, and above all a great educator. He was born on 3 March 1865 in a wagon train in Prairie du Chien, Wisconsin. He lived in Iowa as a young man and attended high school there. He graduated from Battle Creek College in the spring of 1890 with a bachelor's degree. That same

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year he married Sallie Bralliar, who died in 1953. In 1891 he was called to be head of the Bible department at Battle Creek College. He served as president of four colleges, including the new Walla Walla College in Washington from 1892 until Feb. 1897; Battle Creek College in Michigan from 1897. In 1901 he helped in moving Battle Creek College onto a beautiful farm in the countryside in Berrien Springs, Michigan. It was renamed Emmanuel Missionary College, and he continued as president until 1904; and Madison College from 1904 to 1946 when he was called to serve as secretary of the new denominational department known as the Association of Self-Supporting Institutions and the Commission on Rural Living. Having successfully accomplished this task, he returned to the campus at Madison that he loved.

In 1910 Dr. Sutherland and Dr. Magan began the study of medicine, earning their M.D. degrees in 1914.

He died on 20 June 1955 at the age of 90 years, 3 months, and 17 days.

Sandborn (1953, p. 23) states: "Professor Sutherland was also a reformer in certain respects concerning education and health. He had the tendency to push his reforms too rapidly and too independently and thus incurred the ill will of some denominational brethren. Three experiences might be considered examples of this. One was the instituting of a vegetarian diet in Battle Creek College, and another was the ploughing up of the Battle Creek Athletic field and planting it to vegetables. The third and probably most important was the moving of Battle Creek College out of the city onto a farm in Berrien County, Michigan."

1216. McLaughlin, Kathleen. 1955. Soy milk plant to aid Indonesia: Factory in Jogjakarta may build up nutritional values for all Southeast Asia. *New York Times.* Sept. 18. p. 21.

• ***Summary:*** Harry Miller, Jr., an American technician for the United Nations Food and Agriculture Organization, is supervising construction of a plant to produce soybean milk–in both liquid and powdered form, in Jogjakarta, Indonesia. The plant is expected to be in production by Feb. 1956, and by mid-year the dehydrated form should be available for domestic shipment.

More than 20 years ago, Mr. Miller's father, an American medical missionary in China, developed a good-tasting soybean milk there. By hard work, persistence, and ingenuity, he developed the equipment that is now being instaled in the Jogjakarta plant.

"By 1936, Dr. Miller had returned to Shanghai with his family, erected and equipped a factory, and was turning out 3,000 quarts of bottled soybean milk a day, at 7 cents (U.S.) a quart. Cow's milk cost 30 cents.

"Then the war with Japan erupted. In 1937, Japanese forces completely destroyed his plant and in 1938 the Millers left China for their home in the United States." In 1947 they returned briefly to China, then in 1948 they left again before the Communist advance.

Dr. Miller's patents have long since been relinquished to the public domain, with the exception of an interest retained in one soybean milk plant in California. As an F.A.O. expert, Harry Miller Jr. hopes to make his father's soymilk processing system as widely available as possible, especially in places like Indonesia, where it can offer the greatest benefits.

The United Nations Children's Fund [UNICEF], which has provided $350,000 worth of the Miller type equipment for the Jogjakarta plant, has agreed that half of the annual output of 600 tons of soybean milk, powdered or liquid, from this plant, will be distributed free of charge to Indonesians for the first 3 years.

1217. *J. of Agricultural and Food Chemistry.* 1955. Soy milk in Indonesia. 3(10):807. Oct.

• ***Summary:*** "A soybean milk plant is going up in Jogjakarta, Indonesia and should be in production by February. The product, already tested with mothers and children, is expected to get enthusiastic response. Not only is it palatable, but it is more easily assimilated by the underfed than is

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cow's milk. It is also higher in protein. The UN Children's Fund has furnished $350,000 worth of equipment for the 600 annual ton plant being built under direction of Harry Miller, FAO technician whose father, a medical missionary, developed the process."

Note: The soy milk is named Saridele.

1218. **Product Name:** Soy Flakes.
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1955.
New Product–Documentation: Price List. 1955. 5 oz.

1219. Battle Creek Food Company. 1955. Authorized dealer price list. Battle Creek, Michigan. 1 p. *
• ***Summary:*** Compared to the 1940 price list, the number of soy products sold by the company has decreased to the following: Soy Acidophilus (pint bottle). Soy Flour (2 lb or 5 lb). Soy Flakes (5 oz). Address: Battle Creek, Michigan.

1220. **Product Name:** Soybake (Roasted Full-Fat Soya Flour).
Manufacturer's Name: H.J. Langdon. Made in Melbourne, Australia, by F.G. Roberts' Health Foods.
Manufacturer's Address: Australia.
Date of Introduction: 1955.
Ingredients: Soybeans.
New Product–Documentation: Letter from Paul Smith of Soy Products of Australia Pty. Ltd. 1995. March 14. "Soyvita has only ever been used as a tradename for debittered full fat soy flour since 1951. Initially it was made using imported soybeans, but from 1954 it was made from Australian-grown soybeans. The tradename 'Soybake' was used for the same product packaged under the H.J. Langdon's name and address from 1955 to mid-1991, when it was abandoned due to a rationalisation of packaging and product lines. H.J. Langdon now buys the product in the 'Soyvita' packaging."

1221. Lager, Mildred. 1955. How to use the soybean: A plus factor in modern nutrition. Burbank, California: Published by the author. Printed at La Sierra College Press, Arlington, California. 115 p. Index. 23 cm. Lay-flat comb bound.
• ***Summary:*** Contents: Preface. Nutritional nuggets–food value of soybeans. The versatile soybean. Soup to nuts–soybeans and soy products. Recipes: Green soybeans. Dry soybeans. Sprouted soybeans. Roasted or toasted soybeans. Meat-substitute dishes. Soy-enriched meat dishes. Soy noodles, macaroni, spaghetti. Sauces and gravies. Soups. Salads. Dressings. Soy spreads. Soy milk. Tofu or soy cheese. Soy butter (made from finely ground soybeans or soy flour, it may be raw or roasted, and resembles peanut butter; p. 73-74). Soy cereals. Soy desserts. Soy candies. Soy beverages. Soy-flour recipes. Breads and muffins. Pancakes and waffles. Soy gluten recipes. Baking-powder biscuits. Pastry. Cookies and doughnuts. Cakes. Contains 350 recipes.

A so-called "second edition" of this book was published in 1959, but it was identical to this first edition.

Ad in *Let's Live.* 1960. April. p. 39. Mildred Lager Publications [perhaps her home] is now located at 4118 Warner Blvd., Burbank, California. Mildred died in Aug. 1960. Address: Burbank, California.

1222. Battle Creek Food Co. 1955? Pointers: On Battle Creek Sanitarium health foods. Battle Creek, Michigan. 16 p. Undated. Illust. No index. 16 cm.
•

Summary: Contents: The story of Battle Creek Foods (The Battle Creek Food Company was established nearly 50 years ago). Agar–The laxative from the sea. Bran Biscuit–A crisp wafer. Dormi–Promotes sound, restful sleep (this is one of

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the newest Battle Creek Health Foods). Fig & Bran–The regulating breakfast food. Fig & Bran Cookies–Pure, tasty, wholesome. Food Ferrin–A pleasant way to get the iron you need. Battle Creek gluten products–for special diets (Toasted Bran Gluten Flakes, Gluten Bread, Gluten Meal, Sanitarium Gluten Flour, Pure Gluten Biscuit). Health Chocolates–Delicious health candy. Lacto-Dextrin–An internal cleansing food. Laxa–The laxative biscuit. Malted Nuts–A powdered nut milk (A "palatable vegetable substitute for cow's milk, it is a splendid food for babies and growing children"). Meltose–A syrup from grains ("It is a well-known fact that cane sugar does not agree with many persons." It may cause acid stomach. In appearance, Meltose "resembles strained honey"). Meltose sugar (a powdered form of Meltose; it is "much more easily assimilated than ordinary sugar, and is a better source of energy"). Minute Brew–A bracing cereal beverage ("resembles coffee but contains no caffeine"). Paralax with agar–An efficient regulator ("...a most effective remedy for constipation. No laxative drug of any kind has been added. A highly refined mineral oil using Agar as an emulsifying agent"). Paramels–The candy-like constipation remedy ("cubes of pure mineral oil... sweetened with Meltose sugar"). Protose–A vegetable meat that satisfies ("made entirely from nuts and grains"). Psylla (dark or white)–A seed that fights constipation [psyllium]. Sanitarium Cooked Bran–a bran cereal (serve with cream and sugar for constipation). Sanitarium Fig & Bran Flakes–A new flavor in breakfast flakes (Vitaminized, enriched with food iron and vitamin B; combines "Two of Nature's best laxative foods"). Savita–a rich, vitamin B flavoring extract ("concentrated yeast extract in paste form..." Rich in Vitamin B). Whole wheat flour–Stone ground. Cooked whole wheat–A ready-to-eat breakfast food. Zo–A Vitamin B breakfast food (crisp, crunchy). Sanitarium canned fruits and vegetables (in 20 oz cans). On the rear cover, with order form: Send for these valuable booklets free!: "Healthful Living." "Modern Health Recipes and Menus."

Note: This booklet was sent to Soyfoods Center by Chef Akasha Richmond (chef to the stars), of Los Angeles as a gift (Feb. 2004). Address: Battle Creek, Michigan.

1223. Cross, Leslie J. 1956. A Veganmilk Association. *Vegan* (*The*) (*England*) 9(8):2. Spring. [1 ref]

• ***Summary:*** "Provided sufficient support is forthcoming, an effort will be made as early in 1956 as possible to form an organization with the above suggested title, for the following purpose: To produce and make available to the general public in Great Britain a milk. the ingredients of which would be of plant origin; which would satisfy nutritional requirements; and which would be palatable, attractive, and simple to use for the purposes of which dairy milk s now used.

"The Association would probably function in three main stages: (1) It would conduct an enquiry into progress made in this and other countries in the manufacture of non-animal milks [Note: see Harry W. Miller, 1944. "The Story of Milk from the Soya Bean," 37 p.]. (2) Based upon information thus collected and collated, it would consider the problems connected with the successful manufacture and sale of such a milk upon the general market in this country, including the question of scientific research and experiment. (3) Upon the successful manufacture on a small scale of an acceptable, the association would consider the question of large-scale manufacture and sale, including the organization required to promote such manufacture and sale; such, for example, as the formation of a Limited Company.

"While the work of the Association would be largely motivated by the ideals of vegetarianism and veganism, it would nevertheless function as a body with a precise practical job to do, and membership would be open to anyone prepared to support its work.

"The work would take a number of years and require considerable financial support. It would call for sustained and high endeavour, and though difficult, would be by no means impossible to achieve. Its successful outcome would be of immense value in many ways.

"Any persons interested in the proposal should send their name and address to Leslie J. Cross, Uxbridge, Middx. [Middlesex], who will, if support is sufficient act as convener of an inaugural meeting."

Note: This is the earliest document seen (Aug. 2013) that uses the word "Veganmilk" to refer to plantmilk. Address: Vice-President, The Vegan Society.

1224. *Today's Food.* 1956-1973. Serial/periodical. Riverside, California: Loma Linda Foods.

• ***Summary:*** The place of publication is given as Arlington, California from Spring 1960. The Heritage Room of the Del E. Webb Memorial Library at Loma Linda University in Loma Linda, California, owns the following volumes and years: 1(1956)-5(1960), 6(1961)-12(1967), 13(1968)-14(1969), 15(1970)-18(1973). Address: Riverside, California.

1225. White, Herbert Clarence. 1956. California meeting impresses physicians: Display of organically-grown produce earns favorable comment from Los Angeles medical group. *Organic Gardening and Farming* 3(5):70-71. May.

• ***Summary:*** "January 3, 4, and 5 of 1956 were three great days in the annals of Organiculture out here on the West Coast, During the history-making event, nearly 7,000 members of the Los Angeles County Medical Association were brought face to face with the basic principles of natural farming and gardening under the most favorable environment possible."

At the annual mid-winter convention, Foods for Life, Inc. presented a magnificent exhibit of organically-grown fruits, vegetables, nuts and grains. It was favorably received, and so far as the writer could tell, not one unfavorable or

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disparaging comment was heard from these distinguished physicians about the value or soundness of the Foods for Life enterprise, which involves the growing and distribution of all many kinds of organic foods; all are grown without the use of chemical fertilizers or poison sprays.

"It is heartening to know that Dr. Jonathan Forman's basic concept of 'Creative Medicine' seems to be gaining ground among his fellow Allopathic practitioners. For the benefit of our readers it might be of interest to re-state Dr. Forman's dynamic views on this subject. Here is a paragraph from *The Land*, of which Dr. Forman is editor.

"'It is no oversimplification to say that *our health comes from the soil.* No matter how many physicians and health officers we train, and how much *curative or preventive medicine* they may practice, we cannot attain optimal health until they and we have turned our attention to creative medicine, and thereby learned to keep and even improve our health. To build and maintain good soil is the real fundamental service. Creative medicine must be founded on growing the best foods. Thus alone can create real health for our people–through creating a sound and prosperous agriculture.'"

"The most important single attraction of the Foods for Life booth was the display of succulent, garden-fresh organic produce."

"But the biggest 'hit' of all was the bakery display. In front of the array of Foods for Life loaves, trays of delicious peanut-butter and creamed-cheese sandwiches were placed. These, of course, were made from the new 100% whole-grain loaf we have mentioned. A leaf or two of crisp bronze lettuce was also incorporated into each delightful sandwich. One of these dainty 'delicacies' was offered *free* to each visitor at the booth. The almost overwhelming popularity of this 'sandwich feature' is indicated by the simple fact that that nearly 3,000 of these tantalizing, titillating morsels 'disappeared' during the three day medical conclave.

Note: The founder and head of Food for Life, Inc. was Dr. George Johnstone, a Seventh-day Adventist physician, who also founded Behrens Memorial Hospital in Glendale, California. Address: Emmaus, Pennsylvania.

1226. Chen, Philip S. 1956. Heart disease and soybeans: Will recent medical discoveries mean increasing importance for soybeans? *Soybean Digest.* June. p. 22, 24.
• ***Summary:*** Philip Stanley Chen was born in 1903. Address: Prof. of Chemistry, Atlantic Union College, South Lancaster, Massachusetts.

1227. *CME Alumni Journal* (*College of Medical Evangelists, Loma Linda, California*). 1956. Harry Miller, M.D., O.B.B.S. July. p. 44.
• ***Summary:*** Dr. Harry W. Miller, class of 1902-a, "recently returned from Formosa with the highest honor the Chinese Nationalist Government can confer, the Order of the Brilliant Blue Star. This is comparable to the U.S. Congressional Medal of Honor.

"Dr. Miller received the award personally from General Chiang Kai Shek, at a party at the President's mansion with the Generalissimo and Madam Chiang.

"The award came as a climax to Dr. Miller's last contribution to medical work in that area. For the past two years he has been in Formosa where he established and has been director of the new SDA Taiwan Sanitarium and Hospital." A photo shows Dr. Miller bowing as he receives the award and shakes hands with Chiang Kai Shek.

Note: Dr. Miller graduated from the American Medical Missionary College in Battle Creek, Michigan, in 1902. The commencement address was given by Dr. John Harvey Kellogg. According to the 1996 Seventh-day Adventist Encyclopedia, there was no organizational or legal connection between American Medical Missionary College and the College of Medical Evangelists (CME).

1228. **Product Name:** Loma Linda Soy Milk (Powdered, and Liquid).
Manufacturer's Name: Loma Linda Food Co., Eastern Div.
Manufacturer's Address: P.O. Box 388 (Wooster Road), Mount Vernon, Ohio.
Date of Introduction: 1956.
New Product–Documentation: Soybean Blue Book. 1956. p. 99. No brand name is given, but the product includes Soyalac. This is right after Loma Linda bought Dr. Harry Miller's International Nutrition Laboratory. *Soybean Digest Blue Book.* 1970. p. 117. "Powdered and liquid soy milk in five flavors."

1229. **Product Name:** Instant Soyamel (Soy Milk. Based on Isolated Soy Protein) [Powdered, or Liquid, in Plain, or Malt Flavors].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio.
Date of Introduction: 1956.
New Product–Documentation: See next page. Soybean Blue Book. 1958. p. 88. "Processing and packing powdered soy milk." No brand name given. Wholesale price list. 1957. April 1; Letter from Allan Buller. 1981. April 29. Shurtleff & Aoyagi. 1984. Soymilk Industry and Market. p. 28. This was the "world's first soymilk to be made from soy protein isolate; the isolate was manufactured by Gunther Products in Illinois. This was not an infant formula." Sold in 12 oz, 3 lb, or 15 lb sizes.

1230. Chen, Philip S.; Chen, Helen D. 1956. Soybeans for health, longevity, and economy. South Lancaster, Massachusetts: The Chemical Elements. xii + 241 p. Illust. Index. 21 cm. 2nd ed. Jan., 1962, 242 p. [24 ref]

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• ***Summary:*** See next page. A comprehensive review of the subject. Contents: Preface, by the author (South Lancaster, Massachusetts, July 1956). Foreword, by Geo. M. Strayer, Vice-President and Secretary-Treasurer, American Soybean Association. Introduction. Part I: Nutritive value of the soybean. 1. Protein (incl. Dr. Wolfgang Tiling of Hamburg, Germany; Dr. Harry Miller). 2. Fat (incl. phosphatides, sterols and hormones). 3. Carbohydrates and caloric value. 4. Minerals. 5. Vitamins. 6. Soybeans and world population. 7. Soybeans and disease (incl. Dr. Wolfgang Tiling of Germany).

Part II: Soy products. 8. Soybean oil: Composition and properties, processing and refining, reversion, uses, phosphatides, margarine, mellorine (vegetable frozen dessert). 9. Soybean oil meal: Heat treatment, Gelsoy, Multi-purpose Food. 10. Soy flour: Uses, soy bread vs. enriched white bread. 11. Soy milk. 12. Soy cheese (or soybean curd, "aptly described by the Chinese as 'the meat without bones'"–incl. pressed tofu sheets and yuba). 13. Soy sauce: Preparation of kojis, brine fermentation, production yields, microorganisms are available. 14. Soybean sprouts.

Part III: Soybean culture and preservation. 15. Soybean culture: Two types of soybeans (commercial field vs. edible or vegetable varieties), inoculation, fertilizer, cultivation,

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harvest. 16. Preservation of soybeans: Shelling, canning, freezing, dehydration, harvesting dry mature soybeans.

Part IV: Recipes. 17. Soybeans and soybean pulp: Green or fresh soybeans, dry soybeans, soybean pulp ("prepared by pressing cooked soybeans through a coarse sieve or by grinding them in a food grinder"), recipes (incl. Soyburger, Scalloped green soybeans, and Roasted soybeans–dry roasted or deep-fried (p. 151). Describes how to make wheat gluten at home and praises monosodium glutamate for its ability to improve the flavor of recipes–though its use is called for only in the recipe for Soyburger). 18. Soy flour: Breads, cakes, cookies, pies, soups, other recipes (A recipe for Wafers, p. 180, calls for "½ cup roasted soybeans, finely chopped").

19. Soy grits and soy flakes. 20. Soy milk. 21. Soy cheese. 22. Soybean sprouts.

Appendices: A. Soybean utilization (chart). B. Manufacturers and handlers of soy foods (Source: 1956 *Soybean Blue Book*). C. References.

Chapter 1, "Protein," begins: "The soybean is best known for its high protein content (p. 7). It then discusses the work of Dr. Harry Miller (p. 14-15).

Chapter 15, "Soybean Culture," describes how to grow soybeans in a garden. Pages 126-27 discuss the two types of soybeans: the commercial field type and the edible vegetable type. Five major differences between the two types are discussed (p. 126). The edible varieties are larger in size, do not yield as heavily (though they yield more heavily than snap beans or lima beans), are more prone to shatter as they near maturity in the field, are superior in flavor, texture, and ease of cooking, and some edible varieties are also superior in the manufacture of soybean flour, soybean milk, roasted beans and other products. Table 31 (p. 130) lists eleven varieties of edible soybeans: Very early–Giant Green. Early–Bansei, Fuji. Midseason–Hokkaido, Jogun, Willomi. Late: Illington, Imperial, Funk Delicious, Emperor, Higan. Commercial–Illini.

Chapter 16, "Preservation of Soybeans," describes how to preserve "green soybeans" by canning, freezing, and dehydration.

Photos show: (1) A sack of Lincoln soybeans (facing p. 1). (2) Soybean plants, showing pods and leaves (p. 3 and 4). (3) A beam balance with a small amount of soy flour balancing many animal products. "The protein value of soy flour: 1 lb. of soy flour contains protein values equal to 2 lbs. beef, or 34 eggs, or 6 quarts milk." Source: Health and Character Education Institute (p. 6). A similar photo (p. 24) states: "1 lb of soy flour contains food calories equal to 3½ lbs beef, or 3 quarts milk, or 29 eggs. (4) Two views of a child. Left, suffering from marasmus. Right, after six months on a soy milk diet. Courtesy Dr. Wolfgang Tiling (p. 62). (5) A machine at the Northern Utilization Research Branch of USDA treating soybean oil with alkali (p. 72). (6) The distribution of MPF [Multi-Purpose Food] to starving Indian children (p. 91; Courtesy Meals for Millions Foundation). (7) Quaker City No. F4 grinding mill (p. 102; Courtesy Straub Co., 4059 Ridge Ave., Philadelphia, Pennsylvania). (8) Early soy cheese (tofu) production in the United States (p. 108; perhaps at Madison Foods). (9) The Northern Utilization Research Branch, Agricultural Research Service, USDA–shows outside of the huge building (p. 113). (10). How to grow soy sprouts in a glass jar at home (p. 119). (11) Well nodulated soybean roots (p. 129; Courtesy The Nitragin Co.). (12) Baked soybeans in a crock (p. 144). (13) Soy flour used in numerous baked products (p. 159; Courtesy ADM). (14) Griddle cakes [pancakes] made with soy flour brown quickly (p. 173). (15) Soy peanut butter cookies (incl. peanut butter and soy flour; p. 185). (16) Soy grits in a glass jar (p. 198). (17) Freshly-cooked crisp soybean sprouts in a raw vegetable salad (p. 219).

Note 1. The first printing of this book (1956) was dedicated "To Li Yu Ying and William J. Morse, *The Soybean Champions of the Eastern and Western Hemispheres,"* but by the second printing (April 1957) the dedication had changed "To William J. Morse and Harry W. Miller, *The Soybean and Soy Milk Champions of Our Time."*

The publisher of this third printing was unable to sell all the books printed, so Chen apparently arranged for a company named "Outdoor Pictures" (Box 1326, Escondido, California) to sell them. On the title page, Outdoor Pictures pasted their name and address over that of "The Chemical Elements."

Note 2. According to the *National Union Catalog*, Philip Stanley Chen was born in 1903. The rear cover states that he was born in China and is now a naturalized U.S. citizen. He is a graduate of Emmanuel Missionary College [in Berrien Springs, Michigan] and Michigan State University. Before writing this, his first book on diet, health, or soybeans, he wrote several books on chemistry: (1) The Chloro Derivatives of *m*-cresol. 1933. Easton, Pennsylvania: Mack Printing Co. 7 p. (Abstract of his PhD thesis, Michigan

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State College of Agriculture and Applied Science); (2) *The Chemical Elements, Rev. ed.* 1948. South Lancaster, Massachusetts: Chemical Elements (fold chart). (3) 500 Syntan Patent Abstracts, 1911-1950. 1950. South Lancaster, Massachusetts: Chemical Elements. 125 leaves. (4) Syntans and Newer Methods of Tanning. 1950. South Lancaster, Massachusetts: Chemical Elements. 128 p.

In 1962 Chen wrote *A New Look at God,* published by Chemical Elements (288 p.). Address: 1. Prof. of Chemistry, Atlantic Union College, South Lancaster, Massachusetts; 2. National Science Foundation Fellow, Cornell Univ.

1231. Chen, Philip S.; Chen, Helen D. 1956. Tables (Document part). In: P.S. Chen and H.D. Chen. 1956. Soybeans for Health, Longevity, and Economy. South Lancaster, Massachusetts: The Chemical Elements. 241 p. [24 ref]

• ***Summary:*** Tables show: (1) Soybean production in the United States, 1924-1958 (p. 2). (2) Essential amino acid content of some foods (calculated as percent of amino acid in sample). Foods include: Extracted soybean oil meal, whole milk, whole eggs, beef loin, patent wheat flour (p. 8). (3) Protein efficiency of a number of proteins (incl. whole milk 2.9, cottonseed flour 2.0, peanuts 1.9, soybean flour 1.8, casein 1.7, patent flour 1.00) (p. 11). (4) Biological value of food proteins for human adults (incl. whole eggs 78, milk 74, meat 72, soy flour 65, peanut flour 42, white flour 41) (p. 11). (5) Supplemental values of soy flour and milk for wheat flour (p. 12). (6) Nutritional quality of soy flour and milk solids in bread (p. 13). (7) Fat content of several common foods (p. 16). (7A) Chemical composition of vegetable oils (in per cent) (p. 18). (8) Carbohydrate content of soybeans (Street & Bailey) (p. 21). (9) Caloric values of various cereals and legumes (p. 22). (10) Mineral content of soybeans (p. 25). (11) Calcium, phosphorus and iron content of soybeans (p. 26). (12) Availability of iron in different foods (p. 27). (13) Availability of iron in several Hawaiian foods (p. 28). (14) Alkalinity of various foods (p. 29). (15) Vitamin content of soybeans and soybean oil meal (p. 32). (16) The vitamin B-1 content of some common foods (milligrams per 100 grams) (p. 34). (17) The vitamin B-complex content of soy flour as compared with wheat flour (per 100 grams of flour) (p. 35). (18) Choline content (dry weight basis) (p. 37). (19) Production of fats and oil in the United States in 1953 (p. 67). (20) Physical and chemical characteristics of soybean oil (p. 68). (21) Chemical composition of soybean oil (p. 69). (22) Protein concentrates used for feed in the United States, 1954-1955 preliminary (p. 83). (23) Correlation of volume of loaf and urease content of soy flour used in making bread (p. 86). (24) Analysis of nutritive elements (p. 92). (25) Soy flour standards (p. 94). (26) The growth-promoting values of the proteins of soybean flour, peanut flour, and cottonseed flour and their values as supplements to the proteins of patent wheat flour (p. 99). (27) Composition of soy milk and cow's milk (p. 103). (28) Some precipitating agents for soy milk (p. 107). (29) Composition of soybean curd (p. 109). (30) Composition of soy bean sprouts vs. mung bean sprouts (p. 122). (31) Eleven varieties of edible soybeans (p. 130). Address: 1. Prof. of Chemistry, Atlantic Union College, South Lancaster, Massachusetts; 2. National Science Foundation Fellow, Cornell Univ.

1232. Chen, Philip S.; Chen, Helen D. 1956. The work of Dr. Harry Miller with soy milk (Document part). In: P.S. Chen and H.D. Chen. 1956. Soybeans for Health, Longevity, and Economy. South Lancaster, Massachusetts: The Chemical Elements. 241 p. See p. 14-15. [24 ref]

• ***Summary:*** Chapter 1, "Protein," begins: "The soybean is best known for its high protein content (p. 7). It then discusses the work of Dr. Harry Miller (p. 14-15): "The one who has done more with soy milk than any one else is Dr. Harry W. Miller, Director of Research, International Nutrition Research Foundation. He began his work with soy milk shortly after 1925 when he was in China as a medical missionary and saw the need of making a preparation for the feeding of babies and children. Referring to his work with soy milk, he said,'I regarded that work as of far greater importance than the building up of the sanitarium because it had to do with the preservation of thousands of lives that otherwise would be lost if they did not have a proper substitute for mother's breast milk, because cow's milk is beyond the economic level of the Chinese people and almost all the Oriental races. We used this milk extensively and a long period of experimental work was carried on. Studies were made of the development of babies and children as to their weight gains, their height gains, their disposition, their skin texture, their hair development, their dentition and bone development. We finally published the article in the Chinese Medical Journal in 1937.'

"Dr. Miller was the first to put out a true soy milk, one that is homogenized and built to any formula. Finally he made it into a powdered milk by spray drying. Both 'Soyagen' and 'Soyalac,' which he perfected according to his patented process, are now widely used by infants and children who are allergic to cow's milk, as well as by grown-ups who prefer a vegetarian diet.

"Besides his factory in this country, Dr. Miller has established soy milk plants in Japan and Formosa [Taiwan], and has helped the United Nations build a plant in Indonesia. His formula is used by three large soy milk companies in Hong Kong, one of which puts out 75,000 bottles a day." Address: 1. Prof. of Chemistry, Atlantic Union College, South Lancaster, Massachusetts; 2. National Science Foundation Fellow, Cornell Univ.

1233. Chen, Philip S.; Chen, Helen D. 1956. Soy cheese (Document part). In: P.S. Chen and H.D. Chen. 1956. Soybeans for Health, Longevity, and Economy. South

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Lancaster, Massachusetts: The Chemical Elements. 241 p. See p. 106-10. Chap. 12.

• ***Summary:*** "Soy cheese" is tofu. Starts by describing how to make tofu. A very interesting photo (p. 108) shows "Early soy cheese production in the United States" (probably at Madison College in Madison, Tennessee).

"Soybean curd contains 7 to 9 percent of highly digestible protein with little carbohydrates and no crude fiber, and therefore has been aptly described by the Chinese as 'the meat without bones'" (p. 108). "From the soybean curd are derived three products of which the Chinese are very fond. They are Tofu Kan [pressed tofu], Tofu P'i [pressed tofu sheets] and fermented soybean cheese [fermented tofu]. These are briefly described below.

"Tofu Kan, or dried soybean curd, is made by filling a small straw or cloth bag with soybean curd and subjecting it to great pressure to reduce further the water content. The product [each cake] measured about 2½ by 2½ by ¼ inches and has the consistency of a soft rubber eraser. The dried soybean curd thus prepared may be seasoned with burnt millet-sugar or soy sauce flavored with tea or other spices.

"Tofu P'i, or soybean curd skin, is formed by pressing soybean curd between sheets of cloth under great pressure. The formed Tofu P'i is like a sheet of canvas about one foot square. It is generally used as a wrapper for sausage.

"Fermented soybean cheese is made in several forms and with different flavors. They are prepared by exposing cubes of soybean curd (from ½ by ½ by ¼ to 1½ by 1½ by ¼ inches) on matting to mould for a week or longer, and then placing it is salted rice wine or salted soy sauce to age for 6 months to a year.

"Besides soybean curd and other soybean products, another food product derived from soy milk that is popular among the Oriental people is Yuba. The Yuba is the name given to the protein film that forms on the surface of soy milk when the latter is heated nearly to the boiling point. It is removed with sticks, hung on a line and dried in the form of sheets or sticks. Before being use, it is wetted back by soaking in water. The Yuba in sheet form is like Tofu P'i and finds similar uses."

Note 1. This is the earliest English-language document seen (Oct. 2012) that uses the term "protein film" to refer to yuba.

Note 2. This is the earliest document seen (Nov. 2010) in which the Chinese author (Philip S. Chen, Ph.D.) uses the Japanese word "Yuba" to refer to this delectable soyfood, which is popular in both China and Japan. Its Chinese name makes no sense when translated into English–"bean curd skin." Dr. Chen was a Seventh-day Adventist. Address: 1. Prof. of Chemistry, Atlantic Union College, South Lancaster, Massachusetts; 2. National Science Foundation Fellow, Cornell Univ.

1234. Chen, Philip S.; Chen, Helen D. 1956. Soybean sprouts (Document part). In: P.S. Chen and H.D. Chen. 1956. Soybeans for Health, Longevity, and Economy. South Lancaster, Massachusetts: The Chemical Elements. 241 p. See p. 117-22. Chap. 14.

• ***Summary:*** Begins by discussing the research of Dr. Clive McCay at Cornell University on soybean sprouts, then gives the 8-step procedure for sprouting soybeans at home recommended by Cornell.

Dr. Chen then adds: "The sprouts will be fully grown in four to six days when they are around 1½ to 2 inches in length. They should be taken out of the vessel before rootlets have shown their appearance. After the sprouts are washed to free them from loose hulls or seed coats and excess water, they are ready to be used in cooking, stored in the refrigerator, or blanched for two minutes and placed in a deep freezer.

"The writer has found that either 30-ounce fruit juice cans or 3-pound shortening cans are very convenient for use in sprouting soybeans. The cans were perforated with small holes at the bottom. After the soaked beans were placed in the cans, they were then covered, and left on the draining board of the kitchen sink to drain. The beans were watered regularly after each meal when the dishes were washed.

"For those who might encounter difficulty in their first few experiments and become discouraged, the following suggestions are offered:

"Beans will become moldy or even rot during sprouting if they are too old and lack germination. The only remedy for this is to use new seeds with high germination values.

"In case the decay of the beans is due to bacterial action, the use of a disinfectant may be resorted to, provided its use is limited to not more than one-half hour treatment. The disinfectant to be used may be in the form of chlorinated lime (bleaching powder) or any of the soluble hypochlorite solutions such as Chlorex [sic, Chlorox?], Dazzle, Oxo, or Savol. The use of water containing one teaspoon of chlorinated lime or other bleaching solutions in three

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gallons of water once a day will be sufficient to discourage the growth of mold or bacteria which cause spoilage of the beans. Frequent changing of soaking water was found by some to be just as effective as bleaching solution.

"It might be well for the housewife to gain some experience from sprouting mung beans before attempting to sprout soybeans. Mung beans are the tiny green beans out of which the bean sprouts used in chop suey dishes are prepared. They may be purchased in Chinese grocery stores in any Chinatown, and they never give trouble in sprouting. While they are easy to cook and widely used, they cannot compare with soybean sprouts in flavor and food value."

Two photos show soybeans being sprouted in an inverted glass fruit jar in a sink (Courtesy Nebraska Extension Service).

A table (p. 122, based on Li and Grandvoinnet 1911-1912) compares the nutritional composition of soybean sprouts and mung bean sprouts. Soybean sprouts contain 14.73% nitrogenous materials (protein) compared with only 3.41% for mung bean sprouts. Address: 1. Prof. of Chemistry, Atlantic Union College, South Lancaster, Massachusetts; 2. National Science Foundation Fellow, Cornell Univ.

1235. Powell, Horace B. 1956. The original has his signature–W.K. Kellogg. Englewood Cliffs, New Jersey: Prentice-Hall, Inc. 358 p. Illust. No index. 24 cm.
• ***Summary:*** The lack of an Index and of any bibliographic references greatly reduce the value of this book.

W.K. Kellogg built a mighty breakfast cereal manufacturing company and established a major charitable foundation. In 1906 W.K. Kellogg started his own company making corn flakes.

"In February of this year [1956] the Kellogg Company observed the fiftieth anniversary of its founding, and June will complete the W.K. Kellogg Foundation's twenty-fifth year as the vehicle of its founder's investment in people."

Until the late 1890s consumption of peanuts in America was mostly roasted in the shell. However, in 1894 Dr. John Harvey Kellogg, M.D., an eminent health reform advocate and director of the Sanitarium in Battle Creek, Michigan, developed and introduced peanut butter as a nutritious, easily digested health food for patients [see p. 94-95].

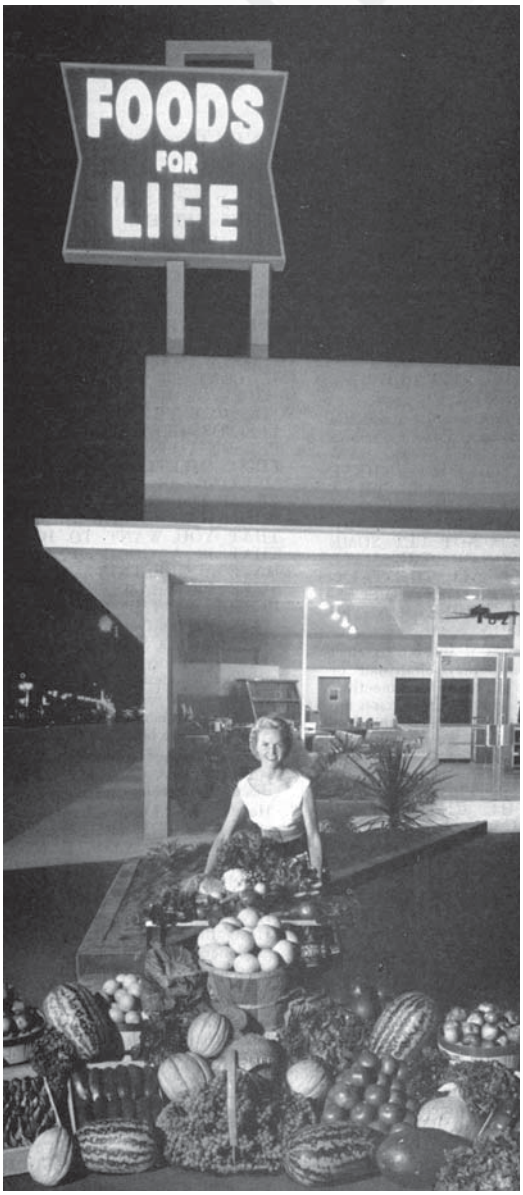
Note: A short article titled "Corn Flakes maker Kellogg deceased," in an unknown Oct. 1951 magazine states that "W.K. Kellogg died on 6 Oct. 1951, at age 91. He credited his longevity to his diet based on Kellogg's Corn Flakes and other vegetarian foods. He developed the first wheat flake in 1894 at his brother's sanitarium in Battle Creek, Michigan, and promoted the product tirelessly. He spent millions on charity.

"In 1907 a conflagration engulfed one of his factories. Will Keith was calm. 'The fire is of no consequence,' he said. 'You can't burn down what we have registered in the mind of the American woman.'" A photo shows W.K. Kellogg and his seeing eye dog standing in front of the W.K. Kellogg Foundation.

1236. White, Herbert Clarence. 1957. Natural Food Associates in action. *Natural Food and Farming* (*Atlanta, Texas*) 3(10):12-14. Feb.
• ***Summary:*** Heroes of the Natural Foods Movement include Dr. Joe Nichols, Paul Pfund, Dr. Fred Miller, Earl Striplin, Leonard Wickenden, Dr. Royal Lee, and many others.

"But in this brief story I want to bring to our membership the thrilling story of another N.F.A. member from the medical profession who has gone 'all the way' in an effort to bring 'Creative Medicine'–not only to his family, and to the patients in his 100 bed Behrens Memorial Hospital [Glendale, California], but to the *entire community.*

The article then focuses on the story of Dr. George A.



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Johnstone of Glendale, California, the Glendale, California, founder and president of Foods for Life, Incorporated, and of its first Foods For Life market and lunch counter, which opened in the late spring of 1950 in Glendale, California (on South Verdugo Road).

Dr. Johnstone has three farms–one in North Dakota and two in Southern California. After hearing the writer speak, he said: "I want to get onto this organic program–and Fast! Will you help me?" And that is how Foods for Life was conceived. Three months later the Foods for Life enterprise was "born" as a legal corporation with nearly twenty of Dr. Johnstone's medical associates.

"One of the first projects of the new corporation was to make Dr. Jonathan Forman's concept of 'Creative Medicine' not merely a 'dream' but a 'living reality' in the lives of the Glendale community. Southern California organic farmers from Escondido to Santa Barbara were sought out and their garden-fresh, vitamin-packed, mineral-rich produce was made available to city dwellers in the greater Los Angeles Metropolitan area."

The second step was to establish the Foods for Life store.

One photo shows the outside, and three show the inside of the huge, modern natural foods supermarket–the first of its kind in the United States.

Note 1. Dr. George A. Johnstone was a Seventh-day Adventist and graduate of the College of Medical Evangelists (now Loma Linda University) School of Medicine Class of 1923.

Note 2. According to a small ad in *Modern Nutrition* magazine, in about 1961 Foods for Life was located at 821 E. Broadway, Glendale, California. It sold "Organically grown and unsprayed fruits and vegetables. Roger Jessup and Alta Dena certified Milk. Natural Vitamins and Minerals."

Note 3. In 1968, Dr. Jonathan Forman established the Jonathan Forman Gold Medal Award, honoring those who had contributed to the field of clinical ecology. Dr. Forman was also president of Friends of the Land–and a professor of the history of medicine at Ohio State University.

1237. Nichols, Joe. 1957. President's address, 1957 national convention. *Natural Food and Farming* (*Atlanta, Texas*) 3(11):5, 8-10. March.

• ***Summary:*** "Natural Food Associates was organized in January, 1953, at the Normandy House in Chicago, Illinois. A small group of men and women met together in an effort to effect a national organization which would have for its objective, the teaching of the advantages of natural, poison-free food and natural organic farming methods. This was not the beginning of the organic movement in America. Many people and a few organizations had practiced organic farming and had taught the values of natural foods for many years. Long before Sir Albert Howard's book, *An Agricultural Testament*, was published in this in this country in 1946, there were organic farmers scattered all over this nation. Some of the people at our first Chicago convention had been taught organic farming by their fathers. The publication of Sir Albert's book and the work of the Mr. J.I. Rodale of Emmaus, Pennsylvania, did much to increase the interest of thousands of American farmers. Books by Friend Sykes and Sir Lionel Picton in England, and the work of Lady Eve Balfour and her Soil Association, with

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members scattered all over the world increased interest in natural farming methods and emphasized the declining nutrition of both man and beast. Sir Robert McCarrison for years had tried to interest the medical profession in better nutrition. Our own Dr. Royal Lee, Dr. Henry Trautmann, Dr. Jonathan Forman, Dr. Fred Miller, Dr. Coda Martin, Dr. Ray Evers and many, many others have recognized the values of natural foods grown on fertile soils for years. Dr. James Asa Shields of Richmond, Virginia, has been writing about the relationship of soils to health for a long time. The American Academy of Nutrition, organized on the West Coast in 1936, was an attempt by a group of doctors and dentists to find and publicize the truth about nutrition in relation to metabolic disease. Dr. E.E. Pfeiffer, who is perhaps the world's greatest soil scientist, has proved the principles of organic farming, long before some of you were born."

"The Mormons and the 7th Day Adventists have known and practiced these principles for decades."

"Modern scientific agriculture and modern scientific nutrition have failed. The plight of our farmers and the illness of our people prove that statement... The real cause of our farm problem is poor soil and the hordes of insects that have resulted from chemical farming. Chemical farming has failed... All history teaches us that every great civilization has failed when the fertile soil was destroyed." Address: Atlanta, Texas.

1238. Worthington Foods, Inc. 1957. Wholesale price list and order blank. P.O. Box 190, Worthington, Ohio. 1 p. April 1.
• ***Summary:*** New products include: Soyamel (soy milk; Instant or instant malt). Soy milk (powdered or regular). Fry-Sticks. Ground wheat gluten. MC (Sliced Miller's Cutlets). MC Ground (Miller's Cutletburger). VP (Vegetable Protein). Sweet dill pickles. Address: Worthington, Ohio. Phone: Tuxedo 5-5359.

1239. *Los Angeles Times.* 1957. Sciences accused as cause of most illness. May 22. p. B2.
• ***Summary:*** Dr. Joe D. Nichols, a "small town Texas banker, physician and nutritionist," spoke yesterday before 75 physicians at a staff meeting in Behrens Memorial Hospital, Glendale, California. When he finished, he was applauded. Nichols is the spark plug behind "several organizations which are trying to change farming methods and the nation's dietary habits."

He said that we live in a country where we have more good physicians, more excellent medical schools and hospitals, more education, more outstanding scientists, and more money than any other country on earth.

"But despite all of this, everybody in the country is sick." He said that he did not know anyone, anywhere, who did not have some physical disability. Even his own son, age 3, has three bad teeth!

Diseases such as heart disease, cancer, high blood pressure, stomach ulcers, rheumatism, diabetes, and mental diseases are all increasing in the USA. He believes that the basic cause of these problems is modern chemical farming–the way we mistreat our soil, with chemical fertilizers and sprays–and the effects of this on the crops and animals that consume the products of such farms. The plants are unhealthy, and so the animals (both human and non-human) are unhealthy.

He then discussed refined foods, such as white bread and white rice. He described white sugar as "the worst food in the American diet"–noting that not even a worm would eat it. By refining natural foods, American food processors are destroying their life-giving qualities. When people eat such foods, day after day, it is no surprise that they are poorly nourished.

Note 1. This is the earliest article seen (Aug. 2010) on "Joe D. Nichols" in the ProQuest suite of 15 digitized major American newspapers.

Note 2. Behrens Memorial Hospital was founded and is run by Seventh-day Adventist physicians.

1240. Nichols, Joe D. 1957. Book reviews: Soybeans for Health, Longevity and Economy, by Philip S. Chen, Ph.D., Professor of Chemistry, Atlantic Union College. Reviewed by Joe D. Nichols, M.D. *Natural Food and Farming* (*Atlanta, Texas*) 4(2):13, 22. May.
• ***Summary:*** "The soybean is a food that is as nearly perfect as cow's milk, but at the same time is rich in iron and vitamin C (when sprouted). Its milk is used as a substitute for cow's milk for individuals who are allergic to it.

"This little book by Dr. Chen comes at an opportune time. The increasing incidence of cardio-vascular disease has focused the attention of the medical profession on nutrition. The possible relationship of 'bad fats' to cardio-vascular disease is in the news."

"The book makes a good case for vegetarians. (So did the Symposium on fats at New Orleans last month sponsored by the American Medical Association Council on Food and Nutrition.)"

"Every doctor interested in nutrition should read this book. It is easy to read and can be 'digested' in an evening

"It is said that the future of medicine lies in the field of prevention. I believe the greatest part of prevention lies in the field of nutrition." Address: M.D.

1241. Chen, Philip S. 1957. The soybean–A food without peer. *Let's Live.* July. p. 3.
• ***Summary:*** Discusses the nutritional and economic benefits of the soybean. Contents: Introduction. Protein advantages. No cholesterol. Rich in iron. Economically cheaper. Varied assortment [of edible soy products]: Soy milk, soy milk powder, green soybeans, dry mature soybeans, soy sprouts, soy grits and flakes, and soy flour. Address: PhD, Prof. of Chemistry, Atlantic Union College, South Lancaster,

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Massachusetts.

1242. *Today's Food* (*Loma Linda Foods, Arlington, California*). 1957. Now, milk without a cow. Summer. *
• ***Summary:*** About soy milk. Address: 11503 Pierce Place, Arlington, California.

1243. Walley, Ersel. 1957. Soybeans around the world. It would take 400 million bushels of soybeans to meet minimum needs of babies and growing children alone in the Orient. *Soybean Digest.* Sept. p. 30-32.
• ***Summary:*** The author made a world tour studying soybeans, including visits to Hawaii, Japan and other parts of Asia, and Italy. He studied production of soy milk in Taiwan, Hong Kong, and Bangkok (Thailand). In Taiwan he visited a soya milk plant which was established "by our good friend and American Soybean Association pioneer, Dr. H.W. Miller. In Hong Kong, the 'peek hole' and gap in the Bamboo Curtain, we found many small soya food producers and no doubt the largest and most successful soya milk plant to be found anywhere [Hong Kong Soya Bean Products Co. Ltd., makers of Vitasoy]." Hong Kong is the place where competition between soybeans from Red China and the USA is said to meet head-on. "May I voice my conclusion that Red China needs in its domestic economy more soybeans than it can possibly produce.

"A trip to southeastern and south Asia included good and sufficient visits to Thailand (Siam), Burma, India, and Pakistan. Of these countries, Pakistan is the only one that has soybean production of mention and here the total production is less than 1 million bushels per year."

A photo shows Walley. Address: Part president and chairman of Market Development Committee, American Soybean Assoc.

1244. Chen, Philip S. 1957. Soybean oil for the heart. *These Times.* Dec. p. 16-18. Summarized in Soybean Digest, Feb. 1958, p. 25. *

1245. **Product Name:** Compro (Canned Meatless Meat with Tofu).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1957.
Ingredients: Wheat gluten tofu, seasonings.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable.
New Product–Documentation: Letter from Sam Yoshimura. 1981. March 19.

1246. **Product Name:** [Soymilk].
Foreign Name: Tônyû.
Manufacturer's Name: Ueda Tofu Shop.
Manufacturer's Address: Hachioji, Tokyo, Japan.
Date of Introduction: 1957.
Wt/Vol., Packaging, Price: 180 ml bottles.
How Stored: Refrigerated.
New Product–Documentation: William Shurtleff. 1981. Soyfoods. p. 35. "Dr. Harry Miller: Taking soymilk around the world." "Starting in about 1955 Dr. Miller started to recommend that the Adventist-run Japan San-iku School serve soymilk instead of cow's milk to the students; however the staff hesitated because of its nutritional value and flavor. In 1957 two Japanese Adventists, Mr. Hidekazu Watanabe and Mr. Hanzo Ueda (who ran Ueda Tofu Shop at the time), started making Japan's first soymilk on a small scale in Hachioji, Tokyo, bottling it is 180-ml milk bottles, and selling it locally. Mr. Watanabe later described the great value to them of Dr. Miller's ongoing technical, nutritional, and spiritual guidance. After some time, directors of the San-iku School visited the small soymilk plant, liked the soymilk flavor, and understood its nutritional value. In 1959 they bought similar equipment, set up a small plant in the school, and started to produce soymilk, which was bottled in 180-ml bottles and served to the students at every meal. In 1969 the San-iku School set up an independent food production company called College Health Foods (which later became today's San-iku Foods) and through it, with the help of Loma Linda Foods in America, began to produce Soyalac soymilk infant formula."

Letter (in Japanese) from Hidekazu Watanabe. 1981. July 19. Discusses the early history of this product. "The Ueda Tofu Shop in Hachioji helped with the product development; I was there at the time. In those days our name was *San-iku Gakuin Shokuhin-bu*, not San-iku Foods. The purpose was to provide a place of labor for the students and opportunities to learn food processing. It was not a business. Dr. Perry Webber was the principal of our school at the time. I think that our company did not make commercial soymilk before 1957. The food company is said to have been founded in 1928 in connection with the school, but legally it did not become an independent company until December 1970."

Note 1. This is the earliest known commercial soymilk product made in Japan.

Note 2. This product was the predecessor of Soyalac made by San-iku Foods.

Letter from Mr. Ichiro Tabuchi of San-Iku Foods. 1990. July 4. In 1948 Mr. Tabuchi visited Dr. Harry W. Miller and studied at his soymilk plant in Mt. Vernon, Ohio. During this period, Dr. Miller visited Nihon San-iku Gakuin (located at Chiba prefecture, Sodegaura-cho) almost every year and earnestly advised the people there to make soymilk. In about 1957-58 they started to make soymilk at a tofu plant that was owned by Mr. Ueda. They bottled it in 180 ml dairy milk bottles, which they sold with their tofu. It was a small scale operation and it didn't last long.

Note 3. This is the earliest document seen (Aug. 2013)

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concerning major soymilk manufacturing companies in Japan.

1247. **Product Name:** VP ("Vegetable Protein").
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: Tuxedo 5-5359.
Date of Introduction: 1957.
Wt/Vol., Packaging, Price: 20 oz or 4.75 lb can.
New Product–Documentation: Wholesale price list. 1957. April 1. Sold in 20 oz or 4.75 lb cans.

Chopletter (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods." April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include VP.

1248. **Product Name:** Fry-Sticks (Like Chicken Drumsticks; Spelled Fry Sticks by 1971).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: Tuxedo 5-5359.
Date of Introduction: 1957.
Ingredients: In 1971: Wheat protein [wheat gluten], soya, potato meal, powdered whole eggs, hydrolyzed vegetable proteins, dehydrated onion and garlic, plant extractive flavorings, MSG, salt, water.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Wholesale price list. 1957. April 1. Sold in 12 oz and 4 lb 12 oz cans. No description of the product is given.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 163. Lists the ingredients in "Fry Sticks (Worthington)." This is an institutional product.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned chicken drumstick-like product based on spun soy protein fiber.

1249. Carson, Gerald. 1957. Cornflake crusade: From the pulpit to the breakfast table. New York, NY: Rinehart & Company, Inc. xii + 305 p. Illust. Index. 22 cm. Also published in London by Victor Gollancz (1959). [150* footnotes]
• ***Summary:*** Though written in a light-hearted, often humorous and playful manner, this book is nevertheless extremely well researched and well written. The author has spent 12 years pursuing the social history of American eating and food reform movements. It contains an excellent history and chronology of the 19th century vegetarian food reform movement (inspired in large part by Seventh-day Adventist teachings), which led to the development of ready-to-eat breakfast cereals and other foods by W.K. Kellogg, John Harvey Kellogg, C.W. Post, Sylvester Graham, and others.

Contents: 1. Foodtown, U.S.A. (Battle Creek, Michigan). 2. The landing of the vegetarian pilgrims (Rev. William Cowherd, William Metcalfe, American Vegetarian Society, Bible Christian Church of Philadelphia (Pennsylvania), Rev. Henry Stephen Clubb). 3. The great American stomach ache (Dr. James Caleb Jackson of Dansville, New York, early American eating habits). 4. Sylvester Graham watched America starve. 5. Bloomers and bread crumbs (Dr. J.C. Jackson–more detail). 6. The grains, the nuts and the second coming (Seventh-day Adventists, Ellen G. White, the Millerite movement). 7. The Cornflake Kelloggs found a home in the West (The Kellogg family and Battle Creek, Michigan). 8. The cable address was "Health" (Dr. John Harvey Kellogg and the Battle Creek Sanitarium). 9. Ella Kellogg's dough board (flaked breakfast cereals, Granose flakes, Granola). 10. A sword of fire hung over Battle Creek (the Sanitarium burned in 1902, Sanitarium menu 1912). 11. C.W. Post; or, what is this strange power? 12. Our stock salesmen meet all the trains. 13. Few were chosen. 14. None genuine without this signature. 15. The Golden Rule and other good ideas. 16. The simple life in a nutshell. 17. Doctor Kellogg's last fight. Chronology (1794-1951). Sources and authorities; chapter notes.

Chapter 13 is a discussion of the genius of C.W. Post, and his new type of advertising, which was serious, focused, and potent. He was among the first to see the great potential power of advertising in selling a product and building a company–and he spent millions of dollars on advertising. He once said, "All I have I owe to advertising." He reminded people that they could "recover from any ordinary disease by discontinuing coffee and poor food, and using Postum Food Coffee and Grape Nuts." Other manufacturers soon adopted the new Post way to advertise food. The Ralston Health Food Co., for example, explained that when you open the package, you could see thousands of tiny grains "full of the Vegetable phosphorus that makes children grow like magic and develop strong mentally," giving the brain "all the phosphorus it can use in heavy thinking."

Note: C.W. Post, developer of Postum Food Coffee, Grape Nuts, etc. is discussed throughout this book–often in depth. His Postum Cereal Company was eventually renamed General Foods Corporation. Address: Millerton, New York.

1250. Miller, Harry W. 1957. Review of literature on the nutritional value of soy milk. WHO/FAO/UNICEF Nutr. Panel R.1/Add.4. 18 p. 21 cm. International Nutrition Research Foundation. [102 ref]
• ***Summary:*** "In China where the infant mortality ranges as high as 250 per 1000 live births and malnutrition so evident amidst surviving infants, there is a problem of finding suitable available food for the nourishment of infants and growing children. Dr. Harry W. Miller, Medical Director

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of the Shanghai Sanitarium and Clinic, and Consultant to a large group of Seventh-day Adventist hospitals in China and the Far East, determined to produce a completely formulated milk beverage from the soybean to meet this need.

"Beginning his research in 1928, a milk called Soyalac was manufactured and granted exclusive patent rights in 1937 by the United States Patent Office. The product had all the characteristics of animal milk, was a true colloid liquid, and could be make to any desired formula. This milk, in contrast to the gruel formulas made from soy flour, was a fiber-free liquid which would not plug the nipples. Its processing resulted in a milk that was both palatable and readily digestible. It could be manufactured either as a canned liquid or dehydrated in powder form. The powder could readily be reconstituted to a liquid. Both the sterilized bottled milk and the powder would not require refrigeration. In the original soybean dairy in Shanghai, China, soy milk was boiled in bottles, and distributed daily.

"In a paper by Miller and Wen published in the April 1936 *Chinese Medical Journal* appears the results of extensive feeding on premature, new-born and growing infants on Miller's formulated soy milk. This feeding was carried out in the Shanghai Clinic where a 20 bed ward of new-born babies, and a 24 bed ward for older children, where Miller's soy milk was their routine diet. This report covered a record of two years of supervised feeding."

"This early work on infant feeding with Miller's soy milk was the first and most far reaching use of soy milk feeding, as the entire city of Shanghai had a soy milk route, with many thousands of families using it, until the soy milk plant was destroyed by Japanese bombing in 1937."

1251. Zerfing, Sally D. 1957. Sally's recipes. Glendale, California: Published by the author. vi + 221 p. Illust. No index. 25 cm.

• ***Summary:*** A remarkable vegetarian cookbook with a Christian message and references to many Biblical passages. It would be vegan, except for the use of honey. The author is a devout Christian and is probably a Seventh-day Adventist since (1) Ellen G. White is quoted on several pages (p. 2, 214-17, etc.), (2) it contains so many soy recipes at a relatively early date, and (3) it mentions some brands of soy products (e.g. Madison Health Food Company's Cheze-O-Soy = tofu) made by Adventist companies. Page 14 has a short section on soy oil and page 14 a long section on soy beans, including soy milk. Soy-related recipes include: Soy beans (p. 44). Soy paste (with soy milk powder, p. 50). Soy-whole wheat noodles (with soy flour, p. 62). All purpose soy milk no. 1, no. 2, and no. 4 (made with El Molino Soya Milk Powder, p. 66-67). All purpose soy bean milk no. 3 (made from whole soy beans). Hot carob drink (with soy milk, p. 66). Almond milk. Cashew nut milk. Sesame milk (p. 67. "Liquefy together: 1 cup sesame seeds and 2 cups water. Then strain the milk through a fine cloth; squeeze to get out all the milk. Then liquefy with a little honey, salt, oil, or liquid lecithin").

Note: This is the earliest English-language document seen (Aug. 2013) that contains the term "sesame milk"–or a recipe for making it at home.

Scrambled tofu (with Chef Bonneaus Aminotone, p. 73). French toast (with soy milk, p. 73). No. 2 health burgers (with tofu, p. 79). Scrambled tofu sandwich (p. 80). Creamed tofu and nut spread. Soy cream and olive sandwich on Boston bread (with soy creamed cheese, p. 80). Cheze-O-Soy sandwich (p. 81). Sesame tahini cheese spread (with Sally's Soy Mayonnaise, p. 81). For other tahini recipes, see p. 82 and 111. For other sesame seed recipes: Sesame cream cheese (p. 82). Sesame salad dressing (p. 85). Sesame wheat germ candy (p. 148).

Soy creamed cheese (p. 82). Soy mayonnaise. Thousand island dressing (with soy mayonnaise, p. 83). Cucumbers with tofu cream dressing (p. 90). Homemade tofu cottage cheese (p. 91). Tofu cottage cheese (p. 91). Tofu vegetable jello-salad (p. 92). Tofu and rice croquettes (p. 100). Soy and rice patties (with ground soybeans, p. 101). Soy and eggplant patties (with ground soybeans, p. 101). Tartar sauce (with Sally's Soy Mayonnaise, p. 104). Baked macaroni and soy cheese (with tofu). Cheze-O-Soy and millet hash. Baked soy beans (p. 104). Soy and millet loaf (p. 105). Thanksgiving loaf–Wheat, tofu and nut combination (p. 107). Cheze-O-Soy patties (p. 108). Spanish-style scrambled tofu (p. 115).

Note: This is the earliest document seen (Feb. 2012) that contains the term "Scrambled tofu" or that contains a recipe for "Scrambled tofu." The book actually gives 3 recipes for scrambled tofu (pages 73, 80, and 115).

Ravioli (noodles made with soy flour and filling made with Cheze-O-Soy, p. 116). Bean sprout entree (with Cheze-O-Soy, p. 117). Scalloped corn (with tofu). Tofu Chick Pea Foo Young (p. 117). Wonder of the sea loaf (baked, with tofu, p. 118). Chew mein vegetarian style (with soy sprouts, p. 119). Tofu and Sally's homemade tofu (p. 118-19; curded with lemon juice and sea salt). Homemade soy cheese (made with El Molino Soya Powder, p. 119). Tofu gravy (p. 120). Non-dairy ice creams (p. 149-53; most recipes call for 2 tablespoons El Molino soya milk powder). Banana split, Maple nut sundae, Fruit Sundae (each topped with "soy whipped cream," p. 151).

Note 1. We are unable to find a recipe or definition for "soy whipped cream" anywhere in this book.

Note 2. This is the earliest English-language document seen (Oct. 2013) that contains the term "soy whipped cream" (regardless of capitalization).

Date shake (with "2 cups soy milk No. 3 or No. 1," p. 152). Carob soy malt (with "2 cups all purpose soy milk No. 3," p. 152). Ice cream pie (topped with soy whipped cream, p. 153). Carob-wheat germ banana shake (with soy milk, p. 153). Soy pie crust (with "¼ cup stirred soy flour," p. 154). Pineapple soy cheese pie (with "1¼ cups tofu and "¼ cup

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soy milk powder," p. 156). Baby's soybean formula (p. 196). Composition of ¼ cup soy powder (p. 196). Tofu for babies (p. 200).

Chapter 18, "Grandma's remedies" is about fasting, including "A week or fourteen day fast" (p. 204). A large portrait photo on the front cover shows Sally Zerfing. Address: 24629 N. Arch St., Newhall, California.

1252. Dimond, Albert. 1958. Former ASA secretary in Japan mission [American Soybean Assoc. secretary Dr. P.A. Webber]. *Soybean Digest.* March. p. 7.
• ***Summary:*** Albert Dimond, past president of the American Soybean Association (ASA). wrote this account of Dr. P.A. Webber, a former ASA secretary, after visiting him and Mrs. Webber while in Japan recently. The Webbers live and work 10 miles north of Maebashi City, and a third the way up towering Mount Takagi.

"Dr. Webber, who did his graduate work at the University of Michigan, and his wife, also a graduate of the same school, are well on their way toward building and establishing the Mount Akagi Rest Home and Rural School. This is a non-profit Christian, medical and educational center, dedicated to furnishing self-help education and a rehabilitation center for handicapped children. The center is on a mountainside farm of 125 acres.

"Dr. Webber has spent much of his life alternating between Japan and the United States, and has been in Japan since 1948.

"During the early part of his career in Japan he became thoroughly acquainted with the valuable properties of soybeans. On one of his sojourns in the United States he served as secretary of the American Soybean Association, in 1931-32.

"Among his other activities in the United States were serving on the faculties of Berea College in Kentucky and Madison College in Tennessee. He headed the latter for a time. These are both well-known self-help educational institutions. Madison College manufactures and sells soybean foods.

"Dr. Weber also did much of the research and development work on soy milk done in this country [Japan].

During World War II the U.S. government drafted him for "liaison work in Japanese concentration [internment] camps in the western" USA. He "speaks of this interval in his life with sadness. There is no mistaking his love of the Japanese people.

"Asked what was the most pressing need of the Japanese people, Dr. Webber replied, 'Nutrition.' What food? "Soybeans.' Of course it is not as simple as that, but he pointed out that Japan now consumes ½ bushel of soybeans per capita per year. The people need 3 bushels and could use 5 bushels for each person every year. Other forms of protein are beyond their pocketbooks. It is either soybeans or no protein.

"In Japan the government provides 6 years of school. The thirst for knowledge beyond that by these industrious and intense people is impossible to comprehend unless you have seen and talked with them.

"Dr. and Mrs. Webber in offering self-help educational advantages to this agricultural community are doing a wonderful service. It is an example of what can be done by a combination of science and devotion."

1253. Register, U.D.; Peterson, E.W. 1958. The influence of carbohydrate on the utilization of rations containing soybean alpha protein. *J. of Nutrition* 64(3):483-91. March. [13 ref]
• ***Summary:*** Soybean alpha protein (made by the Glidden Co., Chicago, Illinois) or casein, in rations containing 12.5%, 25%, or 15.5% protein, was fed to rats, together with various combinations of sucrose or starch, methionine, and vitamin B-12 to measure the average gain per week over a 5-week period. The highest average weight gain (39.1 gm/week) was from alpha protein + starch + 0.5% methionine + vitamin B-12. At the protein levels studied, alpha protein rations with starch supported better growth of rats than those with sucrose. This effect was not seen with casein or heated soybean protein. Address: Dep. of Biochemistry, College of Medical Evangelists, Loma Linda, California.

1254. McCay, Clive M. 1958. The use and abuse of nutrition research. *Natural Food and Farming* (*Atlanta, Texas*) 5(2):6-7, 14-17. May.
• ***Summary:*** "In 1915 at the ripe age of 88 died one of the most remarkable women that America had produced. Her name was Ellen G. White. Although she had only a few months of formal schooling when a child, her list of books even today numbers about 60. Some of these are books about her or compilations from her lectures. Unfortunately these writings are buried in a few stores dealing with religious books and listed in a catalogue entitled Spirit of Prophecy Volumes. The chief book of Ellen G. White which deals with nutrition is entitled *Counsels on Diet and Foods.* This work consists of excerpts starting in 1863, at the time of our War Between the States and extending until 1909 or nearly until World War I." Address: Ph.D., Prof. of Nutrition, Cornell Univ., Ithaca, New York.

1255. Register, U.D. 1958. Are nonflesh proteins adequate? A scientist's report on some interesting research. *Review and Herald.* Aug. 7. p. 16-19. [18 ref]
• ***Summary:*** This review of the scientific literature, plus extensive new information based on investigations in progress, indicates the adequacy of vegetable proteins. Present-day research, based on controlled experiments, shows that the minimum requirement of protein for human beings is much less than advocated by the two pioneer researchers in this field: Liebig and Voit. In the mid-1800s, the German chemist Justus Liebig (lived 1803-1873)

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believed that protein was the source of energy for work; thus the more a person works, the more protein he or she requires. But it is now known that protein requirements are not increased by activity. The German physiologist Voit, a contemporary of Liebig, recommended 118 grams of protein a day for a moderately active man. He based his recommendation simply on a survey of the average intake of protein by German workers. "In 1946 outstanding investigators at Harvard and the University of Illinois reported that the minimum requirement for adult men was approximately 30 grams of protein per day, whether the diet was of plant origin or from a mixture of plant and animal foods (Sahyun, *Proteins and Amino Acids in Nutrition* [1948], p. 159). As late as 1955, Dr. C.W. Rose of the University of Illinois, for more than 25 years outstanding in the field of protein research, concluded that the protein requirement of adult men was less than 25 grams per day (*J. Biol. Chem.* 217:997, 1955)."

1256. Downs, Robert A.; Dunn, M.M.; Richie, E.L. 1958. Report of dental findings of Seventh Day Adventist students as compared to comparable students in other schools. *Bulletin of the American Association of Public Health Dentists* 18(3):19-21. Sept.

• ***Summary:*** In November 1956 a study of the dental effects of five years of fluoridation was conducted in Grand Junction, Colorado. "The students' dental caries rate was found to be similar for all the Grand Junction schools with the exception of a statistically lower decay rate found in the students attending the Seventh Day Adventist school." It was hypothesized that the reason for this difference, which was also found in studies of other groups of students, was that Seventh Day Adventists discourage the use of refined carbohydrates (such as white sugar) in their diet, and discourage snacking between meals.

1257. Miller, Harry W. 1958. Soybeans meeting nutritional needs in undeveloped countries. *Soybean Digest.* Sept. p. 68-73.

• ***Summary:*** "It was at the Dearborn, Michigan, meeting of the American Soybean Association held Aug. 18-20, 1940, that I presented a paper on 'Soybeans in Human Nutrition." In this paper I ventured the statement that while soybeans and the interest in them were chiefly valued for their oil content, I foresaw the day would come when soybeans in some form or other would become a regular item in the American diet for humans. The bean flakes and cake were discarded as fertilizer, except to a slight extent they were beginning to be used as stock feed, with a certain amount of credulity.

"At that time we were buying soybeans for a penny a pound, largely as a result of the fact that the value of their high biologic protein was not fully appreciated in animal feeds. Today it is being strongly emphasized and well authenticated that the soybean is one of the world's greatest protein yielders, and protein, as its name indicates, is of prime importance in maintaining the life and nutrition of mankind."

In countries where meat and dairy products as suppliers or protein are unavailable, or form a very small amount of the dietary, there is noted a predominantly high incidence of infections, as also a low life expectancy averaging from 25-30 years. This is directly related to a low intake of high quality protein. In these countries the most noticeable and severely injured classes are those of the newly weaned infant, the growing child, and expectant and nursing mothers. During these ages and conditions the demand for the ratio of protein in the diet is double that of the average adult man and woman. The impact of protein deficiency is more than any other factor the cause of deterioration healthwise in nations where this lack exists."

In the United States: "One-half of the products of cultivated land is fed to animals..."

"E.J. DeCastro, in his book *The Geography of Hunger* comparing animal and vegetable sources of protein states, 'The conversion of vegetable calories into animal tissue has long been known to be inefficient. Only 15% of vegetable calories is recovered in producing milk, 7% in eggs, and only 4% in beef.'"

Three tables (p. 70) show "that the value of food obtained from an acre of soybeans is three times that of wheat and twice that of corn. The reason we do not appreciate these values in this country is that we overproduce corn and wheat for edible purposes, but scarcely use any soybeans for human consumption."

"Up to this time the only agricultural product that has given any promise of being a replacement for animal milk is found in the soybean."

"The Japanese are perhaps the best per capita nourished people of the Asiatic races. Imagine them as maintaining a population that is more than half that of the United States on tillable soil no more than that found in the state of California. Through intensive farming and heavy use of fertilizers to the soil they have raised the yield per acre of land to a production of 13,000 calories per day. And on their land they are able to supply the nutritional requirements for a person on 0.2 acre, as contrasted to 1.8 acres in America. One-half of the calories of farm products in the United States go to animal feed. But in Japan only 5% of their calories come from meat, milk and eggs. Their annual consumption of the soybean as their main protein supplier is 50 pounds per capita,..."

"Milk Plant in Shanghai: After 1945 it looked as though we had a little open time for the development. The Chinese government put in a million-dollar soybean plant in Shanghai. It was completed and ready for operation just prior to the takeover of Shanghai by the Communists in 1949 which ended this.

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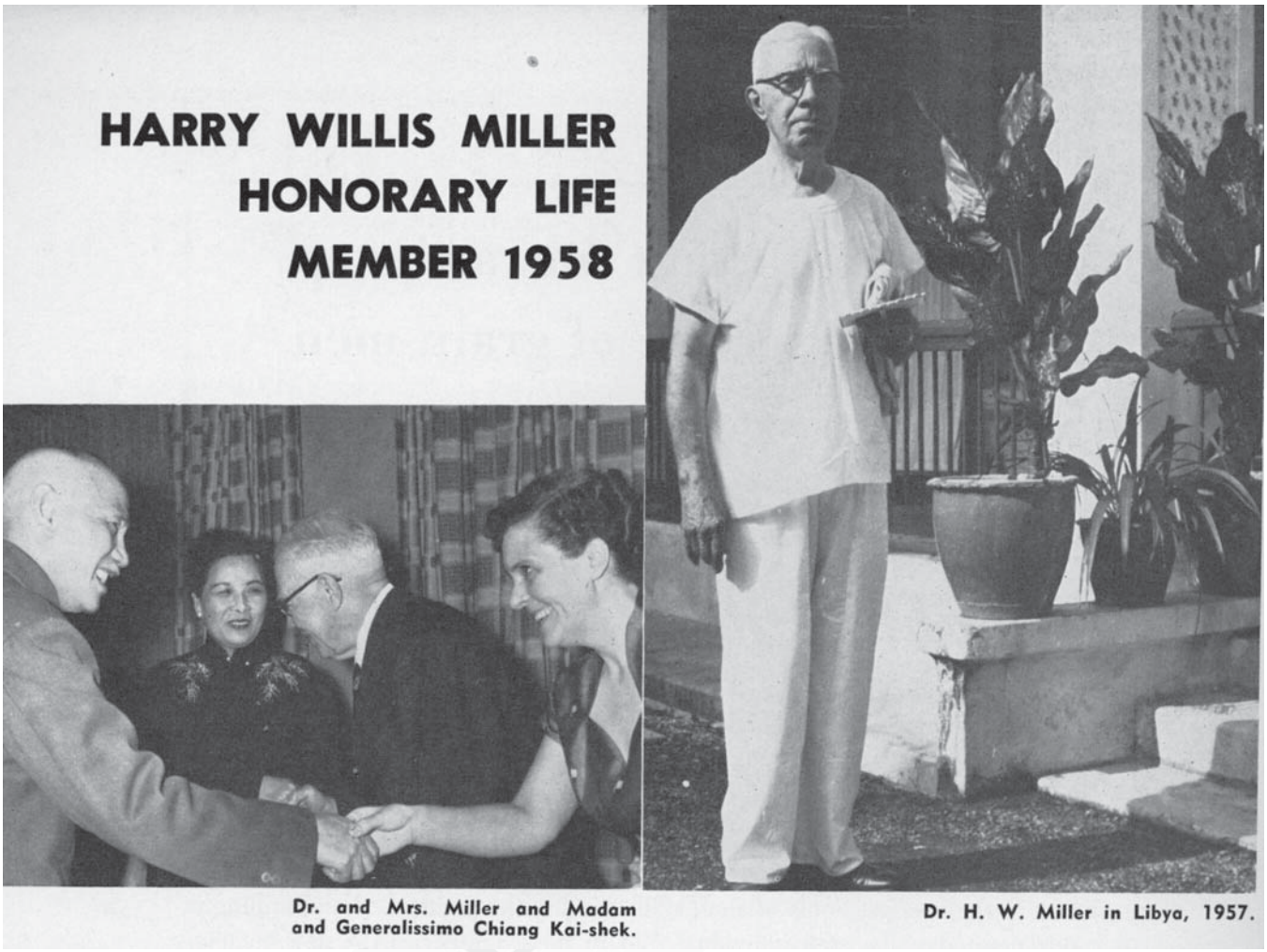

Dr. and Mrs. Miller and Madam and Generalissimo Chiang Kai-shek.

Dr. H. W. Miller in Libya, 1957.

"But the soy milk business has been spreading to other parts of Asia, first to the Philippines then Hong Kong, and now it has been taken up by the United Nations who are pushing the use of soy milk in Indonesia. The Indonesian people have used Tempe [tempeh], which is a form of boiled soybeans that have been inoculated with the aspergillus [sic, Rhizopus]. In that way they have consumed a considerable amount of soybeans. But here the bean was not in a form Where babies or young children could make use of it."

"Now with the ability to install practical soy milk and soy cheese [tofu] plants in countries, especially the tropics, where soybeans do not grow well and the need of protein is so great, there is opened to the soybean industry a tremendous field of opportunity. This field should also receive a liberal apportionment of funds for research. Some research has been given to this subject, but it's infinitesimal with what is required."

Photos show: (1) Portrait of Dr. Miller. (2) A "factory at Jogjakarta in central Java that produces a ton of soy milk [Saridele] every 7 hours. It is a cooperative venture between FAO, UNICEF, and the Indonesian government. Construction was supervised by H.W. (Bill) [Willis] Miller, son of the author." Water buffaloes are pulling a cart on a street in the foreground. Address: M.D., Director, International Nutrition Research Foundation, Arlington, California.

1258. *Soybean Digest.* 1958. Harry Willis Miller honorary life member [of American Soybean Association] 1958. Sept. p. 10-11.

• ***Summary:*** "Dr. Harry Willis Miller, director of the international Nutrition Research Foundation [INRF], Arlington, California, was born 79 years ago in Ludlow Falls, Ohio. Although renowned as one of the world's leading thyroid surgeons, he also has spent many years in soybean research and has done much to perfect and promote soybean food products on the American market.

"As a medical missionary sent to pioneer the work of Seventh-Day Adventists in China from 1903 to 1911, he wondered how he could aid the millions of undernourished Chinese children–hundreds of infants dying daily from malnutrition.

"After years of investigation and practical experimentation with one of the most staple foods in China,

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he discovered a method of 'milking' soybeans and perfected a palatable formula suitable for both infants and adults.

"The response to the product was spectacular. To meet the immediate demand machinery was shipped to China, and under Dr. Miller's management the first modern vegetable milk plant in the world was put into operation. Until the outbreak of war in Shanghai in 1937, fresh soybean milk was delivered daily to hundreds of homes in Shanghai.

"For the service he rendered to the people of Free China in saving the lives of countless thousands of infants with the use of soybean milk and for his untiring efforts in establishing a dozen or so sanitariums-hospital clinics in the Orient, he has received National China's highest honor. In 1956 Dr. Miller was decorated with the Brilliant Blue Star by Generalissimo Chiang Kai-shek himself.

"Although Dr. Miller has certificates to practice medicine in nine of the 49 states and 11 foreign countries, and even at his age retains a steady hand for surgery cases, he continues to devote much time to the development and perfection of soybean foods.

"Despite his full life as a general medical practitioner, and many years spent superintending numerous Chinese sanitarium-hospitals, serving as president of the Seventh-Day Adventist mission in prewar China, managing and editing the Chinese Signs of the Times, authoring many medical books and articles and lecturing around the world, he has managed to continue his soybean research and experimentation whatever his location.

"From 1939 to 1950, while medical director of the Mount Vernon, Ohio, sanitarium and hospital, he opened a research laboratory where he developed a new improved soy milk, soy-olive sandwich spread, and numerous other nutritious foods made from soybeans and grains, and initiated the International Nutrition Laboratory of America which later became the INRF which he has heavily endowed.

"In 1951 he sold his growing soybean food industry to the Loma Linda Food Co. and came to Arlington, California, where he now makes his home and spends as much time as possible in the new laboratory placed at his disposal by Loma Linda. Two years ago, the World Health Organization became interested in Dr. Miller's progress in developing a superior soy milk and modeled a million-dollar factory in Indonesia after the Loma Linda food factory which he had pioneered in Mount Vernon, Ohio. At the present time WHO is also providing $30,000 for an intensive 2-year infant nutrition research program at a leading U.S. hospital using his soy milk formula.

"Since his appointment as director of the INRF, has laboratory and experimental work have been frequently interrupted to answer please for help from his medical colleagues in foreign lands. From 1954-1956 he went to Penang [Malaysia] and Formosa to serve as medical director and surgeon for the hospitals there, took a similar post for 2 months in Trinidad in 1956, another in Libya in 1957, and he is now filling the post of medical director and surgeon at the Tokyo Sanitarium-Hospital in Japan during a 6-month leave of absence by an SDA medical-missionary.

"Despite his present busy daily routine at the sanitarium he is continuing his work with soybeans and has a nearby tofu shop deliver soy milk daily to the sanitarium in 5-gallon containers. Since his arrival he has introduced soy whipping cream for daily use at the sanitarium and routinely prescribes soy milk to allergic Chinese infants. He writes that he was surprised to find that the soy milk he helped perfect for the Loma Linda Food Co. is now obtainable by military personnel at the U.S. army post exchanges in Japan."

Note 1. This is the earliest published English-language document seen (Oct. 2013) that contains the term "Soy whipping cream."

"While other men have rightly taken up golf, fishing, or other hobbies, Dr. Miller has devoted most of his spare time to research and development of vegetable foods. 'Soybeans have been my lifetime hobby,' he declares. Small wonder he is known from East to West as the man who gets 'milk from an iron cow.'

"Over the years Dr. Miller has been among the most active supporters of the American Soybean Association. He was chosen an honorary life member of the Association at the Des Moines convention. The award was made in his absence in Tokyo during the annual banquet."

Photos show: (1) Dr. and Mrs. Miller with Madam and Generalissimo Chiang Kai-shek. (2) Dr. Miller in Libya in 1957–standing outdoors and dressed in his plain white doctor's outfit. (3) "C.G. Simcox presents honorary life membership award to C.P. Miles, manager Loma Linda Food Co., Mt. Vernon, Ohio, in behalf of Dr. H.W. Miller. Award will be formally presented to Dr. Miller in Tokyo by Shizuko Hayashi, managing director of the Japanese American Soybean Institute."

1259. Hardinge, Mervyn G.; Chambers, A.C.; Crooks, H.; Stare, F.J. 1958. Nutritional studies of vegetarians. III. Dietary levels of fiber. *American J. of Clinical Nutrition* 6(5):523-25. Sept/Oct. [9 ref]

• ***Summary:*** The subjects studied, in Southern California, were the same as in part I of this study. Lacto-ovo-vegetarians consumed nearly twice as much fiber as non-vegetarians, and as little less than half that of the 'pure' vegetarians [vegans]. Address: 1-3. Dep. of Pharmacology, School of Medicine, College of Medical Evangelists, Loma Linda, California; 4. Prof. & Chairman, Dep. of Nutrition, Harvard School of Public Health, Boston, Massachusetts.

1260. Wynder, Ernst L.; Lemon, Frank R. 1958. Cancer, coronary artery disease, and smoking: A preliminary report on differences in incidence between Seventh-day Adventists and others. *California Medicine* 89(4):267-72. Oct. [13 ref]

• ***Summary:*** Lung cancer was 10 times less common among

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Seventh-day Adventists than among the general population. Myocardial infarction in Seventh-day Adventist males was less frequent and occurred at a later age than among males in the general population.

Note: This is the earliest document seen (July 1999) from the USA with the term "Preventive Medicine" in the name of the author's organization–Sloan-Kettering Institute, New York City, New York. Address: 1. Section of Epidemiology, Div. of Preventive Medicine, Sloan-Kettering Inst., New York City, NY; 2. Dep. of Preventive Medicine and Public Health, School of Medicine, College of Medical Evangelists, Loma Linda, California.

1261. *Soybean Digest.* 1958. Dr. Miller receives honorary [life] membership [in American Soybean Association] (Photo caption). Nov. p. 23.
• ***Summary:*** This photo shows Dr. Harry W. Miller seated next to Mrs. Miller with 10-15 other people at a long table during a formal luncheon in Tokyo; there he received a gold medallion signifying his election as honorary life member of the American Soybean Association. "The luncheon was arranged by the Japanese American Soybean Institute and Shizuka Hayashi, managing director (standing), presented the award. Dr. Miller, who is on duty in a Tokyo hospital, was elected honorary life member at ASA's convention in Des Moines [Iowa] last August."

1262. **Product Name:** [GranoVita Cutlets].
Foreign Name: GranoVita Phag-Schnitten.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1958.
Wt/Vol., Packaging, Price: 270 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Form filled out and Label sent by DE-VAU-GE. 1990. June 11. Note: This is the earliest document seen (Oct. 2004) concerning DE-VAU-GE and soy. This is the earliest known commercial soy product made by DE-VAU-GE.

1263. **Product Name:** Sanitarium Health Foods Vegecuts (Vegetarian Steaklets).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1958.
Ingredients: Wheat protein, casein, soya beans, peanuts, cornflour, Marmite, onion powder, salt, monosodium glutamate, sucrose, curry.
Wt/Vol., Packaging, Price: 1 lb can.
How Stored: Shelf stable.
New Product–Documentation: Letter from Sanitarium Health Food Co. 1981. Label. 10 by 4 inches. Full color. "Vegetable Protein–Ideal for grills, casseroles, stews, salads." Recipes for Vegecuts Ambrosia and Sukiyaki.

Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1958.

Note: This is the earliest soy product seen that uses casein as an ingredient.

1264. **Product Name:** Sanitarium Health Foods Vegetarian Sausages.
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1958.
Ingredients: Wheat protein, peanuts, tomato, soya beans, Weet-Bix, dried yeast, Marmite, herbs, cloves.
Wt/Vol., Packaging, Price: 430 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Letter from Sanitarium Health Food Co. 1981. Label. 10 by 4 inches. Full color. Photo shows frankfurter-like sausages on a bed of rice. "Vegetable Protein" Recipes for Sweet & Sour Sausages and Sesame Veg-Sticks.

Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1958.

1265. Chen, Philip Stanley. 1958. Heart disease–Cause, prevention, and recovery. South Lancaster, Massachusetts: Chemical Elements. 189 p. Illust. 21 cm. Summarized in Soybean Digest, May 1958, p. 37. [10 soy ref]
• ***Summary:*** The author is a Seventh-day Adventist who advocates a vegetarian diet to prevent heart disease. In Part III, "Prevention of heart disease," are the following chapters: 11. Lecithin. 12. Sitosterol. 13. Heart disease and soybeans–Part 1. Soybean oil. 14. Heart disease and soybeans–Part 2. Soybean protein. 15. Heart disease and religion. 16. Future dietary habits and practices.

Philip S. Chen, Jr. assisted in preparing part 1 of this book. Address: Prof. of Chemistry and Chairman of Div. of Natural Sciences, Atlantic Union College, South Lancaster, Massachusetts.

1266. Ford, Herbert P. 1958. The life story of Dr. Harry W. Miller. Unpublished manuscript. 169 p. Unpublished manuscript. 28 cm.
• ***Summary:*** This manuscript is the slightly edited second draft of the transcript of a single 7-8 hour interview that Mr. Ford did with Dr. Miller in 1958 in Chicago. According to Mr. Ford, Dr. Miller later gave a copy of the manuscript to Raymond S. Moore PhD, a Seventh-day Adventist educator, with the understanding that Moore would use it as the basis for a book. The book, titled *China Doctor,* was published in 1961. Dr. Miller was not very happy with the way the book

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turned out.

Pages 122-35 give a much more detailed account and history of Dr. Miller's work with soy milk, tofu, yuba, other soyfoods, meatlike products, and wheat gluten than is found in the finished book, *China Doctor.*

Concerning wheat gluten: Dr. Miller's company in Mt. Vernon, Ohio, International Nutrition Laboratory, "had protein foods in which they used wheat gluten and made meat patties and various kinds of stews, sprouted the green soybeans and made a chili with them and wheat gluten." They also developed a vegetarian wiener [Veja Links] containing raw vital wheat gluten, soy flour, seasonings, and flavors. They stuffed these into wiener casings, submitted them to a smoke house and to cooking, then peeled off the casings/skins and canned the wieners. He developed these at the Mt. Vernon slaughterhouse.

"Soy milk manufacture in the U.S.A. (p. 131). In 1939 Dr. Miller returned to the United States having been so thoroughly convinced that soy milk was destined to have world-wide acceptance... His son, Harry Willis Miller, Jr. had returned preceding his father and had started a small soy milk plant in Utica, New York, where he made and bottled soy milk and also made and canned some of the protein foods out of wheat gluten for which they had developed recipes. This plant was later moved to Mt. Vernon, Ohio, after they started the soybean plant at Mt. Vernon. The plant was rather small at first as their capital was very limited. They had to build up the food plant out of his surgery earnings. As these products were mostly for export, the firm was called the International Nutrition Laboratory. It was called International because they didn't think of having any particular market for soy milk in the United States but anticipated making and packing soy powder which they could ship over to China, Japan, Korea, and other fields. Since the United States is a dairy country, they just thought they would have all kinds of difficulty getting it introduced over in America. They gave their attention largely in the early part of the work to making some products that went over quite well, which could be sold locally such as meat patties–vegaburgers. They would take the wheat flour, wash the starch from it, and make gluten patties. They actually built up a very fine product that was netting them earnings. The earnings of that, together with Dr. Miller's medical and surgery fees, to finally get together a spray dryer which they built with the aid of the know-how assistance of the Rogers Company, who sold these spray dryers... and through this home-made outfit they daily spray dried considerable powdered soy milk and placed it on the market. They made some ice cream mixes and they shipped out in barrels to the Philippines soy milk powder and also shipped consignments of the powder to Shanghai where they had formerly introduced a soy milk to the Shanghai Settlement. Thus they kept soy milk going up until the time of the world war in 1941 which cut them off from shipping to the Orient."

In the United States they found "an interest on the part of doctors in feeding babies that were covered with various kinds of rashes which they called atopic dermatitis. Many of these babies had asthma, diarrhea, projectal vomiting, nervous irritability and were unhappy babies, all because of the allergy to cow's milk formula." Doctors began to realize that babies with allergies and other sicknesses responded well to soybean milk; the market soon increased. Eggs and milk are the chief causes of allergy, but some vegetable proteins like wheat, corn, and some legumes also cause allergic reactions in some cases. Then doctors began to ask for evidence that the milk was safe. They suggested that it be submitted to the American Medical Association [AMA]. So at once Dr. Miller contacted Dr. Earl Baxter, Professor of Pediatrics at the Ohio State University Medical School, and he agreed to conduct some feeding experiments with soy milk. These studies showed that "babies could be nourished as well on soy milk." In Tokyo, Dr. Choei Ishibashi (later president of the Japan Medical Society) also did meticulous feeding tests with infants, using the powdered soy milk Dr. Miller had sent after World War II. Over a period of many months, he compared the blood, measurement, and growth records of babies fed soy milk with those fed animal milk [cow's milk]. Then Dr. Miller took the results of the studies in Japan and at Ohio State and submitted them to the Council on Food and Nutrition of the American Medical Association. The Council has 15 members, the very best scientists on food and nutrition. "They examined the [soy] milk, examined the claims for it, looked over the research, and then gave the seal of approval which was placed on every can of soymilk thereafter."

"Now that they had this seal of approval, they went to medical conventions and canvassed the doctors; the sale of soy milk grew very rapidly." The plant began to get larger; it made great demands and there were many details to look after. These facts and his lack of capital to carry on this work adequately made Dr. Miller realize that he must do one of two things. He must either organize a corporation, issue stock, and enlarge the company greatly, or he must dispose of the plant and give his time and attention to research.

During this time, Dr. Miller received valuable help from the U.S. Department of Agriculture [USDA]. Dr. J.A. LeClerc (Senior Chemist, Agricultural Chemical Research Division) and Mr. L.H. Bailey, who investigated the use of "soybean milk in making breads" and made the results and analyses available to Dr. Miller. "Thus they got themselves very well established in this country as having a milk for people who did get along with cow's milk."

However the secretary of the AMA told Dr. Miller that he should not claim or advertise that his soy milk was a good alternative to cow's milk for all babies, but only "for those babies who do not do well on cow's milk." However he added: "If you can take care of babies that cow's milk does not take care of, there is no reason why you could not take

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care of the other babies that cow's milk does agree with too." This was his diplomatic way of counseling them not to make unfriendly comparisons with cow's in a dairy country–even if those claims are valid. By following his advice, Dr. Miller was able to work well with the dairy industry without any conflicts.

The Loma Linda Food Company in California showed an interest in acquiring Dr. Miller's company in Ohio. "They had been making some soy milk in the liquid form, but they were interested in getting an Eastern branch." So in 1950 they purchased the [soy] milk plant in Mt. Vernon and have been operating since that time. This took a great burden off Dr. Miller's shoulders and left him free to do medical and nutritional research work. "It was then decided to start the International Nutrition Research Foundation and Dr. Miller was asked to be the Director of this Foundation. He placed a larger part of the purchase price of the factory into this Foundation, which would be devoted to food research only. From the day this research institution was started it has attracted a great deal of attention from all parts of the world; among those interested parties has been the World Health Organization of the United Nations. They came to the conclusion that soy milk had great possibilities in countries of low economic conditions where they could not afford to buy imported [cow's] milk," and in protein-deficient countries. They came to Mt. Vernon to investigate both the soy milk plant and the experimental research. Dr. Miller educated them on the many benefits of using protein from soybeans instead of from animals. As a result, the United Nations constructed a large soy milk plant in Djojakarta [Jogjakarta / Yogyakarta] Indonesia. It was built with the advice of Dr. S.S. De (who has headquarters in Bangkok, Thailand) and the support of the Government of Indonesia, FAO, UNICEF, and WHO.

1267. McCay, Clive M. 1959. A nutrition authority discusses Mrs. E.G. White. *Review and Herald* 136(7):16-17, 24. Feb. 12. Continued Feb. 19 and 26.
• ***Summary:*** For the past quarter century, the writer has taught a course for graduate students on the history of foods and nutrition. "Among the thousand historical acquaintances in my files, one of the most worth-while is Ellen G. White. As near as one can judge by the evidence of modern nutritional science, her extensive writings on the subject of nutrition and health in general, are correct in their conclusions. This is doubly remarkable: Not only was most of her writing done at a time when a bewildering array of new health views–good and bad–were being promoted but the modern science of nutrition, which helps us to check on views and theories, had not yet been born. Even more singular, Mrs. White had no technical training in nutrition, or in any subdivision of science that deals with health, In fact, because of her frail health from childhood she completed only a part of a grammar school education."

He then discusses her basic views. A portrait photo shows the left side of Clive McCay. Address: Ph.D., Prof. of Nutrition, Cornell Univ.

1268. Nichol, Francis David. 1959. Editorials: An onlooker comments. *Review and Herald* 136(7):3-4. Feb. 12.
• ***Summary:*** This is a comment on the article in this issue titled "A nutrition authority discusses Mrs. White," by Clive McCay, Ph.D.

One evening last year, Dr. McCay was invited to give a talk at a man's club of the local church he attended. He chose as his subject: "An Unusual Nineteenth Century Woman, Mrs. E.G. White." A copy of his talk reached the periodical.

On a trip last summer, the writer stopped at Cornell University, in New York State, to visit Dr. McCay. He "is a classic exhibit of the truly scientific man."

"We stayed overnight at Dr. McCay's home, a very livable, rambling remade farmhouse. We soon discovered, to our delight, that though he was a specialist in the field of nutrition, his active interest and reading extended over a remarkable range. More than once during the evening he returned to the question: 'How do you explain the fact that Mrs. White, with very little formal education and no special training in nutrition, so accurately set forth nutritional principles that are only now scientifically established?' He ruled out as wholly unsatisfactory the answer sometimes casually given: 'Mrs. White simply borrowed her ideas from others.' He observed that such an answer simply raises another question: 'How would Mrs. White know which ideas to borrow and which to reject out of the bewildering array of theories and health teachings current in the nineteenth century?'"

"Nor did we seek during the delightful but all too brief visit to enter into extended discussion of the theological doctrine of inspiration. We simply stated that Adventists accept Mrs. White's declaration that she was inspired by God, and let the matter stand at that." Address: Ph.D., Prof. of Nutrition, Cornell Univ.

1269. McCay, Clive M. 1959. Science confirms our health teachings: A nutrition authority discusses Mrs. White. *Review and Herald* 136(8):6-7. Feb. 19.
• ***Summary:*** Continued from last week. Address: Ph.D., Prof. of Nutrition, Cornell Univ., Ithaca, New York.

1270. McCay, Clive M. 1959. Our health teachings further confirmed: A nutrition authority discusses Mrs. White. *Review and Herald* 136(9):9-10. Feb. 26.
Address: Ph.D., Prof. of Nutrition, Cornell Univ.

1271. Granose Foods Ltd. 1959. Fine foods for physical fitness (Ad). *British Vegetarian.* Jan/Feb. p. xi.
• ***Summary:*** This half-page black and white ad shows packages of the following: In cans: Meatless Steaks, Saviand,

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Nuttolene, Sausaltas. In glass bottles: Yex (Yeast Extract), Kwic-Bru, Peanut Butter. In paperboard cartons: Rolls (starch reduced), Sunnybisk (breakfast cereal), Granobisk. Address: Stanborough Park, Watford, Hertfordshire.

1272. Miller, Harry W. 1959. Why Japan needs soy milk. *Soybean Digest.* April. p. 16-17.
• ***Summary:*** "It was an opportunity greatly appreciated to study the needs of the Japanese people nutritionally during my 7 months' responsibilities as surgeon and physician at the Tokyo Sanitarium and Hospital... The idea of a soybean beverage and milk from the soybean for soups and cooking was something altogether new... We set us a small pilot plant where we made soy milk, soy cream, soy ice cream, and soy spread... After seeing the ready acceptance by the nursing staff and patients of the Tokyo Sanitarium and Hospital of soy milk and soy cream made daily from a small fabricated plant of equipment procurable in Japan, we conceived the idea of such additions to be made to the tofu plants... We fitted up a small tofu plant out in a rural district with a homogenizer and a few utensils for milk handling. The milk is being bottled and capped there, and the local community is most appreciative. Since it sells at half the cost of fresh dairy milk it leaves a modest profit for the local shop."

1273. Kalnay, Francis. 1959. Soybean has all the answers (or nearly all). *House Beautiful* 101:174-75, 207-12. May.
• ***Summary:*** The opening 2-page spread contains photos of many commercial soyfood products available in America at the time: Dr. Fearn's Soy-O pancake flour (one with whole wheat and soya, and the other with just wheat and soya), Pure soya bean powder, and Soya bean granules, Wuest's soya-protein bread, Wuest's cookies, Wel-Pac kinako [roasted soy flour], Yamasa shoyu, Kikkoman shoyu, Oliver Tonkatsu Sauce (Tonkatsu are breaded pork cutlets), Hain soy oil (cold pressed), Amoy soy sauce, Prosperity soy sauce, Golden Sang Chan soy sauce, Madison Zoy-Koff, Hime aka-miso (Pacific Trading Co.), Hime yakidofu, Hime frozen bean curds, Delicious Edamame (Packed by Tokai Kanzume Co. Ltd., Nagoya, Japan), Quong Hop & Co. bean cake [tofu], Schiff soy lecithin, Oriental food shop black soybeans, Climax wheat and soy pure egg noodles (The Pfaffman Co., Cleveland, Ohio), and Prince Veta-Roni (Mezzani or Spaghetti; Prince Macaroni Co.).

The subtitle reads: It's a choice gourmet food. It's as nutritious as vitamin pills. It comes in a dozen forms and makes a hundred dishes.

The author uses soy-related words in a very modern way: "Have you ever noticed the way people who know food pronounce the simple word 'soy'? Their facial expression changes instantly, and their tone of voice turns positively lyric. There are two serious reasons for their extraordinary respect for a bean so little and so innocent. The soybean is enormously rich in protein. This wealth of protein is apparent in both quality and quantity... And because soy oil is high in unsaturated fatty acids, it fits well into today's popular low-cholesterol diets.

"In our country soy is relatively new... Soy is the most versatile legume imaginable... The glittering star in soy's troupe of players is soy sauce (also called soya and shoyu)... The soy food industry is still in its infancy in the U.S. Yet the variety of soy products available is impressive."

Note 1. This is the earliest publication seen (April 2001) that mentions Quong Hop & Co. in connection with tofu.

Note 2. This is the earliest English-language document seen (Aug. 2003) that contains the term "soya-protein" (or "soya-proteins").

1274. **Product Name:** Loma Linda Soy Beans in Tomato Sauce.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: Loma Linda, California.
Date of Introduction: 1959 May.
Wt/Vol., Packaging, Price: 1 lb 1 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Francis Kalnay. 1959. House Beautiful. May. p. 174-75. "Soybean has all the answers." Photo of the can and label. On the front panel is a glass casserole dish filled with the product. A sort of oval in the lower right corner says "Loma Linda Foods." 1968. Called "Soy Beans in T.S." [Tomato Sauce]. 17 oz. for $0.30 retail.

1275. *British Vegetarian.* 1959. A vegetarian research centre. July/Aug. p. 138-40.
• ***Summary:*** A vegetarian research laboratory is being established in the Science Department of Stanborough School, Watford, Herts., England. Seventh-Day Adventists, who administer the Stanborough School, are making great efforts to raise funds to support the research. The laboratory will conduct nutritional investigations, focusing particularly on vegetarianism. Dr. Frank Wokes has been invited by the school board to organize the research. A life-long vegetarian, he is well known for his nutritional research during the last 18 years at the Ovaltine Research Laboratories. He has been a pioneer in showing the importance of vitamin B-12 in vegetarian diets and in improving the quality of vegetable protein. One outcome of this work was the development of a new soyamilk product, fortified with vitamin B-12 and launched recently under the name Wanderlac by A. Wander Ltd., which also makes Ovaltine. "This first British plantmilk has been used with success to replace milk in various allergic conditions, including the disease galactosaemia" [galactosemia].

Note. This is the earliest English-language document seen (Aug. 2013) that contains the term "replace milk" in connection with soyamilk.

Stanborough School provides a particularly suitable site

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for the research center, in part because it was the site, 27 years ago, of the first Experiments in Great Britain on the basal metabolism of vegetarians. The results were published in the *Journal of Biological Chemistry* (1932).

A photo shows the new laboratory at Stanborough Park. Note: *Webster's Dictionary* defines galactosemia (a term first used in 1934) as "an inherited metabolic disorder in which galactose accumulates in the blood due to deficiency of an enzyme catalyzing its conversion to glucose."

1276. Battle Creek Food Company. 1959. Eastern authorized dealer price list. Battle Creek, Michigan. 1 p. Sept. 1.
• ***Summary:*** Products of interest on the list include the following; those followed by an asterisk (*) contain soya: Soya Flakes* (5 oz). Veg. Burger, Prime (20 oz or #10). Nuttose (10 or 20 oz). Protose (10, 20, or 28 oz). Vegetable Skallops (10, 20, or 28 oz, or #10). Vegetable Steaks (10, 20, or 28 oz, or #10). Vegetable Steaks, small cuts (20 oz or #10). Vegetable Steak, low sodium (20 oz). Gluten Flour (5 lb or 100 lb). Malted Nuts (14 oz or 5 lb). Savita (3, 7, or 14 oz, 8½ lb or 50 lb). Savita Soup Cubes (10 cubes). Soy Beans* (15½). Soy Flour* (2 or 5 lb). Brewers Yeast (10 oz). Lacto Dextrin (16 oz, or 4 lb). Address: Battle Creek, Michigan.

1277. **Product Name:** Gluten Flour.
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1959 September.
New Product–Documentation: Battle Creek Food Company. Price List. 1959. Sept. 1. Available in 5 lb. or 100 lb. sizes.

1278. Wokes, Frank. 1959. Vegetable diets and nutrition (Letter to the editor). *New Scientist* 6(150):595-96. Oct. 1. [1 ref]
• ***Summary:*** "Plantmilks based on soya are being used in America to treat milk allergies in infants. The first British plantmilk, Wanderlac, has just been put on the market, after two years' trial on infants suffering from such allergies, especially galactosaemia..." (p. 596, col. 1). Address: Vegetarian Nutritional Research Centre, Stanborough Park, Watford, Herts. [England].

1279. **Product Name:** Promine D (Food-Grade Isolated Soy Protein–Dispersible), and Promine R (Food-Grade Isolated Soy Protein–Regular = Nondispersible/Insoluble, Precipitated at the Isoelectric Point). Named Amisoy before about 1955.
Manufacturer's Name: Central Soya Co.
Manufacturer's Address: 1825 N. Laramie Ave., Chicago, Illinois.
Date of Introduction: 1959 October.
Ingredients: Soybeans.
Wt/Vol., Packaging, Price: 50 lb multi-wall paper bag.
How Stored: Shelf stable.
New Product–Documentation: Promine, the world's first non-enzyme modified, edible isolated soy protein, has an unusual history. This line of products having different functional properties was developed by The Glidden Company from 1955 to 1959 and was made available for testing by other major companies but never sold commercially by Glidden. It was only after Central Soya acquired the Chemurgy Division of the Glidden Co. and built a semi-commercial plant to make Promine in Chicago (opened 27 Oct. 1959) that the product was first sold commercially. For details, see interviews with Edwin Meyer and Dale Johnson (1985, below).

1955. Aug. 31. 38th Annual Report. Page 5 notes: "During the year we increased our productive capacity for isolated proteins by 67%. There is increasing acceptance of these products for use in paint, paper and other industrial products. A new edible product is now being tested by several major food processors as a nutritional supplement for their products. The potential for this new protein is promising." Under "Chemurgy Division"–Edible Soya Products is a listing for "Promine–Isolated Protein."

The Glidden Co. 1956. Nov. 13. Annual Report. Page 13 states: "Our work on the development of an edible protein is continuing. Its initial reception by the food industry as been promising, but extensive tests are still being conducted to obtain a proper evaluation." On the same page the product's name is given as *Promine* edible protein.

Chemurgic Digest. 1957. Nov. p. 9. "Edible Protein Plant Announced by Glidden." "A new $4,000,000 edible protein plant, the world's first facility for commercial production of this important soybean derivative, will be constructed at Indianapolis [Indiana] by the Glidden Company... The new protein product will be marketed under the registered trademark 'Promine.'... Already used in a wide range of food products, Promine has been available in limited quantities for the past three years. It promises a wide variety of uses in bakery products, all types of breakfast foods, senior foods, baby foods, desserts, and scores of other food items."

Soybean Digest. 1957. Dec. p. 25; Glidden Annual Report. 1957. p. 12. "On the basis of our technical and market development work on edible protein, we have started construction of a new protein plant at Indianapolis. Promine, our trade name for this edible protein, is an entirely new product." Central Soya bought the Glidden plant in 1958.

Food Processing. 1959. March. p. 36. "Multipurpose quality protein offers 'plus' factors." Isolated soybean protein containing 92% protein, free of undesirable flavor characteristics and no indigestible carbohydrates. Lists almost 100 products in which Promine may be used.

Chicago Tribune. 1963. "Central Soya Co. spends a million to boost output." March 5. p. B5. The expansion,

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involving the redesign of the facility and installation of added equipment, "has resulted in a tripling of the plant's capacity to produce Promine. The newly expanded plant went into operation last month. It has been producing Promine on a semi-commercial basis since the product was launched in late 1959.

Interviews with Edwin Meyer and Dale Johnson, who worked for both Glidden and Central Soya. 1985 and 1993. Dr. Sidney J. Circle, head of protein research, was in charge of the development of Promine, the world's first edible soy protein isolate product, which he called Amisoy until 1955. It was produced in a small pilot plant constructed outside, behind the company's laboratory in Chicago. The first Promine that Circle made was not dispersible in water, because it had been precipitated at the isoelectric point and he did not have a good spray dryer. It had to be oven-dried in a range dryer (on a steam heated belt) then ground. It had to be dispersed with a food-grade alkali. Several hundred pounds a month of edible isolates were produced and Dale W. Johnson offered them to various food companies (such as General Foods and Pillsbury) for testing. Dr. M.L. (Tim) Anson of Lever Brothers (a division of Unilever) in New York tested Glidden's non-dispersible isolate to make sheets, which were then laminated and flavored to make meat analogs. He was issued a number of well-known patents on these inventions. Circle hired Steve Frank from Cornell University to help him develop new applications such as margarine, milk, and ice cream. The basic concept was to use small amounts of isolates (to bypass problems of beany flavor) in foods containing small amounts of casein. With interest in Promine growing among major American food companies, but with no orders or sales yet, Glidden decided to take a risky gamble. In 1957 they began to build America's first real plant to produce edible soy protein isolates, next to their solvent extraction plant in Indianapolis. But then problems began to develop; Circle pointed out what he considered to be major flaws in the design and Glidden halted production. Glidden then let it be known (unbeknownst to researchers in their Chemurgy Division) that this chemurgy division was for sale, because they were not making the return on their investment that they could make from selling paints at their new paint centers, a large store that sells paints both to retail customers and professional/trade painters. Ed later learned that Glidden had talked to Central Soya in the mid-1950s about buying Glidden's Chemurgy Division and Central Soya turned down the offer. Glidden then came back later, in 1957-58 with a better offer and the deal was consummated. After almost 10 years of inactivity in the field of edible soy protein products (since early 1949), Central Soya jumped back into the field in a big way–with the benefit of Glidden's outstanding research team. They formally acquired Glidden's Chemurgy Division it on 1 Sept. 1958, starting with a 3-year lease, then purchasing it on 31 Aug. 1961. Central Soya scrapped the plant in Indianapolis and in late 1958 began construction of a new edible isolate plant in Chicago at 1825 N. Laramie Ave., adjacent to Glidden's large old plant that made industrial isolates. Several doors connected the two buildings. This semi-works plant, a scaled-down version of the plant designed by Glidden's engineers, opened to much fanfare and publicity on 27 Oct. 1959. At that time the first Promine D and Promine R (D = Dispersible; R = Regular) were sold commercially–in small amounts. The plant had a capacity of 5 million lb/year of edible isolates but it never made more than 3.5 million lb. The first customer for Promine R was Picot Laboratory in Mexico, which made a high-protein nutritional food. Most of the Promine D was sold to the meat industry for use as emulsifiers and/or binders in sausage-type products. Promine D would gel if heated to about 100º, but the gel would break if it was heated much higher. Ed Meyer visited Worthington Foods many, many times because, for a while, they were using Promine made by Central Soya as the basis of their spun soy protein fiber.

Booklet (8 pages) announced in *Food Engineering.* 1977. June. p. ef-34 (In special section on Engineered Foods). On the cover of the booklet is a baby's face in rectangle, surrounded by many foods.

1280. Kirschner, H.E. 1959. What about fasting? *Let's Live.* Oct. p. 26-27.

• ***Summary:*** Dr. Kirschner, who advocates therapeutic use of raw food juices, was skeptical of therapeutic fasting at first–even though the natural hygienists have waxed eloquent for more than a century about this method of treating the sick. Though he was in normal good health, he decided to go to an institution in the mountains about 17 miles from Harrisburg, Pennsylvania, and undergo a supervised 7 day fast. For "seven days nothing but two quarts of water passed my lips each day. I was on what they call a 'total fast.' After the second day the pangs of hunger left me and I did not miss food. I was surprised that I did not become weak... I was amazed at the beneficial results. My blood pressure dropped from 175/95 to 120/80... But best of all I lost 15 pounds in weight..." Five additional days were required to "break" the fast–12 days in all... "I was happily surprised at the improvement in my eyesight, and how much better I felt in so many other ways..."

Leaders of the natural hygiene movement include Dr. Sylvester Graham, Dr. Trall, Dr. Jackson, "and my friend the late John Harvey Kellogg, M.D. of Battle Creek [Michigan] fame." Address: M.D., 748 Crescent, Monrovia, California.

1281. Wynder, Ernest L.; Lemon, F.R.; Bross, I.J. 1959. Cancer and coronary artery disease among Seventh-Day Adventists. *Cancer* 12(5):1016-28. Sept/Oct. [14 ref] Address: 1. Section of Epidemiology, Div. of Preventive Medicine, Sloan-Kettering Inst., New York, NY; 2. Dep. of Preventive Medicine & School of Health, School of

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Medicine, College of Medical Evangelists, Loma Linda, California.

1282. **Product Name:** Granose Soya Beans in Tomato Sauce (Canned).
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England. Phone: 0923-672281/2.
Date of Introduction: 1959.
Ingredients: Soya beans, tomato puree, brown sugar, onion oil, soya flour, salt, maize starch, soya oil, yeast, hydrolised vegetable protein, mixed spice, autolised protein.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: *The British Vegetarian.* 1960. Sept/Oct. p. 249. Granose makes Soya Beans, containing soya beans, tomato puree, brown sugar, vegetable shortening, onion, yeast extract, wholemeal flour, and seasoning. Note: This is the earliest commercial soy product seen made by Granose Foods.

Ad in *The British Vegetarian.* 1962. July/Aug. p. 5. "If he likes 'beans on toast'–he'll love these new wonder beans!" "Granose Soya Beans are truly 'The Wonder Beans of Health.'" A boy is carrying a large can of the beans, showing the label, in a wheelbarrow. They are made by Granose Foods Ltd., Watford, Herts.

Manufacturer's catalog. 1980. April. p. 3. "Soya Beans have a high balanced protein content. Can be used as an extra vegetable or as a nutritious snack."

Form filled out by Granose Foods Ltd. 1981. States that the company first started to make foods of any kind in 1899. Their first food product containing soybeans was Canned Soya Beans in Tomato Sauce, introduced in the late 1950s. The company presently produces the following foods that contain soy, listed in descending order of popularity and each starting with the brand name Granose: Sausaltas, Saviand, Soyabean in Tomato Sauce, Soy Beans in Brine, Goulash, Curry, Bolognese Sauce, Chicken Pie Filling. A descriptive brochure is enclosed.

Shurtleff. 1981. Overseas Adventist Food Companies. p. 6.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product was introduced in 1959. It has been discontinued.

1283. **Product Name:** Soymilk.
Manufacturer's Name: Mountain View College.
Manufacturer's Address: Mindanao, Philippines.
Date of Introduction: 1959.
New Product–Documentation: Letter from Eric C. Fehlberg, Director, International Health Food Assoc. 1990. May 24. This organization no longer makes foods.

1284. **Product Name:** Veelets.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 2-2539.
Date of Introduction: 1959.
New Product–Documentation: *Chopletter* (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods." April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include Veelets.

Note: This is the earliest known commercial meat alternative product that bears a Kosher label as having been Kosher certified.

1285. Baur, John E. 1959. The health seekers of southern California, 1870-1900. San Marino, California: Huntington Library. ix + 202 p. Foreword by John W. Caughey. Index. 24 cm. Series: Huntington Library Publications. [310 ref]
• ***Summary:*** Discusses: The gold rush and the health rush. California's population growth: The health seekers represented "the first big influx to southern California, and the chief dynamic in the region's development" in the 1870s, 1880s (the boom years), and 1890s. It was aided by the introduction of the navel orange, abetted by the arrival and promotions of the Southern Pacific and Santa Fe railroads, and swelled by the promotional antics of real estate developers and agents and chambers of commerce. Each of these elements contributed to the population growth to about 76,000 in 1880, to 221,000 in 1890, and 325,000 in 1900. At least a quarter of the new arrivals are estimated to have come as health seekers. In "almost every important respect–agricultural, commercial, residential, cultural–this health rush permanently changed southern California (p. viii-ix, by John W. Caughey). Medical advice, diet and outdoor living (p. 21-26).

The sanatorium / sanitarium belt, Los Angeles as a resort, diet. The main types of resorts were desert, mountain, mineral springs, and seaside. (p. 32-38). Sanitariums and hospitals (p. 39-42). Health foods, diet, Seventh-day Adventists, and the Battle Creek Sanitarium, Michigan (p. 47-50). The health rush and its effects, Pasadena founded in 1874 as an early health resort and community for invalids from Indiana (p. 51-54). Sanatoriums (p. 57-58). Diet and Dr. Francis M. Pottenger, who came to Monrovia in 1895 for his wife's health. Despite her early death, he loved California and "in 1903 opened the Pottenger Sanatorium, a private residential hospital for tuberculars of all stages." It was successful from the beginning and "the first modern sanitarium in southern California." There were only 60 such hospitals in the USA at that time. Pottenger's sanitarium attracted considerable attention because of its advanced methods and high percentage of recoveries (p. 59-60).

Small southern California towns were often overwhelmed with the arrival of hundreds of health seekers,

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many of whom were unable to secure lodging. In 1872 Santa Barbara, which had long promoted itself as a resort for health and pleasure, suddenly became a sanitarium, and the Arlington Hotel was built (p. 67-68).

Not far from Santa Barbara lies the Ojai Valley, publicized as a resort town nationwide by Charles Nordhoff. Laid out in 1874, it had two well-patronized invalids' hotels for those "seeking relief from the ravages of tuberculosis and the discomforts of asthma" (p. 71-72).

In "1886 Dr. Wellwood Murray and his wife established a small resort at Palm Springs where they regained their health and soon began to welcome dozens of boarders, who were mostly tuberculars." "It was not the climate that cured, but the new way of life–rest, relaxation, a psychology of serenity..." (p. 77-78).

The Idyllwild Sanatorium opened on 10 April 1901. It was an early example of medical philanthropy, funded by 40 local physicians and 20 other important citizens, who spurned profits and worked to get persons in the early stages of tuberculosis out of the hotels and boarding houses of large towns and into the sunshine and mountain air. Yet by 1907 this model resort failed. Its counterpart was Loma Linda, which took over a hotel already built (in 1886 in the midst of the great boom). "Unfortunately, Loma Linda shared the fate of Idyllwild, and its quarters once more reverted to hotel status" (p. 85-86).

By the 1890s, California doctors were at least as advanced in the study of lung diseases as their eastern colleagues. "Few individuals have written more words on tuberculosis than Francis M. Pottenger" (p. 86). Yet quackery was also common. "In 1905 a member of the local board of medical examiners called Los Angeles County the 'Mecca of the quack.' and few doctors would dispute the unpleasant nickname (p. 87). This area became known as the "Sanitarium Belt" (p. 88-89). The Pasadena Young Men's Christian Association (YMCA), established in 1886, was active in trying to help the sick. In December 1891 the Cottage Hospital at Santa Barbara was opened (p. 97). In 1886 the Temecula Land and Water Co. laid out Murietta, a spa with mineral springs (p. 108).

Southern California grew up as a health resort and attracted famous people. While many historians have overlooked this unusual story, but James M. Guinn helped to organize the Historical Society of Southern California in 1883, and wrote two solid histories of the region in 1902 and 1907. Other good histories soon followed (p. 126-30).

One health seeker who would eventually become the "most powerful of all local journalists was Harry Chandler." While a promising student at Dartmouth College, his health suddenly broke and he staked all his hopes on a trip to Los Angeles. He went to work on a ranch, then for the *Los Angeles Times.* Chandler rose rapidly, married the daughter of owner Harrison Gray Otis, and when Otis died in 1917, Chandler became proprietor of what would become southern California's greatest newspaper (p. 130).

There is a long discussion of Abbot Kenney, who came to live in a community at Sierra Madre by 1882. He wrote on outdoor life and health, and later developed Venice Beach and its canals to help promote it as "the American Italy" (p. 132). Other prominent health seekers to Southern California are also discussed: Thaddeus S.C. Lowe, Helena Modjeska, Walter Q. Gresham, John C. Frémont (Fremont), Joseph Pulitzer, Joseph Medill, Andrew McNally, Philip Danforth Armour (the "world's greatest butcher"), Eugene Field. These men brought as much talent and human eminence to California as had the earlier gold rush (p. 141-49).

The failed movement to build state-sponsored sanitariums for tuberculosis / consumption / phthisis (first petition was 1869). Address: Los Angeles, California.

1286. Encyclopedia Britannica (14th ed): Vegetarianism. 1959. Chicago, Illinois: William Benton, Pub. See vol. 23, p. 27-28.

• ***Summary:*** "Vegetarianism, a word which came into use about the year 1847, as applied to the practice of living on foods from which fish, flesh and fowl are excluded...

"The fact, however, must not be overlooked that while vegetarian societies claim as 'vegetarians' all who abstain from flesh foods, there is a large and growing number of people who repudiate the name of 'vegetarian' because of its associations, but who none the less, for some of the reasons detailed below, abstain from eating anything that has been killed."

The main reasons advanced for practicing a vegetarian or fruitarian diet are: 1. Health (animals are affected by infectious diseases such as parasites and tuberculosis; the flesh of artificially-fed animals is full of excretory substances which, along with uric acid or rapid tissue-destroying disease, may end up in humans, e.g. gout, cancer). 2. Economy (one can obtain more nutrients for less cost from a vegetarian diet). 3. Social economy (an acre of land can produce 2 to 20 times as much food from plants as form cattle or their feed). 4. Racial improvement (every prosperous community should aim to have a large proportion of farmers who labor growing crops; animals require less labor). 5. Character improvement ("On the ground that after the virtues of courage and valour and fearlessness have been taught in the lower stages of evolution, the virtue of gentle humaneness and extended sympathy for all that can suffer should be taught in the higher cycles of the evolutionary spiral. Flesh-eating entailing necessarily an immense volume of pain upon the sentient animal creation should be abstained from by the 'higher classes' in the evolutionary scale").

Vegetarian societies have been organized in many countries, chiefly in the United Kingdom, America, Germany, France, Austria, Holland, and Australia. "In England, the oldest and one of the most important societies is 'The Vegetarian Society,' of which the headquarters are

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at Oxford Street, Manchester. An attempt has been made to organize the various vegetarian societies of the world under the title of 'The Vegetarian Federal Union.' The headquarters of the London societies and of the 'Union' are at Memorial Hall, Farringdon Street, E.C.

"In the religious world the Seventh-Day Adventists (who are connected with many sanatoria and the manufacture of food specialties) and some Bible Christians, the worshippers of Vishnu and the Swami Narang and Vishnoi sects, amongst others, preach abstinence from flesh food. The Salvation Army, the Tolstoyans and the Doukhobors encourage it. A number of orders in the Roman Catholic church (*e.g.*, the Trappists) and in the Hindu faith (*e.g.*, the Dadupanthi Sadus) are pledged abstainers...

"In former years the 'Vegetarian Society' was the most active in producing literature, but since about 1901 the Order of the Golden Age has come to the front with new and up-to-date books, booklets and leaflets, and the Ideal Publishing Union has reprinted much of the earlier literature. The chief periodicals are the *Vegetarian* (weekly), the *Herald of the Golden Age* (monthly), the *Vegetarian Messenger* (monthly), the *Vegetarian* (American monthly), the *Children's Garden* (monthly)."

1287. Servico Social da Industria (SESI). Secretaria da Agricultura. 1959. Receitas de soja [Soybean recipes]. In: 1959. Soja no Rio Grande do Sul. Secretaria da Agricultura (Companha da Produtividade Agricola): Porto Alegre. See p. 77-83. Chap. 8. Excerpted from A Soja. ed. Servico Social da Industria. Dept. Regional do R.G. do Sul. [Por]

• ***Summary:*** Contents: 1. How to extract soymilk from 250 gm of soybeans. Condensed soymilk. Soymilk made from whole soy flour. 2. Recipes based on soymilk: Yogurt, soy cheese [tofu], soymilk *batida* (milk shake), ambrosia, gelatin with fruits and soymilk, souffle with soymilk, soymilk pudding. 3. Recipes made with with soy residue (*com resíduos de soja*)*:* Soya *docinhos* with condensed milk, croquettes, Adventist roast. 4. Dishes made with whole soy flour. Recipes excerpted from "A Soja" (Serviço Social da Industria, Departamento Regional do Rio Grande do Sul). Address: Porto Alegre, Brazil.

1288. American Soybean Association. 1960. Soybean Blue Book. Hudson, Iowa: American Soybean Assoc. 144 p Advertisers' index. 22 cm.

• ***Summary:*** Contents: American Soybean Association. Japanese American Soybean Institute. National Soybean Processors Association. Soybean Council of America. Midsouth Soybean and Grain Shippers Association. Ontario Soya-Bean Growers' Marketing Board. U.S. Department of Agriculture: Agronomic Research (ARS), Disease Research, Entomological Research, Utilization Research and Development (Northern Utilization Division [NRRL], Eastern, Southern, Western), Marketing Research.

Tables: (1) World soybean production. (2) Canadian soybean production. (3) Soybean production, utilization and value, 1936-1959 Canada. (4) Soybean crushings in Canada. (5) Soybean production–United States (with acreage and yield), 1924-1959. (6) U.S. Soybean production by states (1959). (7) U.S. soybean production, supply, and utilization (incl. exports, carryover), 1924-1959. (8) U.S. soybean production, acreage, and yield by state, 1924-1959. (9) U.S. soybeans: Inspected receipts. (10) U.S. soybeans–supply and distribution, 1952-1959 (1,000 bushels). (11) U.S. Soybean oil meal and cake production, supply and utilization, 1924-1959 (1,000 tons). (12) Soybean oil, meal and cake production and stocks by states, 1955-1958. (13) Oilseed cake a meals, supply and distribution, Oct. 1950-59. Incl. soybean, cottonseed, linseed, peanut, copra, total. (14) Production of protein concentrates (cake and meal), 1937-41 (avg.) to 1951-59. Incl. soybean, linseed, cottonseed, copra, gluten feed and meal, tankage and meat scraps, fish cake and meal, dried milk products (dried and concentrated skim milk, buttermilk, and whey used for animal feed), other milk products (fed on farms), total. Note: In 1953-54,395,000 tons of dried milk products were fed to animals. (15) U.S. soy flour production. (16) Production and exports of soy flour and grits (incl. full fat, low fat, and defatted products, exported commercially or to military). (17) Production of mellorine [frozen dessert where vegetable oil replaces butterfat], 1953-59, by month. (18) U.S. fats and oils production, 1937-41 (avg.) to 1959. Incl. Butter, lard, edible beef fats, total edible animal fats, corn oil, cottonseed, edible olive oil, peanut oil, soybean oil, total edible vegetable oils, inedible oils. (19) Soybean oil utilization, 1931-1959 (million lb). Incl. Foods: Margarine, shortening, other, total, Non-food products: Soap, paint & varnish, other drying oil products, miscellaneous, loss, total, total domestic disappearance. (20) Same as No. 19 but in percentages.

(21) Utilization of soybean products, 1955-56 to 1958-59. Incl. meal and oil: Livestock feed, industrial, fertilizer, export. (22) Prices of U.S. soybeans, by month and season average, 1923-1959. (23) Same as No. 22 but only for No. 1 yellow: Chicago, Illinois country shipping points, Minneapolis. (24) Same as No. 21 but soybeans for crushing, No. 2 yellow. (25) Value of U.S. soybean crop, 1925-59 (thousand dollars) in these states: Total USA, Illinois, Iowa, Indiana, Ohio, Missouri, Minnesota. (26) Soybean price support operations, 1932-33 to 1959-60. Started in 1941-42 and has continued to the present, with a peak of $2.56 per bushel in 1953-55. (27) Price spread, soybeans and end products, 1945-1958. Spread between price received by farmers and value of products. (28) Prices of U.S. soybean oil meal (44% protein), 1929-1959 by month. (29) Prices of U.S. crude soybean oil, by month, 1929-30 to 1959-60. (30) Imports, exports, soybeans, oil and meal.

(31) Soybeans: Inspections for export, 1957-59, with country of destination and port of departure. (32) U.S. trade

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in soybeans, fats and oils. (33) Oil and fat exports under P.L. 480. Total, cottonseed oil, soybean oil, Oct. 1954 to Sept. 1959. Incl. country of destination, the top four being Turkey, Pakistan, Israel, and Egypt. (34) Imports, exports cake and meal, 1929-1958, incl. cottonseed, soybean, linseed, peanut, copra. Exports incl. country of destination. (33) Soybeans: Crushings and yields of oil and meal. (35) Bar chart: Major markets for U.S. soybeans since 1953: West Germany, Netherlands, Other Europe, Japan, Canada, Other. (36) Composition of soybean seeds, by variety, incl. Maturity Group No., % protein, % oil, weight of 100 seeds in grams. (37) Amino acids of soy protein. (38) Composition of Lecithin. (39) Composition of soybean oil, by variety. Incl. linolenic acid, linoleic acid, oleic acid, saturated acids.

Official standards for soybeans, Revised effective Sept. 1, 1955. Soy flour standards, for full-fat, low-fat, and defatted. Densities of various soybean products. Map of the USA showing the best adapted soybean varieties for each major soybean producing state. Directories: Processors of soybeans, by state, with address and names of officers (p. 56-74). Canadian soybean processors (p. 74). Manufacturers of 50% protein soybean meal (by state, p. 76). Foreign soybean processors, by country (p. 78-81). Refiners of soybean oil, by state (p. 82-84). Manufacturers and handlers of soy foods (p. 86-93): Beverages, breakfast foods, canners of green vegetable soybeans, canners of mature soybeans, cookies, crackers, toasts and wafers, frozen desserts (companies that make vegetable oils used in frozen desserts), health food store & supply houses, lecithin, macaroni, spaghetti & noodles, margarine, meat substitutes, proteins (Griffith Labs, Gunther, Worthington Foods), pudding powders (Brockville, Ontario, Canada), Salad and cooking oils, shortening, sausage binders, seasonings, soups, soybean oil, soybeans for cooking and sprouting, soy butter (Town Food Co., Riverside, California, makes "Town: soy lecithin spread; Shedd-Bartush Foods, Detroit, Michigan, makes "Willow Run" soy spread), soy cheese [tofu], soy flour, grits and flakes, soy flour mixes, soy milk, soy sauce, sprouts, vitamins, whipping agents.

Manufacturers of industrial products employing soybeans (p. 94-95): Caulking compounds & floor tile, coated papers & leather dressing, fire-fighting foam, glues, plywood & adhesives, insecticides, laminating, lecithin, oilcloth and coated fabrics, paints and varnishes (13 companies), paper sizings, wallpaper and wallboard coatings, resins, soaps, soybean fatty acids (8 companies), soybean oil. Services for the industry (p. 96-109): Analysts, appraisals, brokers, commission merchants & jobbers, consultants, engineering services, export elevators, exporters & importers, export warehousing and handling, farm management, field warehousing, futures market, market analysis, mill construction contractors, milling service, miscellaneous services, oil transports, transportation.

Equipment and supplies for the soybean industry (p. 110-32): Aspirators, bagging equipment, belting, chains, conveyors, elevators, defoliants, drying and aeration equipment (farm driers, grain driers, meal driers), dust control systems & dust collectors, elevator buckets, fans, farm equipment, fertilizers, fumigants, fungicides, germinators, grain and seed cleaning and separation equipment, grain grading equipment & moisture testers, grain handling equipment, granulators, grinding & mixing equipment, herbicides, insecticides & pesticides, inoculants, laboratory equipment, man-lifts, material level indicators, materials handling equipment, miscellaneous equipment, packaging materials, pelleting machines, power transmission equipment, pumps, respirators, seed protectants, sifters, soil testing, soybean storage (elevator & processing units, farm units), spraying and irrigating equipment, temperature systems, transportation equipment, truck lifts, unloaders, waterproofing, weighing and packaging equipment.

Soybean processing [crushing] and oil refining equipment and supplies (p. 134-42): Bleaching and filtering equipment, catalysts, complete plants [for crushing], continuous counter-current solvent extractors, continuous screw presses, degumming, deodorization, fractionation, hydraulic pressing equipment, hydrogenation, margarine, miscellaneous equipment, neutralization, shortening, solvent recovery, solvents, soybean seed [suppliers and private breeders], vegetable soybean seed. Advertisers' index. Incl. Allied Mills, V.D. Anderson, ADM, Arkansas Grain Corp., Big 4 Cooperative Processing Assn., Blaw-Knox Co., Buhler Mill Engineering Co., Cargill Inc., Central Soya Co., Crown Iron Works Co., Dannen Mills Inc., Delphos Grain and Soya Products Co., Albert Dickinson Co., Louis Dreyfus Corp., Esso Standard Oil, Farmers Cooperative Assn., Farmers' Cooperative Co., Felco Soybean Oil Meal Dealers, French Oil Mill Machinery Co., Funk Bros. Seed Co., Galesburg Soy Products Co., General Mills Inc., Jacob Hartz Seed Co., Inc., Honeymead Products Co., Huntley Mfg. Co., Illinois Soy Products Co., Iowa Milling Co., Iowa Soya Co., Jensen Mills, Kansas Soya Products Co, Inc., Spencer Kellogg & Sons, Inc., Lauhoff Soya Co., Albert Lea Engineering Co., North Iowa Cooperative Processing Assn., Penola Oil Co., Phillips Petroleum Co., Pillsbury Co., Port of New Orleans, Quincy Soybean Products Co., Rice Grain Corp., Seedburo Equipment Co. (measures oil content of soybeans in 10 minutes), Skelly Oil Co., A.E. Staley Mfg. Co., T.W. Wood & Sons (Seedsmen since 1879; Richmond, Virginia). Address: Hudson, Iowa.

1289. *Chopletter* (*Worthington Foods, Ohio*). 1960. What you should know about Worthington Foods. 13(2):3. April. • ***Summary:*** Worthington makes both liquid and powdered Soyamel. Soy-based Kreem Chee has exactly the same fat (36.9%) and protein (9.0%) content as dairy cream cheese. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both

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Kosher and Pareve (neutral). Foods bearing the Kosher label are Choplets, Choplet Burger, Vegetarian Burger, Proast, Numete, Sandwich Spread, Soyamel, Veelets, Veja Links, VP, and Entree.

New and improved Vegetarian Patties are now available. A product named New Vegetable Burger is also available.

Note 1. This is the English-language document seen (Jan. 2007) that contains the term "Vegetarian Burger" (or "Vegetarian Burgers"), or the term "Vegetable Burger" (or "Vegetable Burgers").

Note 2. This is the earliest document seen (Jan. 2009) that uses the word "Kosher" or the word "Pareve" in connection with meat alternatives or with soy products. Address: Worthington, Ohio.

1290. **Product Name:** Vegetarian Burger.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1960 April.
Ingredients: In 1971: Wheat protein [wheat gluten], water, yeast extract, salt, soy sauce, Brewer's yeast, MSG, seasonings, algin, caramel color.
Wt/Vol., Packaging, Price: 20 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: *Chopletter* (Worthington Foods, Ohio). 1960. "What you should know about Worthington Foods." April, p. 3. The Kosher certification on 11 Worthington products has been in effect since 1 July 1959. These products are both Kosher and Pareve (neutral). Foods bearing the Kosher label include Vegetarian Burger.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Vegetarian Burger (Worthington)."

Ad in Whole Foods. 1983. Sept. p. 45. in 20 oz. cans. This product and Vegetable Skallops are being promoted as "Salt Shakers." Both are available in versions with and without salt and MSG. For the hypertensive and sodium-conscious. A black-and-white photo shows the can and label. The text reads: "Contains no meat. A vegetable protein product. No added salt or MSG."

Worthington Yesterday and Today. 1984. p. 11. Nutrition Action Healthletter. 1987. Oct. p. 13. Critical treatment of this product which contains 790 mg of sodium vs. only 65 mg for lean beef. Much of the sodium comes from MSG. The "no salt added" label is highly misleading though technically legal. It also contains caramel coloring. Thus it is not necessarily more healthful than beef.

1291. **Product Name:** Loma Linda Dinner Cuts (Meatless Cutlets) [With Salt, or with No Salt Added].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Arlington, CA 92505.
Date of Introduction: 1960 May.
Ingredients: In 1971: Wheat protein [wheat gluten], water, soy sauce, yeast extract, salt, MSG, dextrose, powdered onion, celery and parsley extracts.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 2 dinner cuts (3.5 oz–100 gm): Calories 110, protein 21 gm, carbohydrate 4 gm, fat 1 gm, cholesterol 0 mg, sodium 30 mg, potassium 75 mg.

New Product–Documentation: *Today's Food* (Loma Linda Foods, Arlington, California). 1960. Spring. p. 4. Today's Food. 1964. Autumn. p. 7. 20 oz. can retails for $0.74, serves 5, and provides 65 gm of protein; Ad. 1981, undated. "Try improved Dinner Cuts. Its no longer a tough choice. Let's face it, our old Dinner Cuts–as delicious as they were–took a lot of chewing. We took a lot of kidding... Dip in batter and wheat germ and brown in a skillet."

Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Dinner Cuts contain 18.79% protein, 1.00% fat, and 3.49% carbohydrate. One serving, 1 patty, weighs 125 gm.

Loma Linda Food Co. 1969. "Wholesale Price List." Dinner Cuts are now sold in 14 oz, 19 oz, 28 oz, and 48 oz cans. A version with no salt added is sold in 20 oz cans.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. Lists the ingredients in "Dinner Cuts (Loma Linda)."

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned steak or burger-like product based on wheat protein.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 175. The ingredients in "Dinner Cuts (Loma Linda)" are "wheat protein, soy sauce, yeast extract, MSG, salt, powdered onion, L-lysine, dextrose, celery, parsley extract."

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Label sent by Loma Linda Foods. 1988. Oct. 5. The ingredients are now, for "No salt added": Wheat gluten, water, oat flour, wheat flour, soy protein isolate, caramel color. Broth: Water, natural (vegetable) flavors, onion powder, mono potassium glutamate, dextrose, L-lysine, spice. This product was introduced in 1963.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1292. Van Gundy, Dorothea. 1960. Man-sized meals in mere minutes... for homemakers in a hurry! *Today's Food* (*Loma Linda Foods, Arlington, California*) 5(1):4-6. Spring.
• ***Summary:*** Commercial food products made by Loma Linda Foods include: Vegemeats (with gluten). Vegeburger. Dinner Cuts. Loma Linda Green Soy Beans. Linketts. More information about these products is given on pages 3 and 7 of this 8-page magazine. A photo shows Dorothea Van Gundy. Address: Dietitian, International Nutrition Research Foundation, 11503 Pierce Place, Arlington, California.

1293. California State Registrar of Vital Statistics. 1960. Certificate for the marriage for Martha D. Van Gundy and Edwin S. Jones. Riverside, California. 1 p.
• ***Summary:*** Martha D. Van Gundy (age 57, born about 1903) and Edwin S. Jones (age 69, born about 1891) were married on 7 Aug. 1960 in Riverside, California. Ed Jones was a widower; he had previously been married to Mildred Lager, a close friend of Dorothea Van Gundy. Address: Riverside, California.

1294. Farlow, David R. 1960. The Japanese American Soybean Institute. When Automatic Allocation goes into effect you will see the full impact of JASI's promotion work. *Soybean Digest.* Sept. p. 35-36.
• ***Summary:*** JASI is starting to get involved with soy milk in Japan. There are about 60,000 tofu makers in Japan and they can readily make both tofu and soy milk. Dr. Harry W. Miller "has long been a strong advocate of the utilization of soy milk to aid in the increased consumption of protein and fat by the Japanese people... K.S. Lo of the Hong Kong Soybean Co. showed me his plant last fall, and I saw huge amounts of soy milk being manufactured and bottled for the Hong Kong area alone. Pepsi Cola is bottled in the same plant and Mr. Lo informed me that soy milk was outselling Pepsi Cola by about two to one in the Hong Kong area. I drank a bottle and I have to admit that much to my surprise it was delicious."

The increase in exports of U.S. soybeans to Japan has been accomplished under a "controlled allocation system"–controlled by the Japanese government. "When the Automatic Allocation system goes into effect, and the consumer alone decides the amount of soybeans and soybean products that are consumed, you will see the full effect that the promotion work that we have done has had." A small portrait photo shows David Farlow. Address: Asst. to the Executive Vice President, American Soybean Assoc.

1295. Worthington Foods, Inc. 1960. Battle Creek Food Company, authorized dealer price list. Worthington, Ohio. 1 p. Oct. 15.
• ***Summary:*** Battle Creek Food Company in Battle Creek, Michigan, is now a division of Worthington Foods, Inc. in Worthington, Ohio. Products of special interest on the list include the following; those followed by an asterisk (*) contain soya: Veg. Burger, Prime. Nuttose. Protose. Vegetable Skallops. Vegetable Steaks, regular or small cuts. Gluten Flour. Malted Nuts. Savita. Savita Soup Cubes. Soy Flour*. Brewers Yeast Powder. Lacto Dextrin. Address: Worthington, Ohio.

1296. *British Vegetarian.* 1960. Vegetarian foods. Sept/Oct. p. 248-49.
• ***Summary:*** The main protein foods used by vegetarians are nuts, cheese and pulses. In addition, all Health Food Stores sell a wide variety of tinned nutmeats, including the following:

Granose Foods Ltd. makes: Nuttolene (peanuts and cashew nuts). Sausalene (wheat protein, mixed nuts, etc.). Saviand (Wheat gluten, ground nuts, etc.). Meatless steaks (wheat gluten, etc.). Savoury Pudding (wheat protein, wheatmeal flour, groundnuts, etc.). Nutmeat (wheat gluten, cashew nuts, wheat flour, etc.). Sausalatas (wheat protein, mixed nuts, etc.). Soya Beans (soya beans, tomato puree, brown sugar, vegetable shortening, onion, yeast extract, wholemeal flour, seasoning). Peanut Butter. Cashew Nut Cream. Granose was founded in 1898 under the name International Health Association Ltd. and is now at Stanborough Park, Watford. Note: This is the earliest document seen (July 2000) concerning the work of Granose Foods Ltd. with soya beans.

Mapleton's Nut Food Co. Ltd. makes: Maplemeat (cashew nuts, wheat risk, etc.). Savormix and Frittermix (incl. groundnuts); these are in packets for making savouries. They also make numerous tinned nutmeats, plus a wide range of nut and soya butters [probably margarines], savoury spreads and pastes, nut creams, fruit and Dundee cakes. Mapleton's was started in 1897 by the two Mapleton brothers who were processing cracked nuts in a large house on Dolphin Street, Manchester. By 1907 Mapleton's had become a public limited company and occupied a mill at Wardle, Lancashire, later moving to Garston, near Liverpool. The company opened a second factory in Hamburg, Germany, which flourished until 1914, when it was confiscated. A fire gutted the their Garston mills in 1932 but in 1933 the factory and offices were rebuilt.

Many tons of organically grown produce are grown in the UK and overseas using compost.

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THE BATTLE CREEK FOOD COMPANY

DIVISION OF WORTHINGTON FOODS, INC.

BATTLE CREEK, MICHIGAN — WORTHINGTON, OHIO

AUTHORIZED DEALER PRICE LIST

October 15, 1960

SHIP TO — SOLD TO — DATE

STREET — City & State — STREET — City & State

Quantity	Description	Pack & Size	Suggest. Minimum Price	Dealer Price	Totals	Quantity	Description	Pack & Size	Suggest. Minimum Price	Dealer Price	Totals
cs.	Burger, Veg., Prime	24/20 oz.	.60	11.96		cs.					
cs.	Burger, Veg., Prime	6/#10	...	12.90		cs.					
cs.	Nuttose	24/10 oz.	.39	7.90		cs.					
cs.	Nuttose	24/20 oz.	.72	14.28		cs.					
cs.	Nuttose	12/28 oz.	.92	9.20		cs.					
cs.	Protose	24/10 oz.	.38	7.44		cs.					
cs.	Protose	24/20 oz.	.65	12.96		cs.	Acidone Tablets	12/100's	.99	7.20	
cs.	Protose	12/28 oz.	.87	8.64		cs.	Acidone Tablets	12/600's	3.79	27.36	
cs.	Skallops, Vegetable	24/10 oz.	.32	6.40		cs.	Brewers Yeast Powder	12/10 oz.	1.35	10.80	
cs.	Skallops, Vegetable	24/20 oz.	.58	11.48							
cs.	Skallops, Vegetable	12/28 oz.	.75	7.44		cs.	Brewers Yeast Tablets	12/100's	1.65	12.00	
cs.	Skallops, Vegetable	6/#10	...	12.30							
cs.	Steaks, Vegetable	24/10 oz.	.32	6.40		cs.	Brewers Yeast Tablets	12/300's	4.45	32.25	
cs.	Steaks, Vegetable	24/20 oz.	.58	11.48							
cs.	Steaks, Vegetable	12/28 oz.	.75	7.44		cs.	Ferrin. Unswt.	6/pint	1.79	6.48	
cs.	Steaks, Vegetable	6/#10	...	12.30		cs.	Lacto Dextrin	12/12 oz.	1.10	8.64	
cs.	Steaks, Vegetable Small Cuts	24/20 oz.	.54	10.64		cs.	Lacto Dextrin	4/4 lb.	4.96	11.90	
						cs.	Laxo	12/4 oz.	1.39	10.08	
cs.	Steaks, Vegetable Small Cuts	6/#10	...	11.40		cs.	LD-Lax	12/10 oz.	1.66	12.00	
						cs.	LD-Lax	4/3 lb.	6.99	16.80	
cs.						* cs.	Natural Mutli-Vit. & Mineral Tablets	.....	...	...	
cs.											
cs.						cs.	Psyllium Seed Blond	12/11 oz.	.84	6.72	
cs.											
cs.						cs.	Sugarless Sweetener	24/1½ oz.	.45	7.20	
cs.						cs.	Sugarless Sweetener	12/14 oz.	1.99	15.96	
cs.	Gluten Flour	6/5 lb.	2.99	12.42		cs.					
cs.	Gluten Flour	1/100 lb.	...	29.00		cs.					
* cs.	Kaffir "Tea"	.....	...	...		cs.					
cs.	Malted Nuts	12/14 oz.	1.38	11.28		cs.					
cs.	Malted Nuts	4/5 lb.	7.07	19.20		cs.					
cs.	Savita	24/3 oz.	.60	9.60		cs.					
cs.	Savita	12/7 oz.	1.19	9.60		cs.					
cs.	Savita	12/14 oz.	2.25	18.12		cs.					
cs.	Savita Soup Cubes	12/10's	.39	3.24		cs.					
cs.	Soy Flour	6/2 lb.	.89	3.66		cs.					
cs.	Soy Flour	4/5 lb.	2.11	5.76					SECOND COLUMN TOTAL		
* cs.	Wheat Germ Natural	.....	...	...					FIRST COLUMN TOTAL		
				TOTAL					GRAND TOTAL		

SALESMAN	Cash	c.o.d.	Chg.

BUYER

PRICES SUBJECT TO CHANGE WITHOUT NOTICE

* Not available till later date.

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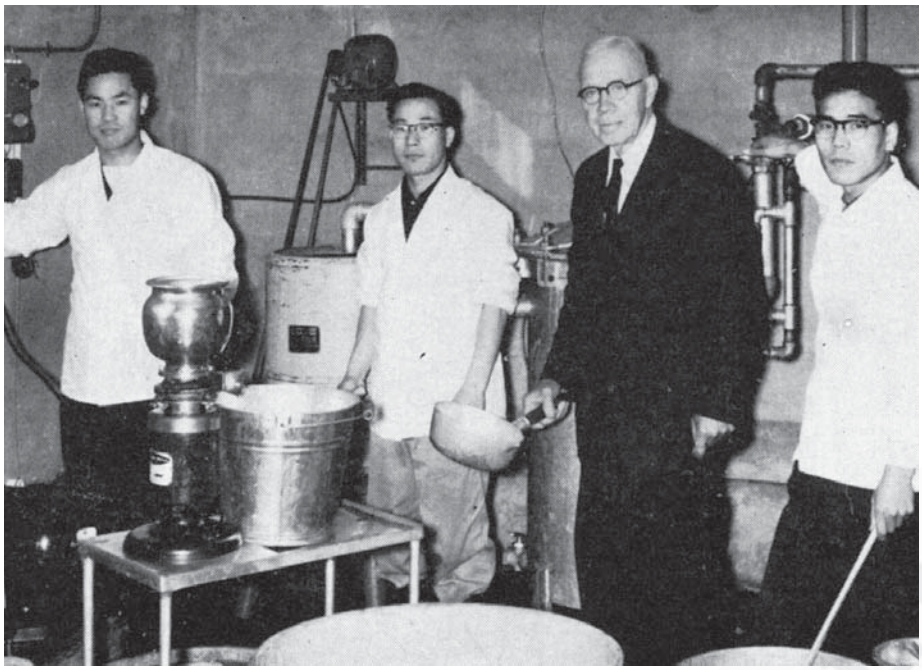

1297. Miller, Harry W. 1960. The package soy milk shop. *Soybean Digest.* Oct. p. 14-15.

• ***Summary:*** Soy milk is now widely marketed in the United States in both powdered and evaporated forms.

"The demand for the product has been mostly from those allergic to animal milk and through prescription to those who cannot tolerate dairy products. Its manufacture, however, has been by large factory establishments. This is the case with Loma Linda's Soyalac, Borden's Mull-Soy, and Mead Johnson's Sobee. The latest soy milk is being put out by the Indonesian soy milk plant located at Djorgakarta [Yogyakarta, Jogjakarta] which began soy milk powder production in 1957. These plants have contributed much to the knowledge of soy milk, and emphasized its value as a dietary article."

A package soy milk plant can be installed for less than

$2,000. It can start as a tofu shop to which is added a steam boiler or steam generator of 5 to 10 horsepower capacity, either a hand-operated stone mill, or better a small mill run by an electric motor with steel or carborundum buhr, and a 50-gallon pressure cooker. The soymilk is formulated by adding sugar, oil, salt, calcium, and vitamins. "These are placed in about one-fifth the desired quantity of extracted milk and run through a small homogenizer especially made for the package plant. When it is homogenized it is added to the other four-fifths of the milk, and we have it as a constituted milk of a nice color and good flavor.

"In most places this soy milk is used hot and marketed at once as hot milk. However, where it is bottled (as is customary with animal milk) it is run over a cooler and bottled which adds a little expense. The package soy milk plant has a capacity for 150 pounds of cheese curd, and 200 gallons of milk per day of operation, using three trained workers, also at a very minimum of cost.

"Plant 30 Years Ago: The practicability of such package soy milk and cheese plants has been amply demonstrated. In fact, my first beginning with soy milk was made in a rather crude package plant at the Shanghai Sanitarium some 30 years ago. This grew into the large soy milk factory later in Shanghai. The next one, which was more streamlined, was put in a school at Taipei, Taiwan, supplying the school, the Taiwan Hospital and community with soy milk daily.

"One year ago the writer had the satisfaction of arranging a flow line of the above described equipment in a village in the northern suburbs of Tokyo, where soy milk is made in a soy cheese [tofu] factory so both bottled soy milk and tofu are supplied to the community and also to a state institution. There are an estimated 3,000 soy curd plants in Japan. At little additional cost each of these can be transformed into soy milk producing shops.

"A soy milk package unit has been assembled at Mountain View College, located in central Mindanao, Philippine Islands. Here the college farm raises a good type of edible soybean. There 700 students get soy milk for breakfast every morning and at noon have soy cheese. In these rice eating and corn producing areas the soybean thus prepared has made a great contribution to the health and welfare of the student body and faculty members.

"A similar package soy milk shop is now being installed at a school in Hong Kong, another at a college and hospital at Bandung, Indonesia, and another at a college in Japan.

"Thus a partial solution of the all-important protein in the nutrition of the Orientals, within their economic reach, is now a possibility. No greater benefit can be visualized than nutrition adequate for infants and the growing school child."

Photos show: (1) Three Japanese workers standing behind a table on which are glasses of soy milk. The caption

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reads: "Soy milk, ready for customers, is made fresh every day." (2) Dr. Harry Miller and three Japanese workers in a "soy milk package plant," or compact soy milk shop, with several pieces of equipment. Address: M.D., Director Emeritus International Nutrition Research Foundation.

1298. **Product Name:** Soymilk.
Manufacturer's Name: Bandung College.
Manufacturer's Address: Bandung, West Java, Indonesia.
Date of Introduction: 1960.
New Product–Documentation: Letter from Eric C. Fehlberg, Director, International Health Food Assoc. 1990. May 24. This organization no longer makes foods.

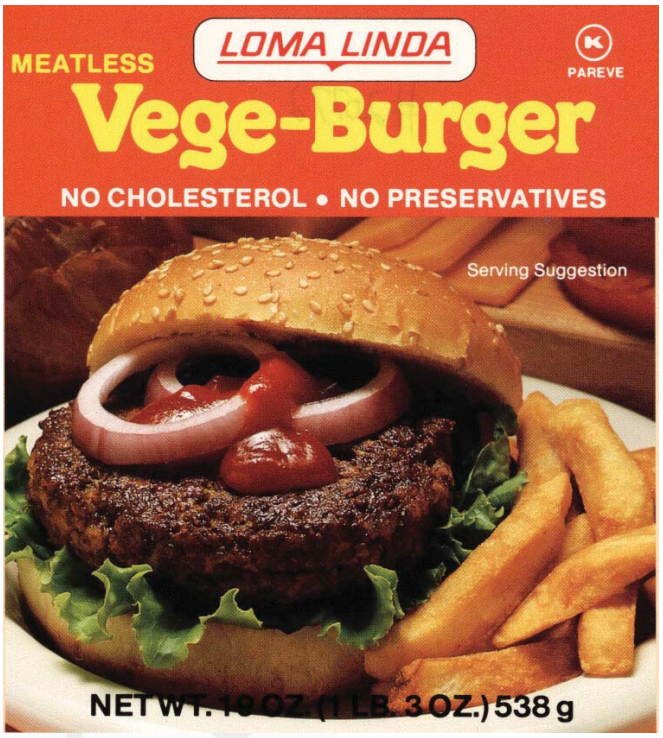
1299. **Product Name:** Vegetable Steaks.
Manufacturer's Name: Battle Creek Food Co.
Manufacturer's Address: Battle Creek, Michigan.
Date of Introduction: 1960.
Ingredients: In 1971: Wheat protein [wheat gluten], water, yeast extract, salt, flavorings, MSG, caramel color.
Wt/Vol., Packaging, Price: 20 oz can. Retails for $2.70 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Vegetable Steaks (Battle Creek–by Worthington)." Note: Worthington Foods acquired Battle Creek Food Co. in 1960.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned steak or burger-like product based on wheat protein.

Worthington Yesterday and Today. 1984. p. 11.

1300. **Product Name:** Soymilk.
Manufacturer's Name: Hong Kong Hospital and South China College.
Manufacturer's Address: Hong Kong.
Date of Introduction: 1960.
New Product–Documentation: Letter from Eric C. Fehlberg, Director, International Health Food Assoc. 1990. May 24. This organization no longer exists.

1301. **Product Name:** Loma Linda Vegeburger (Canned Meatless Hamburger). Later renamed VegeBurger or Vege-Burger.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, California.
Date of Introduction: 1960.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: *Today's Food* (Loma Linda Foods, Arlington, California). 1960. Spring. p. 4-5. "Loma Linda Vegeburger."



Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Vegeburger contains 17.75% protein, 0.92% fat, and 4.08% carbohydrate. See also reformulated 1971 version that contains textured soy protein.

Loma Linda Food Co. 1969. "Wholesale Price List." Vegeburger is now sold in 14 oz, 20 oz, 30 oz, and 51 oz cans. A version with no salt added is sold in 20 oz cans.

1302. **Product Name:** Loma Linda Vegelona (Meatless Bologna-like Loaf).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, California.
Date of Introduction: 1960.
Ingredients: Wheat gluten, water, dried yeast, corn oil, salt, soy flour, vegetable mono- and di-glycerides, caramel color, natural (vegetable) flavors, oat flour, onion powder, L-lysine, wheat flour, artificial colors, soy protein isolate, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per ½ inch slice (2.4 oz–67 gm): Calories 100, protein 18 gm, carbohydrate 6 gm, fat 1 gm, cholesterol 0 mg, sodium 210 mg, potassium 100 mg.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Vegelona contains 25.38% protein, 5.45% fat, and 7.22% carbohydrate.

Loma Linda Food Co. 1969. "Wholesale Price List." Vegelona is now sold in 14 oz, 20 oz, and 30 oz cans.

It's Your World Vegetarian Cookbook. 1973. Glendale,

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California: Seventh-Day Adventist Church. p. 118. This is a canned bologna-like product.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1963.

1303. **Product Name:** Cho-Pats.
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison, Tennessee.
Date of Introduction: 1960.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Cho-Pats contain 16.50% protein, 0.10% fat, and 6.22% carbohydrate.

Talk with Warren Hartman, who worked for Worthington Foods since early 1946. 1992. Nov. 5. He thinks that this product was made by Madison Foods.

1304. **Product Name:** Chic-Ketts (Meatless Chicken).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: Tuxedo 5-5359.
Date of Introduction: 1960.
How Stored: Frozen.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Chic-Ketts contain 18.45% protein, 0.21% fat, and 6.70% carbohydrate.

By 1973 this product was reformulated to contain textured soy protein concentrate and isolate.

Note: This is the earliest commercial meat alternative seen which has a name clearly indicating that it is an alternative to chicken or poultry.

1305. **Product Name:** Cutlets.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085. Phone: 800-628-3003.
Date of Introduction: 1960.
Ingredients: In 1971: Wheat protein [wheat gluten], extract of Brewer's yeast, hydrolyzed vegetable proteins, MSG, salt, caramel coloring, water to process.
Wt/Vol., Packaging, Price: 50 oz (1417 gm) can. Retails for $6.25 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Cutlets plus their liquid contain 15.50% protein, 0.62% fat, and 4.94% carbohydrate. Not listed in the 1965 *Diet Manual.*

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. Lists the ingredients in "Cutlets (Worthington)."

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 175. The ingredients in "Cutlets (Worthington)" are "wheat protein, yeast extract, HVP, soy sauce, mushrooms, MSG, salt, lysine, dextrose, corn oil."

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

By 1990 this product had been reformulated with textured soy protein concentrates.

1306. **Product Name:** Cutlets in Gravy.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085. Phone: 800-628-3003.
Date of Introduction: 1960.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Cutlets in gravy contain 14.37% protein, 3.68% fat, and 8.34% carbohydrate. Not listed in 1965 *Diet Manual.*

1307. **Product Name:** Vegelinks (Meatless).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: Tuxedo 5-5359.
Date of Introduction: 1960.
Ingredients: In 1971: Soy protein (Fibrotein spun soy protein fibers), oats, corn oil, vegetable shortening, [egg] albumin, salt, corn syrup solids, soy sauce, vegetable gum, hydrolyzed vegetable protein, flavorings, U.S. certified color, water.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1960. *Diet Manual.* 1st ed. p. 95. Vegelinks and its liquid contain 22.10% protein, 10.70% fat, and 9.19% carbohydrate. The manufacturer's name is not given.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 164. Lists the ingredients in "Vegelinks (Worthington)." This is an institutional product.

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Note: This is the earliest English-language document seen (Aug. 2003) that uses the term "Vegelinks" to refer to meatless soy sausages.

1308. Meyer, Herman Frederic. 1960. Infant foods and feeding practice. Springfield, Illinois: Charles C. Thomas. xxviii + 332 p. Foreword by Philip L. White. Index. 24 cm. [199* ref]
• ***Summary:*** Chapter 5 is titled "Bottle-fed (artificial) infant foods." A photo (p. 82) shows all known available U.S. and Canadian bottle-fed infant foods. These are divided into 3 basic types: 1. Milk-base dilution mixtures. 2. One-formula (ready-modified) mixtures. 3. Preparations with special functions. The soy milk products are all listed under type 3, in the category "Hypo-allergic preparations (liquid or dry). The following are mentioned: Mull-Soy Liquid and Mull-Soy Powder (The Borden Co., Pharmaceutical Div., 350 Madison Ave., New York 17, NY). Sobee (dry) and Sobee Liquid (Mead Johnson & Co., 2404 W. Pennsylvania St., Evansville, Indiana). Soyalac Infant Powder, Soyagen (dry), and Soyalac Infant Concentrate (liquid) (International Nutrition Laboratories, 11503 Pierce Place, Arlington, California; or Box 388, Mt. Vernon, Ohio).

Soyola (made by Wyeth), a soy-based "Therapeutic adjunct and dietary supplement," has been discontinued since 1952. Almond Lac (made by Almond Lac Co.), a hypoallergenic preparation, was discontinued during 1952-59. Address: Assoc. Prof., Dep. of Pediatrics, Northwestern Univ. Medical School, Chicago, Illinois.

1309. Seventh-day Adventist Dietetic Assoc. 1960. Diet manual. 1st ed. Main Office: 1720 Brooklyn Ave.. Los Angeles 13, California. 106 leaves. 22 cm.
• ***Summary:*** The title page reads: "Prepared by the Department of Dietary Service, White Memorial Hospital, College of Medical Evangelists, in cooperation with the Seventh-day Adventist Dietetic Association" (SDADA). It was published and distributed by the SDADA. Editions published after 1971 (later listed as 1970, i.e. 1975, 1978, 1982, 1990) were prepared by the SDADA.

A comprehensive loose-leaf handbook for the planning, selection, and coordination of vegetarian diets. Although this book is undated, subsequent editions give the publication date as 1960.

Table VI, titled "Protein, fat, and carbohydrate composition of some meat alternates" (p. 95), lists 27 product names alphabetically. Most (perhaps all; the names of the manufacturers are not given) are made by Seventh-day Adventist food companies, especially Loma Linda Foods and Worthington Foods. These products are: Chic-Ketts, Cho-Pats, Choplets–liquid, Chopletburger, Cutlets–liquid, Cutlets in Gravy, Garbonzos, Nuteena, Nutmeat, Proast, Proteena, Protose, Sandwich Spread, Soyloin Steaks, Soybeans–green, Steaklets–liquid, Vegeburger, Vegechee, Vegecuts, Vegelinks–liquid, Vegelona, Vegemeatburger, Vegemeat Steaks, Vegetable Cheese, New Wieners–liquid, Yum, Zoyburger.

Note: This is the English-language document seen (Jan. 2007) that contains the term "Chopletburger" (or "Chopletburgers"). Address: California.

1310. Sonnenberg, Lydia. ed. 1960. Everyday nutrition for your family. Los Angeles, California: Seventh-day Adventist Dietetic Assoc. 147 p. Illust. 4 tables on nutritional intake. 22 cm. [43 ref]
• ***Summary:*** Discusses the principles of a vegetarian diet for all age groups. Chapter 3, "The Basic Food Groups," lists five: Fruits, vegetables, bread and cereals, protein foods (including legumes, cottage cheese, eggs, soy cheese [tofu], prepared meat alternates, nuts and nut butters), and the milk group. A "soy cheese sandwich" is listed as "something hearty" in a month's suggestions for pack-it lunches. The chapter titled "Proteins on Parade" discusses soy milk as a good source of protein, "complete proteins," and the supplementary action of proteins (p. 46-47). It has a section titled "Soybeans Important" which praises soy flour and soy cheese [tofu].

Chapter 8, titled "Fats are Concentrated," has a table (p. 53) listing protein-rich foods of animal origin (with mostly saturated fat) and plant origin (mostly unsaturated): Soybeans, soybean milk, and soybean cheese are mentioned; they have 50-70% of their calories from fat. A "Gluten" type entree is low in fat. Chapter 21 is titled "The Vegetarian Diet."

Note: This is the earliest document seen (Dec. 2013) that mentions the Seventh-day Adventist Dietetic Association. Address: Director, Dietary Dep., Loma Linda Sanitarium and Hospital and Assoc. Prof., School of Dietetics, College of Medical Evangelists.

1311. **Product Name:** Loma Linda Soyagen Infant Powder (Soy-Based Infant Formula).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: 11503 Pierce Place, Arlington, California. Phone: 714-687-7800 (3/88).
Date of Introduction: 1960?
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable.
New Product–Documentation: H.F. Meyer. 1960. Infant foods and feeding practices. A photo (p. 82) shows this canned product. A photo of a baby's face appears on the front panel. See also p. 88 and 90. Page 121 gives a detailed analysis of the product. The powder, after being reconstituted, contains: Fat 3.2%, protein 2.85%, carbohydrates 5.4%. Calories per ounce: 18. Tablespoons per oz.: 4. Added vitamins and minerals: ferrous sulphate, calcium carbonate, dibasic calcium phosphate. Affected by terminal sterilization: No. How formulated or reconstituted:

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1 vol. milk to 7 vols. water. Chemical definition and essential clinical uses: Same as Soyalac Infant Powder but sold in grocery and health food stores. Soyalac Infant Powder and Infant Concentrate only sold in drug stores. Meyer gives the manufacturer as International Nutrition Laboratories, but with two addresses: 11503 Pierce Place, Arlington, California, and Box 388, Mt. Vernon, Ohio.

1312. Madison Foods. 1960? Everybody loves Madison Foods: Recipes. Madison, Tennessee. 32 p. Undated. 10 x 15 cm.

• ***Summary:*** Contents: The story of Madison Foods (a division of the famous Madison College located near Nashville, Tennessee). Tasty, healthful Madison foods (listing and photo). Vegetarian vs. meat diet. Vegetable fats vs. animal fats. Vegetable proteins vs. animal proteins. Nutritional analyses of Madison Foods products. List and description of Madison Foods. Recipes (at least one for each product; a photo accompanies each).

This little (6 by 4 inch) booklet focuses on the various innovative Madison Foods vegetarian products, which are packed in 14 oz, 19 oz, and No. 10 cans. The undated booklet was published after Jan. 1960, since page 6 cites an article from *Nutrition Reviews* published that month.

Madison's products are: Cheze-O-Soy (tofu), Com-Pro ("Madison Foods' latest and best." No ingredients given), Dinner Morsels (all-gluten, resembling chicken), Kreme-O-Soy, Madison Burger, Madison Links, Soy beans in tomato sauce, Not Meat (with peanuts and soybeans), Meatless Nu-Steak (all-gluten), Soyburger, Meatless Stake-Lets (with wheat gluten, whole wheat, and soy flour in a meatlike sauce), Vigorost, Yum, and Zoy-Koff (1 lb bags). Coming soon: Madison Links (hot dogs; photo shown).

Photos on the last two pages show: A student operating a canning machine. Madison Links on half-buns on a tray. The Madison Food factory. Dr. A. Perry Webber, food consultant, with Madison's products.

Note 1. This is the earliest English-language document seen (Aug. 2003) that uses the term "Madison Links" to refer to meatless soy hot dogs or sausages.

Note 2. This is the earliest document seen (Jan. 2013) that mentions "Com-Pro" or "Madison Links"–protein foods made by Madison Foods. Address: Madison, Tennessee.

1313. *Madison Survey* (*Madison, Tennessee*). 1961. Health restaurants and treatment rooms. 43(1):1. Jan.

• ***Summary:*** "During the Golden Anniversary Convention at Madison in October, last fall [the college celebrated its 50th anniversary in Oct. 1960], Robert Santini, R.N., of Pine Hill Sanitarium, near Birmingham, Alabama, touched off the important question of opening up vegetarian cafeterias and treatment rooms in the larger cities, using the units as country bases. He said he was frequently approached by non-Adventists, asking when a health restaurant would be opening in the Birmingham area." It was agreed that "it would be even more difficult to find qualified personnel than money."

"Several spoke of how formerly we had health restaurants and treatment rooms in the large cities of the South, and these should be reopened. Nashville (the Polk

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Street Settlement), Birmingham, Knoxville, and Memphis were mentioned.

Note: Madison Survey is now 23 cm tall and 4 pages long. At the top of page 1 is an illustration of the entrance to the college, consisting of two stone pillars. On the left one is written "Madison Sanitarium and Hospital." On the right one "Madison College 1904."

1314. Donnelly, Charles J. 1961. A comparative study of caries experience in Adventist and other children. *Public Health Reports* 76(3):209-12. March. [6 ref]
• ***Summary:*** Seventh-day Adventist children have fewer caries (cavities), decayed, missing, or filled teeth than would normally be expected. Address: Dental Surgeon, Epidemiology and Biometry Branch, National Inst. of Dental Research, Public Health Service, USA.

1315. *British Vegetarian.* 1961. Soya milk for household use. March/April. p. 93.
• ***Summary:*** Granose Foods will soon be in a position to supply two varieties of spray-dried soya milk, Soyalac and Soyagen, made by one of their associated companies, Loma Linda Food Company in Arlington, California. Soyalac is specially prepared for infants, whereas Soyagen is for general use. A table compares the nutritional composition of the two products in both powdered and reconstituted forms. Reconstituted, Soyalac contains 2.85% protein and 3.39% fat vs. 2.80% and 2.80% for Soyagen. Sold in 16-oz. tins, Soyalac retails for 10 shillings 6 pence, and Granogen for 9 shillings 6 pence.

1316. Fact sheet: Harry Willis Miller, M.D., F.A.C.S. (News release). 1961. n.p. 1 p. April. [1 ref]
• ***Summary:*** This one-page biographical sketch of Dr. Miller was released with the book *China Doctor,* by Raymond S. Moore, published this month by Harper & Brothers in New York. "Dr. Clarence Hall, *Reader's Digest,* says: 'Towering figure... Dr. Harry W. Miller... in the inspiring tradition of such all-time "greats" as Livingston, Judson and Paton [sic, Patton, General George]... restless creator of new traditions, a modern-day pioneer whose imaginative use of medicine has touched millions with the magic of new hope and health."

Concerning his work with soymilk and nutrition, this sketch states: "Proponent of preventive medicine, public health and nutrition as greatest challenge to America from world's needy (Consultant to United Nations). Out of this grew his research and development of fiber-free, potable soybean milk which is saving countless lives of infants and adults around the world (In Hong Kong more Miller soymilk sold than soda pop). Gives all royalties and fees back to research and building of hospitals (over $2,500,000). U.N. establishing overseas soymilk plants with Miller's counsel in areas where there are few cows (Indonesia, etc.). Recipient of gold medals for research."

Note: The soymilk made in Hong Kong that sold better than soda pop was not made by Harry Miller; he never made commercial soymilk in Hong Kong. Rather, it was Vitasoy, made by K.S. Lo of Hong Kong Soya Bean Products Co. Ltd.–with little or no influence from Dr. Miller.

1317. Moore, Raymond S. 1961. China Doctor: The life story of Harry Willis Miller. New York, NY: Harper & Brothers. xiv + 215 p. Illust. (8 pages of photos). Index. 21 cm. 2nd edition, 1969. Pacific Press, Mountain View, California.

• ***Summary:*** A key but sometimes inaccurate source of biographical information about this truly Great Man. Contains many excellent photos of Dr. Miller, including an especially good portrait facing page 80.

Contents: Foreword by Hollington K. Tong. Preface. Map: The Far East. The opium cure. Hallway to service. The medical buff. Young surgeon at work. Slow boat to China. From mufti to mao tze and queue. The penniless VIP. Strange horizons. Pigtail honeymoon. Wife hunt. Picture section. Some close calls. A key decision. Operating on the Siamese elephant. Conquering new fields. Return to the Orient. No recipes in China. High finance. Facing the medical boards. A doctor's choice. Travel by presumption. To bow or not to bow. Kidnapping the generalissimo. "Mayor" Miller. An ounce of prevention. Shanghai again. China's greatest honor. Benghazi brink.

The rear cover of the book describes it as follows: "What happens when a man gives himself and his talents to the service of God? Here are a few of the things that Dr. Harry Willis Miller has done and is still doing! At 23 gave up a promising medical career and quarter-million

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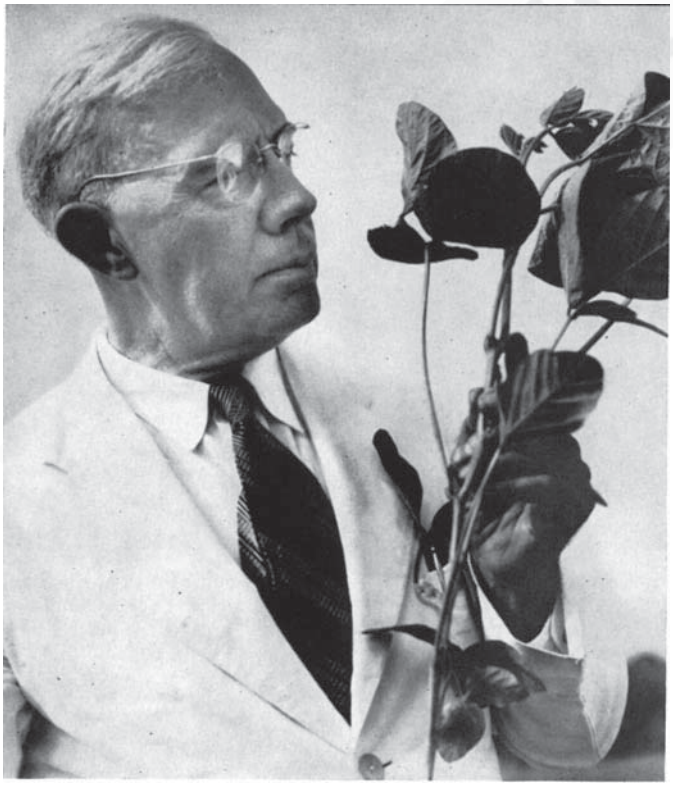
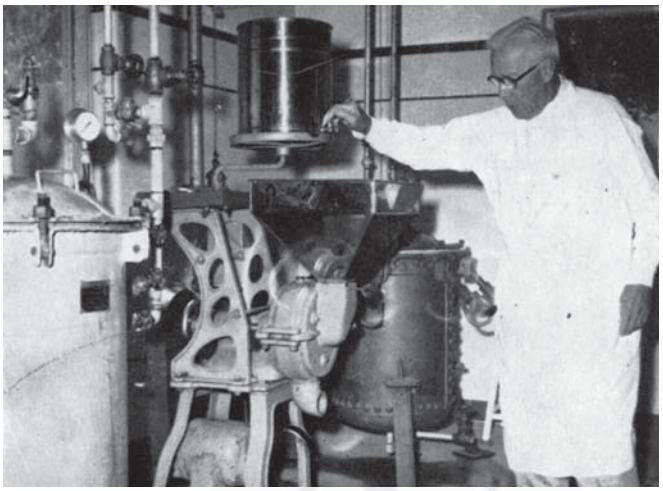
dollar inheritance in America. Went to China as a medical missionary and lived among the poor and sick. Immediately began building the first of 15 hospitals throughout China. With inventive genius performed daring operations and made new discoveries in preventive medicine. Was responsible for many cures of the dread opium 'sickness,' including the cure of the famed 'Young Marshal' Chang. Became perhaps the most widely practiced surgeon in the world. Invented and developed soybean milk, which is responsible today for saving thousands of lives in undernourished areas of the world. Had many dramatic encounters with bandits, wars, famines. Was so well-known and respected that during World





War II the Japanese invaders permitted Dr. Miller to give sanctuary to Chinese soldiers in the hospital compound. Returned to the U.S. for a time. Was consulting physician to 3 U.S. presidents and personal physician to national figures, senators, ambassadors, etc. Was awarded the coveted Blue Star of China by Generalissimo Chiang Kai-shek. At 81 is still healing and caring for the people of the Far East."

An ad for the book in *Soybean Digest* (Nov. 1935, p. 35) begins: "The incredible biography of the 'Schweitzer' of the Orient."

Pages 180-89 describe Dr. Miller's work with soy milk, Soyalac and Soyagen, and other soy foods. In the Shanghai Sanitarium kitchen he learned how to improve the flavor and digestibility of soy milk by running steam directly into the milk. From the Philippine Refining Co., which transformed bad-smelling copra into good-smelling coconut oil, he learned that steam distillation was the key to the transformation. From a Filipino company that refined stale and rancid butter into a product that tasted as fresh as new, he learned the secret of flash pasteurization–which effectively killed bacteria. Back in China, Dr. Miller, with his older son, Harry Willis Miller, Jr., worked to apply these new discoveries to soy milk. They worked! He expanded his experiments with infants and children, and in 1936 his results were published in the *Chinese Medical Journal.*

Photos (p. 81-89, unnumbered) show: (1) An excellent full-page portrait of Dr. Miller at age 81. (2) Harry and Maude Miller in China, wearing the Chinese dress they adopted after their arrival in 1903. Maude's tragic death two years later–caused by sprue, a vitamin deficiency disease–gave added personal meaning to Dr. Miller's nutritional research. (3) A group portrait showing a meeting of Adventist Missionaries at Shanghai, China, in 1907.

(4) Harry and Marie Iverson Miller at the time of their marriage in 1908. A trained nurse, she served with him through 42 years of missionary activity, and helped rear their 4 children. (5) Shanghai Sanitarium, opened 1 Jan. 1928, the first of 15 hospitals to be established in China under the leadership of Dr. Miller, who also founded numerous smaller

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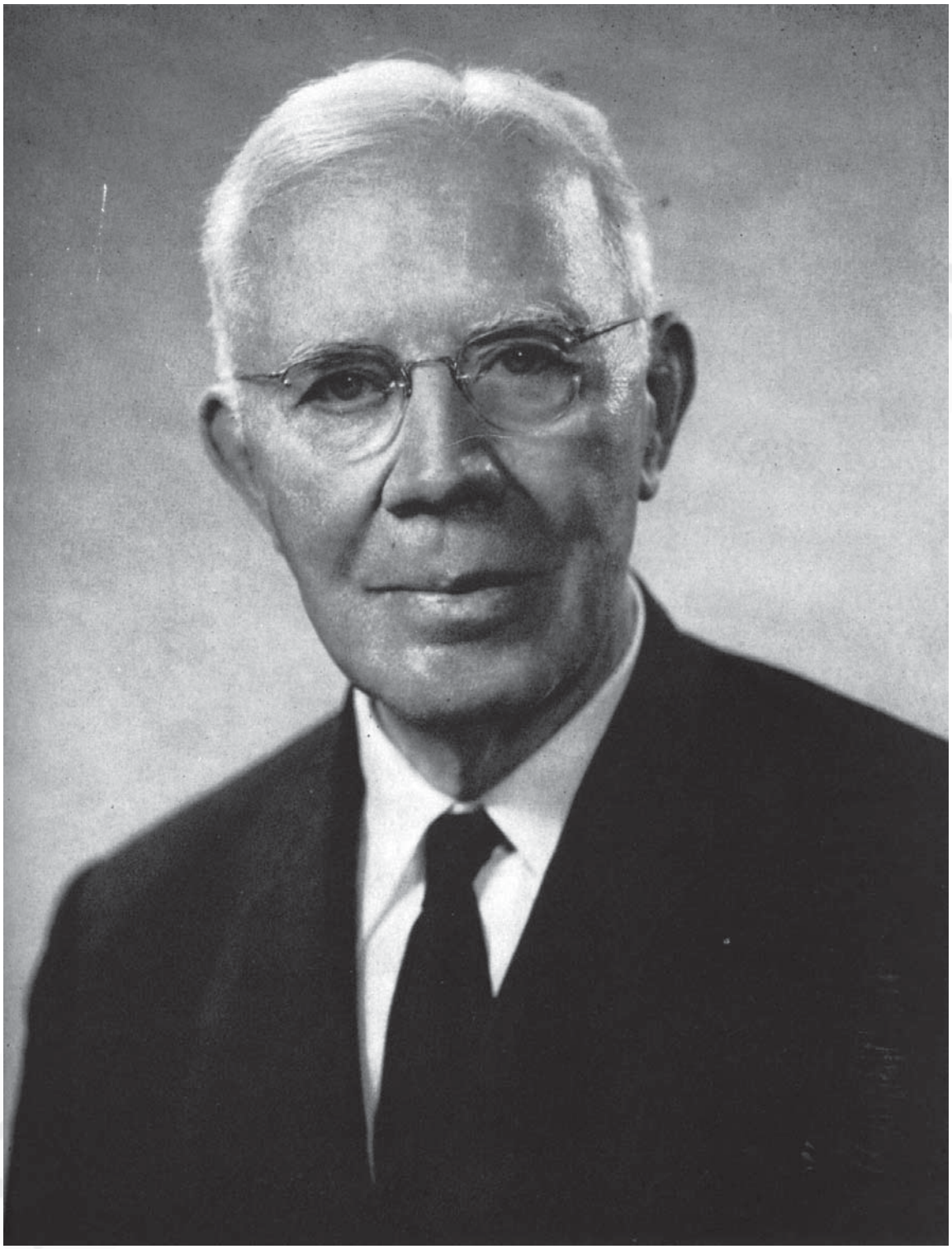

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clinics. (6) Members of the Shanghai Sanitarium staff in the mid-1930s, standing in front of a one-engine plane, as they see him off for a visit to outlying places.

(7) Dr. Miller and Marshall Chang Hsüeh-liang at Hankow airport in 1935, two years after Dr. Miller had cured the young Marshall's opium addiction. (8) Dr. Miller carried out more than 18,000 operations. Here he performs a thyroidectomy at one of his frequent visits to hospitals in Manila, Philippines. (9) Wuhan Sanitarium and Hospital at Wuchang, one of the medical units established through the generosity of the Young Marshal. Twenty thousand refugees moved into the Sanitarium compound when Hankow capitulated to the Japanese in 1938.

(10) The ruins of the Wuchang city dispensary, destroyed by Japanese bombs in 1938. (11) Dr. Miller examines a soybean plant grown on his farm at Mt. Vernon, Ohio. (12) Dr. Miller demonstrates his small-scale soymilk processing machine, which can be operated by one person. "The goal of Japan's Ministry of Health is to install one of these in each of the thirty thousand village tofu (soy cheese) factories in Japan."

(13) A baby and nurse with a large can of Soyalac in Japan. (14) A soymilk booth in Hong Kong, where more soymilk is sold than any kind of soft drink. The bottles in wooden cases are stacked four high. (15) A baby, little Mohammed Ali, a Bedouin child suffering from malnutrition bordering on starvation, at the Benghazi, Libya, hospital. In 1956 Dr. Miller nursed him back to health. He soon grew strong and healthy and began to take a lively interest in the world around him.

(16) "Generalissimo Chiang Kai-shek greets Mrs. Mary Greer Miller while Madame Chiang congratulates Dr. Miller following the ceremonies held March 26, 1956, in which Miller received the Blue Star of China, that country's highest award, similar to the Congressional Medal of Honor in the United States." Address: Vice President, College of Medical Evangelists, Loma Linda, California.

1318. Worthington Foods, Inc. 1961. Wholesale price list–order blank. Worthington, Ohio. 1 p. May 1.
• ***Summary:*** New products in the Worthington Foods line include: Barbie Sue. Patties. Big Pat. Safflower oil. Kreem-chee (natural white or pimiento). Ripe green olives. Chili.

Worthington now owns the Battle Creek line of foods including: Burger, Veg. Prime. Nuttose. Protose. Vegetable Skallops. Vegetable Steaks. Gluten Flour. Kaffir "Tea." Malted Nuts. Savita. Savita soup cubes. Soy flour. Natural wheat germ. Acidone tablets. Brewer's yeast. Lacto dextrin. Laxo. LD-Lax. Psyllium seed blond. Sugarless sweetener.

Worthington now has warehouses in Portland, Oregon, and San Leandro, California (near Oakland). Address: Worthington, Ohio. Phone: Tuxedo 5-5359.

1319. Barber, Mary I. 1961. Lenna Frances Cooper, February 25, 1875–February 23, 1961. *J. of the American Dietetic Association* 38(5):458. May.
• ***Summary:*** An excellent obituary. Her parents, who were pioneer settlers in Kansas, desired "that their children should receive an education that would enable them to serve others. One son went East to Battle Creek, Michigan, to study medicine, and in 1898, his sister, Lenna, followed him to take up nursing at the Battle Creek Sanitarium. She was graduated as a nurse in 1901 and for the next few years was closely associated with Dr. John Harvey Kellogg and assisted in the care of his many adopted and foster children. Dr. Kellogg practiced dietetics along with medicine and had many theories about food for 'biologic' living. It can be imagine how his quiet nurse persuaded him to allow her to attend Drexel Institute in Philadelphia [Pennsylvania] to study foods and food chemistry. She finished the two-year course in 1908 and later was awarded her bachelor's and master's degrees by Teachers College, Columbia University. Miss Cooper met all of her educational expenses with her own earnings.

"On her return from Drexel, she became the *first* dietitian at the Battle Creek Sanitarium where later, as Dean, she initiated the Battle Creek Sanitarium School of Home Economics."

She was the first to be appointed a Supervising Dietitian in the Army during World War I. "In this position she directed the work of over three hundred dietitians in war service for the first time in history. Another *first* was her suggestion that a conference of dietitians be arranged in 1917 to formulate a plan for dietetic communication and to consider the means by which dietitians could best serve the war needs, both at home and overseas. In cooperation with Lulu G. Graves, a decision was made to invite all dietitians of their acquaintance to come to Cleveland [Ohio] for October 18 to 20. This was of great importance to the dietetic profession, because here The American Dietetic Association was formed. From a nucleus of thirty-nine charter members, the Association today numbers almost 15,000."

In 1927 Miss Cooper became Food Service Director at the University of Michigan. Also in 1927 she received an honorary Master of Home Economics degree from Michigan State University. In 1930 she "went to Montefiore Hospital in New York City, where she was Chief of Nutrition for eighteen years." She was the author of three important books. Address: Battle Creek, Michigan.

1320. **Product Name:** Soy Flour.
Manufacturer's Name: Worthington Foods, Inc. (Marketer-Distributor).
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: Tuxedo 5-5359.
Date of Introduction: 1961 May.
New Product–Documentation: Wholesale price list. 1961. May. 1. Sold in 2 lb or 5 lb bags.

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1321. Smith, Allan K. 1961. Oriental methods of using soybeans as food. With special attention to fermented products and notes on Oriental farming practices. *USDA Agricultural Research Service.* ARS-71-17. 65 p. July. Illust. 27 cm.
• ***Summary:*** Contents: Part I: China. Introduction. Farming conditions in China. Oilseed production. Soy sauce in China. Sweet flour paste–Tien mien chang [chiang]. Soybean or vegetable milk (incl. Willis Miller and the Henningsen Produce Co. in Shanghai). Yuba. Soybean curd or tofu. Soybean cheese [fermented tofu]: Chee-fan ("cheese" + "small cube"), tsüe-fan ("drunken cheese"), hon-fan ("red cheese"). Fen-T'iao from mung beans. Fermented soybeans [fermented black soybeans]. Vinegar fermentation process.

Note: This is the earliest document seen (Oct. 2011) that uses the term "tsüe-fan" ("drunken cheese") to refer to a type fermented tofu.

Part II. China–Chinese Institutions. Henry Lester Institute (in Shanghai; Dr. Bernard Read). Academia Sinica (headquarters in Nanking). China Vegetable Oil Corporation (CVOC, Shanghai). The China Oils and Fat Industries Ltd. (Shanghai). National Bureau of Industrial Research. Catholic University (Fu Jen, at Peiping). Yen Ching University (Peiping). Agriculture Experiment Station (Peiping).

Part III: Japan. Introduction. Production of miso in Japan. Soy sauce in Japan. Trends in soy sauce production. Part IV: With Raymond E. Culbertson. Korea. Introduction. Breeding work. Soybean varieties. Climatic relations. Soils of Korea. Topography. Land use. Cultural practices. Marketing. Soybeans as foodstuff. Soy sauce. Acknowledgment.

Page 19 states: "The China National Government has taken an active interest in soybean milk for use by its army. Mr. Willis Miller, with offices and business connections with the Henningsen Produce Company in the Dollar Building (7th Floor) at 51 Canton Road, Shanghai, had just completed, at the time of my visit, the building of a soybean milk plant for the Chinese Government. The process is patterned after that of the International Nutritional Laboratories at Mt. Vernon, Ohio, for making a powdered or spray-dried milk. Mr. Miller also was supervising the installation of a vegetable canning plant for the same purpose."

The text of this bulletin was previously published, serially, with slight revisions, in *Soybean Digest,* from Feb. to June 1949. Address: Northern Utilization Research and Development Div., Peoria, Illinois.

1322. *Today's Food* (*Loma Linda Foods, Arlington, California*). 1961. [Commercial food products made by Loma Linda Foods]. 6(2):5-6, 8. Summer.
• ***Summary:*** Loma Linda food products include: Smokene. Savorex. Vegeburger. Nuteena.

Also mentioned as generic names are: Soy mayonnaise, and soy milk. Address: 11503 Pierce Place, Arlington, California.

1323. Spalding, Arthur Whitefield. 1961-1962. Origin and history of Seventh-day Adventists. 4 vols. Washington, DC: Review and Herald Publishing Assoc. *
• ***Summary:*** The author lived 1877-1954. This primarily anecdotal history contains an abundance of information and serves as a useful reference.

1324. **Product Name:** Loma Linda Boston Style Baked Soybeans (also called Soy Beans Boston Style).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: P.O. Box 388 (Wooster Road), Mount Vernon, Ohio.
Date of Introduction: 1961.
Wt/Vol., Packaging, Price: 20 oz can.
New Product–Documentation: Soybean Blue Book. 1961. p. 101. "Boston-Style Soybeans." Today's Food. 1962. Summer. p. 6. Today's Food. 1964. Autumn. p. 4-5. 20 oz. can. Wholesale pricer list. 1968. Says "Soy Beans Boston Style." 17 oz. for $0.30 retail. Soybean Blue Book. 1973. Still being produced.

1325. **Product Name:** Cheze-O-Soy with Tomato Sauce (Tofu Entree).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1961.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: An improved version of the tofu introduced in 1931.

1326. **Product Name:** Fortified Instant Soyamel (Soymilk).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: Tuxedo 5-5359.
Date of Introduction: 1961.
Ingredients: 1985: Soy protein isolate, partially hydrogenated soybean oil, corn syrup solids, malt extract.
Wt/Vol., Packaging, Price: 2 lb can makes 2 gallons.
New Product–Documentation: Wholesale price list. 1961. May 1; Shurtleff & Aoyagi. 1984. Soymilk Industry and Market. p. 28. "The first fortified soymilk based on isolated soy protein, it was NOT thought of or marketed as an infant formula."

1327. **Product Name:** Kreem-Chee (Non-Dairy Cream Cheese) [White, or Pimiento].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: Tuxedo 5-5359.

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Date of Introduction: 1961.
Wt/Vol., Packaging, Price: 6 oz. or 16 oz. can.
New Product–Documentation: Wholesale price list. 1961. May 1. Sold in 6 oz. or 16 oz. cans. Soybean Blue Book. 1961. p. 104. "Processing and packing a soy cheese." No longer listed in 1964. Note: This was the world's second commercial soy-based cream cheese.

1328. **Product Name:** Patties.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: Tuxedo 5-5359.
Date of Introduction: 1961.
New Product–Documentation: Wholesale price list. May 1.

1329. Deutsch, Ronald M. 1961. The nuts among the berries. New York, NY: Ballantine Books. 224 p. No index. 18 cm. 2nd ed., 1967 (320 p.). Revised 1977 as The new nuts among the berries. Palo Alto, CA: Bull Publ. Co. 359 p.
• ***Summary:*** The rear cover states: "From Dr. Graham (inventor of the Graham cracker) to Dr. Jarvis, the best-selling author of 'Folk Medicine', this book tells the astonishing story of a hundred years of health foods and faddists. It names the promoters and the products. It cites the findings of the Food and Drug Administration. It quotes the warnings of the American Medical Association. It completely exposes the hokum and ballyhoo of the health food business–now bilking the public of $2,000 million ever year–and shows why crackpot food fads are a waste of money at best and a serious danger to the health of those suffering from real illnesses.

"'We are facing an organized dissemination of medical and nutritional quackery which takes the concentrated efforts of all of us to combat'–George Larrick, Commissioner Food and Drud Administration."

In fact, this book ridicules the very people whose ideas and lives it purports to discuss; it sarcastically paints them all as "nuts." Its goal is not understanding but a tacit–and not so thinly veiled–endorsement of the contemporary Big Food and medical industries.

Contents: 1. Of cabbages and things (a brief history of "health-foodism"; "For example the Greeks Porphyry and Pythagoras maintained that meats are unnatural foods for men, and repugnant, while fruits and vegetables were the natural nutriment). 2. Mr. Graham bakes a cracker (Sylvester Graham, William Cowherd, the Bible Christians, William Metcalfe). 3. Little men, little women, little food (Louisa May Alcott, Amos Bronson Alcott, William A. Alcott, vegetarianism, and the American Vegetarian Society; Fruitlands, Sylvester Graham). 4. Father Kneipp and his watering can. 5. Mother White casts her brood upon the waters (Ellen G. White and James Caleb Jackson). 6. Snap! Crackle! Enter Dr. Kellogg! (Dr. John Harvey Kellogg). 7. The battle of Battle Creek (Michigan and Seventh-day Adventists). 8. From pillar to Postum (Charles W. Post, Dr. J.H. Kellogg, Ellen G. White, the evils of coffee, Postum Cereal Food Coffee). 9. Kickapoo and Kellogg, too. 10. The Jungle, the sausage, and the law (Upton Sinclair, Harvey W. Wiley, and the formation of the FDA). 11. Chew, chew, baby (Fletcher, Chittenden). 12. Life along the alimentary canal (Metchnikoff, Kellogg, Henry Ford). 13. The bare torso king (Bernarr Macfadden). 14. The bare torso king rampant (Macfadden). 15. I see America starving (Alfred W. McCann) 16. How to stop your cow from drooling (selling nutrition, Colonel Dinshah Pestanji Framji Ghadiali of Bombay, India, and Malaga, New Jersey). 17. A plague on both your Hausers (Gayelord Hauser, Benedict Lust). 18. How to write about health foods (Lelord Kordel, Cathryn Elwood). 19. Mrs. Spratt's millions (fat and dieting). 20. My mother squeaked (Dan Dale Alexander PhD and arthritis; Dr. D.C. Jarvis, *Folk Medicine*, honey and vinegar). 21. The poisons in your health food (how the public is being duped by health food hucksters; the American Medical Assoc. estimates this racket is now costing 10 million Americans over $500 million a year). 22. Postscript to a sad tale.

In the Introduction, page 9 notes that many health nuts and food faddists "are of the most respectable sort." "Among their number are best-selling authors such as Louisa May Alcott, Gayelord Benjamin Hauser, Upton Sinclair, D.C. Jarvis, and Elbert Hubbard. There are such distinguished scientists and innovators as Elie Metchnikoff, Dinshah Ghadiali (developer of Spectro-Chrome Therapy), Amos Bronson Alcott (the Seer of New England), and Dr. John Harvey Kellogg (inventor of cereal flakes, peanut butter, and the mechanical horse). There are famed industrialists, Henry Ford, Bernard Baruch, and John D. Rockefeller. There are entertainers, as Great Garbo and Robert Cummings, and religious leaders, as Sister [Ellen G.] White, founder of Seventh Day Adventism."

Colonel Dinshah Pestanji Framji Ghadiali was born in Bombay, India, in 1873, and came to the USA at the age of 38 (i.e. in about 1911). "His title derives from his position during the first world war as commander of the New York Police Reserve Air Service, a little-known organization which served little purpose. It was, however, an honorable civilian patriotic group... In 1920 Ghadiali brought forth one of the scientific wonders of our age–Spectro-Chrome Therapy." Based on a vegetarian diet (also free of alcohol, tobacco, coffee and tea), the system also made liberal use of colored lights. "By 1924 Ghadiali was so successful that he opened a Spectro-Chrome Institute on 50 acres at Malaga, New Jersey." In the early days Ghadiali earned more than $3.5 million from sales of memberships, equipment, and his course. He served a 5-year sentence in a federal penitentiary for a violation of the Mann Act by a book he wrote, "Railroading a Citizen," in which he accuses jealous doctors of trumping up charges against him. In the 1940s Colonel

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Ghadiali was prosecuted on the basis of his medical work. He was found guilty and sentenced to 3 years in jail–though his sentence was suspended–and he was fined $20,000. His work, however, still has devoted followers (p. 151-52).

The author acknowledges the help of the U.S. Food and Drug Administration (FDA), Frederick Stare M.D., and the American Medical Association (AMA). Address: Popular scientific and medical reporter.

1330. Deutsch, Ronald M. 1961. Snap! Crackle! Enter Dr. Kellogg. The Battle of Battle Creek. From Pillar to Postum. Kickapoo and Kellogg, Too (Document part). In: R.M. Deutsch. 1961. The Nuts Among the Berries: An Exposé of America's Food Fads. New York, NY: Ballantine Books. 224 p. See p. 54-94.

• ***Summary:*** This is a largely unsympathetic and satirical treatment of the health reform work of Dr. John Harvey Kellogg. Page 63 notes that "In 1879 he married Ella Eaton, of Alfred Center, New York. Within ten years, from the burgeoning sales of his books and the food products he was developing, he had earned enough money to build Ella a twenty-room Queen Anne mansion close to the [Battle Creek] Sanitarium grounds. It was a lavish residence..." Dr. Kellogg drew no salary from the Sanitarium.

"Ella Kellogg kept busy around the Sanitarium. There was not much for her to do around the house, for two reasons. First there were any number of servants. And second, there were no children; Dr. Kellogg had stated publicly that sex bred evil diseases in young men, and therefore he was determined to live without sex as a demonstration that it could be done. Whatever the real reason, John Harvey Kellogg and Ella occupied separate apartments in their home. They were always good friends, and later they adopted a total of forty-two children...

"We have seen Dr. Jackson's water-cure establishment offer the first cereal product in *Granula,* crumbled bits of baked wheat. Kellogg had come up with much the same thing. He called it *Granola.* He was sued and changed the name to *Granose."*

Charles W. Post, a Texan, went to Battle Creek to be cured. After 9 months at the San, Post gave up. He turned to studying the power of the mind, of mind over matter, Christian Science, and the like. Before long he got out of his wheelchair, declared that he was well, and went to work. Before he left the San, he offered to join forces with Dr. Kellogg in making breakfast cereals, but was rejected. In 1892 Post established La Vita Inn on 10 acres in Battle Creek; here the curative forces of both diet and mental healing were combined. Although meat was allowed, the other poisons were not (p. 59).

Post cured people by telling them they were well–and wrote a book about it. He also wrote "The Road to Wellville," a pamphlet that he gave away. In 1895 Post started to make Postum Cereal Food Coffee–just add water and serve as a hot drink in place of coffee. He first sold it in paper bags from a handcart in Battle Creek. Then he began to advertise the product widely and his sales soared. Eventually his ads focused on the ability of Postum to prevent "coffee nerves." In 1898 he launched Grape Nuts, which he also sold as a health food. By 1901 Post had net income of a million dollars from his food business. "Imitators flocked to Battle Creek to stake their claims." Before long, it was a boom town. Address: Popular scientific and medical reporter.

1331. Rodale, J.I. ed. 1961. The complete book of food and nutrition. Emmaus, Pennsylvania: Rodale Books. 1054 p. Index. 23 cm.

• ***Summary:*** J.I. Rodale recommends the consumption of natural meat and eggs. He discourages humans from consuming or using milk, chemicalized meats, added salt, sugar, chocolate, aluminium utensils, and heated or hydrogenated fats. Throughout this book, he uses scientific sources and cites them carefully.

Chapters 30-40 (p. 116-56) are a critique of cow's milk. Man has made the cow into a milk machine, with ever larger udders, which can produce 75 times as much milk per year as in Biblical times. For adults, milk may cause lactose intolerance, allergies and excessive tallness, and may contain undesirable antibiotics.

Chapter 40, titled "Nutritive substitutes for milk" (p. 154-55), mentions "soybean milk and Tahini milk which is a milk made from ground sesame seeds. Tahini milk appears to us to be an excellent substitute for milk in the diet because of its extremely high content of calcium" (p. 155).

Dr. Stefansson (p. 69-72) lived for one year in good health on meat alone. The discovery of cereal culture 2,000 years ago was the beginning of civilization and human degeneration. The human digestive tract has not had time to adjust to this change. It took humans 2 million years to adapt to the diet of the primitive human hunter (consisting mainly of proteins and animal fats) from the largely vegetarian diet of the anthropoids. "It is extremely difficult to plan a vegetarian diet in which the essential amino acids will all be represented in their proper proportion."

Chapter 127, "How to sprout beans" (p. 472-74), discusses mainly how to sprout soybeans, and their nutritional value. A table compares the vitamin and mineral content of soybean sprouts and mung bean sprouts; the former are much more nutritious.

Chapter 153, "Soybeans–The wonder food" (p. 536-41) has the following contents: Introduction. How nutritious are soybeans? ("Soybeans are one of the few non-animal proteins which are complete–that is, contain all of the essential amino acids in good proportion.") Sprouting beans for vitamin C. Soybeans are economical (says the best book on soybeans is *Soybeans for Health, Longevity and Economy,* by Philip S. Chen, Ph.D.). Soybean milk for infants. "Soybeans are richer in potassium than any other

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food except brewer's yeast which, of course, is eaten in much smaller quantities. They contain more pantothenic acid than any other food except egg yolk, brewer's yeast, liver, rice bran, and wheat bran. The iron in soybeans is 96 per cent 'available'–that is, digestible and used by the body." Chapter 154, "Soya milk and soya curds" (p. 541-42), by Dr. W. Kring, of Dusseldorf discusses: Use of soybeans in East Asia. Fresh soya milk for every household. Acidophilus soya milk–Soya curds. Making soya cheese or tofu [at home].

Note 1. This is the earliest English-language document seen (April 2013) that uses the term "soya curds" in connection with tofu.

Note 2. This is the earliest English-language document seen (Sept. 2012) that contains the term "Acidophilus soya milk" (or "Acidophilus soymilk") regardless of capitalization, hyphenation, or spaces.

Chapter 178, "Eggs, meat and soybeans" (p. 675-77) gives a nutritional comparison of these three high-protein foods. One section titled "Meat substitutes" begins: "Soybeans should be a part of your diet as a substitute for meat." It continues: "Even though you include plenty of meat in your diet, make use of soybean protein, too. If your family does not know soybeans, get some and begin to introduce them to a wonder food."

Chapter 169, "Are chemical fertilizers harming our food" (p. 618-24) is part of a statement made by J.I. Rodale on December 15, 1950, to a Congressional Committee formed to investigate chemical fertilizers. He argues that the organic method is "far superior to the present general practice with respect to fertilizer usage, not only from the human health standpoint but from the point of view of preventing soil erosion and giving higher yields at a lower cost." Also discusses: History of the organic method. What is the organic method? What is a chemical fertilizer? The health aspect (experiments showing a much higher survival rate in mice fed organically grown food). More vitamins in "organic" food. Physicians praise the organic method. Rejection by our government (and request that agricultural experiment stations test and compare the two methods).

Chapter 173 titled "Investigating Primitive Diet" (p. 642-54) contains a detailed summary of the work of Weston A. Price. D.D.S., as described in his book *Nutrition and Physical Degeneration.* This book is available from the Lee Foundation for Nutritional Research, 2023 W. Wisconsin Ave., Milwaukee, Wisconsin.

Chapter 182, titled "When you use fats and oils" (p. 682-83) discusses margarine, which is made from vegetable fats which have been hydrogenated. Soybean oil is one of the oils use to make margarine. "As you know, we do not recommend using margarine, mostly because of the many chemical substances used in it, of which the synthetic vitamin A is only one. Artificial coloring, preservatives and so forth are also used. But, in addition, hydrogenating the oils to make them solid destroys most of the essential fatty acids which are the chief reason for eating vegetable oil. So margarine is no better than butter as a spread, in spite of the fact that it is made from substances that do not contain cholesterol." "Soybean oil is another popular vegetable oil." Rodale especially recommends "our old friend, sunflower seed oil"–which is rich in vitamin E and linoleic acid.

Chapter 183 titled "Heated fats can cause cancer" (p. 686-90) summarizes several scientific studies and notes that "Hydrogenated fats are everywhere" in our food supply. "Finally, don't buy hydrogenated shortenings (the solid kind)..."

Chapter 198 titled "Who pays for nutrition research?" (p. 741+) begins: "'Dr. Stare's Nutrition Department (at Harvard University, Massachusetts) received from Food Industries and Foundations representative of their interests between and including the fiscal year 1950 to 1956 gifts totaling approximately $378,000, half of which was from the Sugar Research Foundation, supported by the sugar interests, and the Nutrition Foundation, supported largely by commercial food processors. A large portion of the other half was from the chemical and drug interests.

"This challenging statement sets the tone for a series of open letters from the Boston Nutrition Society, Incorporated, to Dr. Nathan M. Pusey, President of Harvard University. We think readers will find in these letters the answer to their puzzled query Ä 'Why?' Why must we eat doctored up, chemicalized, refined, cheapened food and above all, why must some of our top food scientists, men like Dr. Stare of Harvard, call everyone a faddist and a crackpot who points out that the modern American food is not everything it should be?

"The open letters hit at the very heart of the problem. Much university research on nutrition is being financed by the very folks who profit from selling this worthless food."

Chapter 199, "A British nutritionist takes stock," summarizes an article titled "Food and Health," by Dr. H.M. Sinclair (*British Medical Journal,* 14 Dec. 1957) about the dangers of feeding too much cow's milk to infants and children. Another article on the same subject by Dr. Milton J.E. Senn, was published in *McCall's* (Jan. 1958). Chapter 272 is "Kelp for trace minerals" (p. 1005-09) and Chapter 273 is "The value of seaweed nutrition" (p. 1010-12).

Chapter 39, "Miscellany on milk" (p. 146-54), documents many problems with cow's milk. Its contents: Introduction, detergents in milk, antibiotics in milk, some infants can't take milk at all, is milk the universal antidote?, an all-milk diet is hazardous, ulcer patients beware!, cavities caused by milk, DDT contamination, misuse of calcium, radioactive substances in milk, milk as a cause of goiter, a famous nutritionist speaks (Dr. Norman Jolliffe), milk's value questioned (by McCance and Widdowson), allergies to milk sugar, dermatologist criticizes both bread and milk, and old (1926) court decision on raw milk. Chapter 41: "Yogurt" (p. 156+). "Yogurt is probably the most popular of all so-

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called health foods". In the 19th century, Metchnikoff was the first to investigate it scientifically. Chapter 96: "Sesame seed–An ancient and nutritious food" (p. 342-44; Tahini milk makes a good milk substitute). Address: Emmaus, Pennsylvania.

1332. Grand Rapids Press. 1962. "Meat" for vegetarians. He lost his job, but made a success manufacturing. *Wonderland: The West Michigan Magazine.* Jan. 21.
• ***Summary:*** About Vep Sias and Cedar Lake Foods. Address: Michigan.

1333. Chen, Philip S.; Chen, Helen D. 1962. Soybeans for health, longevity, and economy. 2nd ed. South Lancaster, Massachusetts: The Chemical Elements. xii + 242 p. Jan. Illust. Index. 21 cm. 1st ed. 1956. [24 ref]
• ***Summary:*** This book is identical to the original 1956 edition, third printing (the dedication is to William J. Morse and Harry W. Miller), except that: (1) Table 1, titled "Soybean production in the United States" (p. 2) gives statistics to 1960, instead of 1958. (2) Appendix B (p. 224-36) has been updated based on the 1961 *Soybean Blue Book.* (3) The dust jacket has been updated. On the rear dust jacket is a portrait photo of Dr. Philip Chen and a biographical sketch. (4) The paper is slightly thicker.

Note: In 1962 Chen wrote *A New Look at God,* published by Chemical Elements (288 p.). Address: 1. Prof. of Chemistry, Atlantic Union College, South Lancaster, Massachusetts; 2. National Science Foundation Fellow, Cornell Univ.

1334. **Product Name:** Infa-Soy (Soymilk Infant Formula).
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1962 March.
New Product–Documentation: Letter from Sam Yoshimura. 1981. Feb. 20. "At the beginning of 1962, production of Infa-Soy, using Dr. Harry Miller's formula, was started under the direction of his son, Willis Miller." The key to the formula was the addition of a little cooked rice (or the water therefrom; a small amount of rice was cooked in excess water for 10-15 minutes), which was effective in preventing loose stools in infants. Soybean Blue Book. 1965. p. 115. The company is now called Nutrition International Corp. and Infa-Soy is described as a "hypoallergenic baby formula."

1335. *British Vegetarian.* 1962. Dr. Harry Willis Miller. March/April. p. 96.
• ***Summary:*** Discusses the excellent work of Dr. Harry W. Miller with plantmilks and infant nutrition. Dr. Miller, Emeritus Director of the International Nutrition Research Foundation in Arlington, California, has just been elected an honorary member of the Vegetarian Nutritional Research Council.

"Dr. Miller has recently been visiting different parts of the Far East setting up equipment for the production of liquid plantmilks in under-developed areas..." A large photo shows Dr. Miller.

1336. Hardinge, Mervyn G.; Crooks, Hulda; Stare, Frederick J. 1962. Nutritional studies of vegetarians. IV. Dietary fatty acids and serum cholesterol levels. *American J. of Clinical Nutrition* 10(6):516-24. June. [37 ref]
• ***Summary:*** The subjects studied were the same as in part I of this study. The study found: (1) A significant negative correlation between serum cholesterol and consumption of unsaturated fatty acids; (2) A positive correlation between consumption of animal fat and serum cholesterol; (3) An inverse relationship between the ratio of polyunsaturated to saturated fatty acids and serum cholesterol; (4) In the younger age groups no significant difference between serum cholesterol levels in vegetarians and non-vegetarians. Address: 1-2. Dep. of Pharmacology, School of Medicine, Loma Linda Univ., Loma Linda, California; 3. Prof. & Chairman, Dep. of Nutrition, Harvard School of Public Health, Boston, Massachusetts.

1337. *Chopletter* (*Worthington Foods, Ohio*). 1962. A new concept in foods. 15(3):1, 3. July.
• ***Summary:*** "A new concept in protein foods has recently been announced by Worthington Foods. After years of research involving a unique process in the spinning of protein fibers, the Company has been successful in producing a food product with a texture and nutritional quality that are new an revolutionary. The new product is called *Fibrotein,* a name coined to identify the product and suggest its important qualities." Fibrotein is spun soy protein fibers, made under a patented process.

"Worthington Foods has already been successful in utilizing Fibrotein to make vegetarian protein foods that resemble fried chicken, white meat of turkey, roast beef, and various other kinds of meats. Several of these products are already on the market. Others are to be introduced during the next few months."

"As a direct result of the development of fibrotein, and new line of *Entrees* has been introduced by Worthington Foods. A line of canned vegetarian proteins is also being developed to be marketed under the trade name *Soyameat.* All of these products contain the basic ingredient of *Fibrotein."*

"The enthusiasm of customers who have already tried Worthington *Minute Entrees* and Worthington *Soyameat* indicates a bright future for this type of food.

A photo titled "Three New Fibrotein Products by Worthington" shows: (1) Sliced Whitemeat Style (Worthington Minute Entrees–Frozen; paperboard box); (2)

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Fried Chicken Style (Worthington Minute Entrees–Frozen; paperboard box); (3) Worthington Soyameat–Fried Chicken Style (9½ oz can).

Note 1. This is the earliest English-language document seen (Nov. 2010) that contains the word "Soyameat" (with any combination of capitalization or quotation marks).

Note 2. This is the earliest document seen (Nov. 2010) that contains the word "Fibrotein" which is Worthington's registered trademark used to refer to spun soy protein fibers. Address: Worthington, Ohio.

1338. **Product Name:** Worthington Minute Entrees–Fried Chicken Style (Meatless Chicken–Frozen).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio.
Date of Introduction: 1962 July.
Ingredients: Incl. Fibrotein spun soy protein fibers.
Wt/Vol., Packaging, Price: 6 oz. paperboard box. Or 15 lb.
How Stored: Frozen.
New Product–Documentation: Chopletter (Worthington Foods, Worthington, Ohio). 1962. July. p. 1, 3. "A new concept in foods." This product, made with Fibrotein [spun soy protein fibers], is already on the market. A photo shows the product." Note: This is the earliest commercial soy product seen (one of three chicken alternatives introduced this month) in which Fibrotein is used as an ingredient.

Wholesale price list. 1962. Oct. 1. Sold in 6 oz. portions (24 per case for $9.90, or 15 lb bulk for $1.25/lb). Note: No mention is made on this sheet of spun soy protein fibers.

George D. Kyd. 1963. *Food Processing.* May. p. 123-26. "Edible soy protein fibers promise new family of foods." The author, an employee of Ralston Purina Co., states that this product, which contains Textured Edi Pro (spun soy protein fibers made by Ralston Purina) is already on the market. Page 126 describes the product as "frozen fried-chicken style Minute Entree." These "are new but already fast-selling products, distributed largely through health food stores." No photo of the package is shown.

Note: This is one of the world's first three food products to contain a modern textured soy protein product.

1339. **Product Name:** Worthington Minute Entrees–Sliced Whitemeat Style (Meatless Chicken White Meat–Frozen).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio.
Date of Introduction: 1962 July.
Ingredients: Incl. Fibrotein spun soy protein fibers.
Wt/Vol., Packaging, Price: 6 oz paperboard box.
How Stored: Frozen.
New Product–Documentation: Chopletter (Worthington Foods, Worthington, Ohio). 1962. July. p. 1, 3. "A new concept in foods." This product, made with Fibrotein [spun soy protein fibers], is already on the market. A photo shows the product."

Wholesale price list. 1962. Oct. 1. Sold in 6 oz. portions (24 per case for $9.90 or bulk rolls, frozen, for $1.25/lb). Rolls weigh approximately 8 lb. each and a packed 6 rolls per box. Note: No mention is made on this sheet of spun soy protein fibers.

George D. Kyd. 1963. *Food Processing.* May. p. 123-26. "Edible soy protein fibers promise new family of foods." The author, an employee of Ralston Purina Co., states that this product, which contains Textured Edi Pro (spun soy protein fibers made by Ralston Purina) is already on the market. A photo shows the package–a thin paperboard box about 8 by 10 by 3/4 inch thick. The label states: "New frozen food concept. Serve hot or cold. Contains no meat." A photo shows three meatlike slices on a plate. These "are new but already fast-selling products, distributed largely through health food stores."

Soybean Blue Book. 1965. p. 112. "White Meat Style."

Note: This is one of the world's first three food products to contain a modern textured soy protein product.

1340. **Product Name:** Soyameat–Fried Chicken Style (Canned).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio.
Date of Introduction: 1962 July.
Ingredients: In 1965: Specially processed soybean protein (Fibrotein), corn oil, [egg] albumen, isolated soybean protein, salt, monosodium glutamate, vegetable gum, starch, hydrolyzed vegetable proteins, seasonings.
Wt/Vol., Packaging, Price: 9½ oz can. After 1965: 13 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Chopletter (Worthington Foods, Worthington, Ohio). 1962. July. p. 1, 3. "A new concept in foods." This product, made with Fibrotein [spun soy protein fibers], is already on the market. A photo shows the product."

George D. Kyd. 1963. *Food Processing.* May. p. 123-26. "Edible soy protein fibers promise new family of foods." The author, an employee of Ralston Purina Co., states that this product, which contains Textured Edi Pro (spun soy protein fibers made by Ralston Purina) is already on the market. A photo shows the can. The label states: "Worthington Soyameat. Vegetarian. 9¼ ozs. avd." A photo, above the photo of the can, shows chunks of the chicken-like product on a plate. The caption below this photo reads: "Fried-chicken style shown above has realistic texture; it came from the can shown below." These "are new but already fast-selling products, distributed largely through health food stores."

Soybean Blue Book. 1963. p. 98. Wholesale price list.

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1966. Dec. 1. Hartman. 1966. Food Technology. 20(1):39-40. "Vegetarian protein foods." "The first textured soybean protein fiber product marketed in the U.S. is Worthington's frozen 'Fri-Chik,' an extruded formulation simulating a small fried portion of white chicken meat. This same formulation was next canned in a light gravy and called 'Soyameat–Fried Chicken Style,' and was also later marketed as frozen and canned 'White-Chik' in large rolls for slicing, dicing, etc. The approximate analysis of these simulated chicken products: protein 20-26%, fat 18-25%, and carbohydrate 2-3%."

Ziemba. 1966. Food Engineering. May. p. 82-93. "Let soy proteins work wonders for you." Photo of 6 cans.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. "Soyameat–Fried Chicken-like flavor" is a canned chicken-like product based on spun soy protein fiber.

Note: This is one of the world's first three food products to contain a modern textured soy protein product.

Label sent by Dr. Walter Wolf. 2000. July. Since the first ingredient is Fibrotein (spun soy protein fibers), this label is probably from about 1965. Red, dark blue, and light blue on white. A small color photo shows two pieces surrounded by sprigs of parsley on a blue dish. "Vegetarian. The quick and easy dish with a chicken-like flavor and texture. A new concept in foods."

1341. *Guardian* (*Manchester*). 1962. Milk made from vegetables may be on sale soon. Aug. 27. p. 2, col. 3.
• ***Summary:*** "Milk made from outer cabbage leaves, pea pods, and other greenstuffs may soon be on sale as a result of experiments by scientists working in the Vegetarian Nutritional Research Centre, Garston, Watford." Dr. Frank Wokes, director of the research center, believes that there will never be enough cow's milk to supply all the world's children or to meet all the protein deficiencies. Before the end of this year, the Centre hopes to open a pilot plant for the process; large scale production would start later.

Related experiments have been made since before World War I, and "a plantmilk, made from cereals and pulses, has been on sale for some years."

1342. Dowding, Muriel (Lady). 1962. Why I am interested in plantmilk. *British Vegetarian.* July/Aug. p. 188-89.
• ***Summary:*** This famous woman and vegetarian (head of the Beauty Without Cruelty campaign) is speaking at the [Vegetarian Nutritional Research] Centre located at the Stanborough School, Watford, Herts., England. The school is run by Seventh-day Adventists. She speaks of the cruelty involved when cows are made to give milk and dairy products, and looks forward to the alternate milk that this centre will provide, at the beginning of a new age–the Age of Aquarius.

1343. *Today's Food* (*Loma Linda Foods, Arlington, California*). 1962. [Commercial food products made by Loma Linda Foods]. 7(2):4-6. Summer.
• ***Summary:*** Loma Linda food products include: Loma Linda Boston Style Baked Soy Beans.

An article by nutritionist D. Van Gundy Jones (p. 4) notes that "Soy milk makes an excellent mayonnaise." Address: 11503 Pierce Place, Arlington, California.

1344. Worthington Foods, Inc. 1962. Frozen foods wholesale price list–order blank. Worthington, Ohio. 1 p. Oct. 1.
• ***Summary:*** Only two frozen products are available: Minute Entree–Fried Chicken Style (24 x 6 oz, or 15 lb). Sliced Whitemeat Style (24 x 6 oz or 8 lb rolls). Address: Worthington, Ohio. Phone: 885-5359.

1345. **Product Name:** Textured Edi-Pro (Spun Soy Protein Fibers).
Manufacturer's Name: Ralston Purina Co. Special Soy Products Dept.
Manufacturer's Address: Plant: Louisville, Kentucky. Offices: Checkerboard Square, St. Louis, MO 63102.
Date of Introduction: 1962 October.
New Product–Documentation: G.H. Kyd. 1963. Food Processing (Chicago). May. p. 123-26, 138. "Edible soy protein fibers promise new family of foods." Ralston Purina makes "Textured Edi Pro," an edible spun soy protein fiber. Products amazingly like meat can be made from these fibers.

Soybean Blue Book. 1966. p. 111. "Textured Edi-Pro, spun edible isolated protein fibers as a basis for unique and novel human foods. Provides both texture and excellent protein nutrition."

Soybean Digest. 1969. Nov. p. 43. "Ralston Purina Co." A photo (p. 40) shows "Chiplike products made from Ralston Purina's textured Edi-Pro." A chart of "Edible grade food ingredients" indicates that Ralston Purina makes only soy protein isolates and spun fibers.

W.Z. Gottschall. 1969. "Ralston Purina Yesterday and Today." Nov. p. 15. "Textured Edi-Pro is purified, isolated soy protein which has been converted into continuous filament or fiber form by a patented process."

Horan, Odell & Forman. 1971. PAG Bulletin No. 13. p. 25. Textured Edi-Pro was "in commercial production beginning in 1967." Shurtleff & Aoyagi. 1983. History of Worthington Foods. p. 7.

Worthington Foods. 1989. "The Tradition of Healthy Foods" (50th anniversary booklet). p. 21. "Worthington was too small to go into the business of crushing soybeans and disposing of the oil, or of purchasing the protein extrusion or spinning equipment. So [Robert] Boyer negotiated with Ralston-Purina to set up a pilot plant to make the protein for Worthington. As it turned out, Ralston-Purina made the protein, did the spinning, and Worthington bought the output and put it into new products. When the new Ralston-Purina

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plant was operational, it had the capacity of 10,000 pounds a day. Worthington was not ready for this kind of volume, but working out these difficulties involved Jim Hagle in further negotiations with executives of a large corporation. Finally, Worthington agreed to take all the production, and sales took off."

Talk with Ed Meyer of Central Soya. 1993. April 3. Ralston Purina went into a joint venture (for a short time) selling frozen spun soy protein fiber with National Can Co., which had a small protein division, with they called National Protein.

Letter from Susan W. Vorih, Communications Manager, Protein Technologies International. 1993. June 17. A semi-works plant to produce edible soy proteins was erected in 1961 at Louisville, and both spray-dried and spun fiber proteins began to be produced and sold in October 1962.

1346. Van Gundy, Dorothea. 1962. Holiday recipes from abroad. *Today's Food* (*Loma Linda Foods, Arlington, California*) 7(4):4-7. Winter.
• ***Summary:*** The author has just returned from a six-week trip to Europe. She noticed, above all, the leisurely way in which meals are served, and enjoyed the large, open-air markets in Italy (Venice and Rome) and Germany (Bremen). A black-and-white photo shows Dorothea Van Gundy Jones holding a plate of food. Address: Nutritionist.

1347. **Product Name:** Granose Soya Beans in Brine.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1962.
Ingredients: Incl. soybeans, water, salt.
Wt/Vol., Packaging, Price: Canned.
New Product–Documentation: Letter from Granose. 1981. Lists products they are presently producing that contain soy.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1962. It has been discontinued.

1348. **Product Name:** Soy-Fortified Whole-Wheat Bread.
Manufacturer's Name: Harrison Foods.
Manufacturer's Address: Accra, Ghana.
Date of Introduction: 1962.
New Product–Documentation: Interview with Dr. D.W. Harrison. 1982. Note 1. This is the earliest known commercial soy product made in Ghana.

Note 2. This is the earliest known commercial soy product made by Dr. D.W. Harrison in Africa.

1349. **Product Name:** Madison Burger.
Manufacturer's Name: Madison Foods.
Manufacturer's Address: Madison College, Madison, Tennessee.
Date of Introduction: 1962.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Madison Burger contains 11.08% protein, 0.47% fat, and 4.67% carbohydrate. One serving, ½-inch slice, weighs 76 gm.

Letter from Sam Yoshimura. 1981. Feb. 20.

1350. György, Paul (moderator); Anderson, D.W.; Fomon, S.J.; Hand, D.B.; Miller, H.W.; Sarett, H.P. 1962. Panel discussion on soy milk. In: USDA Northern Regional Research Laboratory, ed. 1962. Proceedings of Conference on Soybean Products for Protein in Human Foods. Peoria, IL: USDA NRRL. iii + 242 p. See p. 188-91.
• ***Summary:*** This discussion of the five papers in Section V ("Processing and feeding value of fluid and dry soy milks") focuses mainly on feeding soy milks to infants and children, rather than to adults.

"In introducing the panel discussion Dr. György said that FAO is writing a manual on milk and milk products. Several years ago FAO wrote a summary on milk. At the first two conferences 4 years ago there was considerable opposition to calling soy milk by that name. There is still opposition, but on the international level objections have subsided. Soy milk has taken its place along with human (or breast) milk, goat milk, and other milks which are normally designated to distinguish them from cow's milk.

"Dr. Fomon commented that it is important that a study be made on a number of babies (30 or more) from birth up to 8-9 months of age. They have some opportunity to do this with students' babies. Controls are breast fed or fed pooled human milk. Dr. György said that for premature babies breast milk is not satisfactory. In the Orient most mothers nurse their babies as long as they can, 1 to 2 years, and a higher protein diet is needed for the older babies to prevent the occurrence of kwashiorkor.

"Dr. Fomon expressed the opinion that for experimentation involving full-term babies the soy milk and human milk should be compared on an equal protein and fat basis." Address: 1. Chairman of the Dep. of Pediatrics, Philadelphia General Hospital, Philadelphia, Pennsylvania.

1351. Miller, Harry W. 1962. Traditional methods of processing and use of soy liquid and powdered milk. In: USDA Northern Regional Research Laboratory, ed. 1962. Proceedings of Conference on Soybean Products for Protein in Human Foods. Peoria, IL: USDA NRRL. iii + 242 p. See p. 149-56.
• ***Summary:*** "It is a new day when so many important sponsoring organizations join in evaluating the suitability of the protein of the humble soybean to meet the nutritional needs of the human subject, and to study practical ways of extending its benefits in protein deficient diets.

"In August l940, I presented a paper entitled 'The Role of the Soybean in Human Nutrition' before the American

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Soybean Association at Dearborn, Michigan, and predicted that the day would come when we would find an awakened interest in this country in utilizing soy products as a part of the American menu. I believe we are rapidly approaching that goal, There is now an awakening in many lands to the needs of better nutrition, and it is timely that study and research be given to how we can utilize the values of the soy protein for universal race betterment.

"Soybeans have for centuries been the chief protein supplier in the heavily populated areas of Southeast Asia. It is well to examine methods of processing and utilization as practiced in the Orient. However, the per capita utilization of soybeans has been far below their needs, ranging from 15 to 50 pounds per annum in countries like China, Japan, and Korea, largely due to the inability of agriculture to keep pace with population.

"It was in these soy-producing and-utilizing countries that I had the opportunity over more than half a century to observe their methods of preparation, and to check the results in the feeding of soy products. Considerable leafy vegetables, stems and 'roots' have to a certain extent supplemented the diet with protein, so that adults of mature age probably get adequate protein. However, the appalling infant mortality and adolescent protein deficiency diseases have stressed the need for increased rations such as may be supplied by the soybean.

"Protein has its greatest contribution during the growing years of life. Three times the amount of protein per unit of body weight is needed the first year of life compared with the adult. During adolescence and the teenage years twice the amount of protein is required till they attain their normal body weight as in after life. If individuals are well grown with ample biologic protein their chances for long life expectancy are enhanced.

"With the infant's short intestinal tract and its immature digestive juices, foods have to be reduced to liquids to be usable. Consequently, a liquid food beverage, if supplied in sufficient quantity and quality, enables normal growth to proceed rapidly. Without it, growth is stunted; anemia, infection follows and many do not survive these years of inadequate food intake. Those that survive childhood often die early in life of degenerative diseases.

"The need of liquid nourishment following birth is evident from the fact that all mammals, including the human, have no provision for taking solid food, so as a starter food a lacteal secretion is by nature supplied, and to meet the need of the growing years of the human, various animal milks have been used. However, the supply is meager in the Afro-Asiatic countries.

"My attention was called to soybeans as a dietary food upon reaching China and living on Chinese cuisine. It was some 20 years later, in 1925, that I embarked on the development of a liquid beverage from the soybean. Considerable progress has since been made in improvement of such a food beverage and its use. However, it is only a few areas where nutritional use is made of soy milk, and much remains to be done in its improvement and distribution to combat malnutrition.

"The Oriental approach to processing the soybean is entirely opposite to that of the west. Western countries process the soybean by grinding it into fine flour after dehulling, and screening through very fine 200- or 500-mesh screens, or shall we call it, the milling operation. While in lands where soybeans have been used for centuries, they first hydrate the beans, or as we call it, use the wet-milling operation.

"In Eastern countries interest in soybeans has been primarily in its protein content, while the West has vied for its oil. It was my good fortune that I began my study of the soybean in the Orient where soybeans were used for human food, rather than for animal rations. Soaking the hard, dry bean was the first procedure, and it then is ground into a milklike slurry. The whole soybean is given a water soak for 8 hours, or after dehulling a water bath for 2 hours. In either case the bean doubles its original weight by water intake. It is then ready for the milling operations. This is accomplished with stone buhr mills, or disintegrators, that break up the continuity of the fiber, and expose its nutrient particles of protein, oil, carbohydrate, vitamins, and minerals to a water wash. The water-soluble nutrients are separated from the fiber portion by filtration. The amount of water used in the slurry mix, its temperature, whether hot or cold, and also the quality of beans, determines the ratio of soluble nutrients to those still clinging to the fiber.

"In fact, there are numerous techniques to be observed to get the dispersible protein and other nutrients in the highest soluble amounts. Beans differ, as also the aging of beans. The nutrient yield is greatest immediately after harvest time. Long heat exposure in warm climates, makes for less solubility. A proper soak is of great importance; then next the grinding of the beans. A small stream of water to give a tearing, rubbing action so as to thoroughly expose all soluble ingredients is preferred to a mill with a cutting action to mince into fine particles. Before filtration this slurry should be agitated and heated, which will yield an additional 10 percent to the soluble ingredients. Several methods of filtration, such as a shaking screen, a plate and frame pres, vacuum drum filters, or centrifuges of various types can be used. A re-grind of the fiber cake and a second extraction makes possible an extra 5 to 8 percent recovery of the solubles. A possible 92 percent of protein with other nutrients in proportion has been attained by grinding and filtration methods. In practical plant operations we expect 60 to 80 percent protein recovery of the original bean. This leaves considerable nutrients in the fiber or pulp, which is then used for stock feed.

"The milky solution thus extracted is used either for cheese curds of various types, or is formulated and processed

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into a beverage milk–liquid or powdered. Soybeans are used in different countries in making a savory sauce, called Soy Sauce; a soup base as in Miso, or as a fermented bean as Japanese Natto. They are eaten as immature green beans in pod or shelled and are very delicious.

"Soy Milk: Trials have been made in the past to utilize soy milk by the Asiatics but for lack of proper processing methods such milk, as filtered and not formulated, was neither tasty nor nutritionally acceptable, giving rise to very unpleasant digestive responses. I have repeatedly asked in parts of China, Japan, and Korea why it was not used as a beverage, always with the same answer, that it gave rise to intestinal disturbances. So a cheese curd is used instead of milk. Curdling it into a cheese, through the use of calcium salts, vinegar or other coagulative agencies, has resulted in many savory food products. Heating this milk extract causes a scum film [yuba] to form, also very tasty, and the remaining portion is curdled and made into cheese [tofu] cakes of varying dimensions and density. All such sheets and blocks of curd receive a second cook, or are fermented, which seems to render them more digestible.

"Soy cheese or curd is easy to market and very popular, being tastily flavored and combined in the Chinese cuisine as a meat, fowl, and fish replacer. The Japanese report 70 different forms or dishes utilizing soybeans, and the Chinese even more. Out of 1 pound of soybeans they make 4 pounds of curd called Tofu.

"While we have spent some time in Indonesia we have had little experience with Tempe–a fermented soybean food product.

"My contributions had to do with developing an easily digested and highly nutritious soy milk, and processing it sufficiently to render it acceptable to both infants and adults. The extract from the bean which is rich in protein can be formulated as desired with added fat, carbohydrate, minerals, and vitamins. These properties can be varied or formulated to that of human milk, or any other type of animal milk. The final product can be made in a single strength, or condensed to double strength and canned, or spray-dried as a powder.

"Our first work in developing a formulated soy milk dates back 56 years ago when we secured a Disper mill [Dispermill], or homogenizer, to constitute a formulated liquid. This soy milk was first used in the Shanghai Sanitarium and Hospital as a table beverage for nurses, helpers, staff, and patients of the institution, and later to the baby and children's ward of the Shanghai Clinic and Hospital. Here we had baby boarders, infants kept under observation on soy milk feeding for up to 2 years. The results of this feeding was reported in the China Medical Journal of 1957. Many other farmed out research studies were made, such as at the indigent hospital in the Philippines; at the Tokyo University, and the Ohio State University in America.

"Results on the Ohio State study are shown in Figure 1.

"The first commercial development was a soy milk dairy established in Shanghai in 1935, the process used was in-bottle sterilized milk, formulated to the standard of cow's milk; also a chocolate milk; and a soy-acidophilus milk, which was extensively marketed all over the city of Shanghai up until the plant was destroyed in 1937 by the bombing of Shanghai.

"A soy milk powder plant was also fabricated there, using a local made Grey Jensen spray dryer, which also came to an end in the same way at the same time.

"There are many technical problems involved in producing a satisfactory nutritional beverage from the soybean to simulate milk, which in the few moments we have would be impossible to enter into. These are gradually being solved, such as improved color, taste, stability, condensing as a double strength canned milk, and as an instant soluble powdered soy milk. On vacuum pan evaporation, due to the viscosity of soy milk, concentrating to more than 30 percent solids is the limit, as compared with animal milk at 45 percent solids. However, generally speaking, once a water extraction soy milk is obtained the same methods and equipment used by the dairy industry are applicable to produce it in various forms for marketing" (Continued). Address: M.D., Director Emeritus, International Nutrition Research Foundation, 11503 Pierce Blvd., Arlington, California.

1352. Miller, Harry W. 1962. Traditional methods of processing and use of soy liquid and powdered milk (Continued–Document part II). In: USDA Northern Regional Research Laboratory, ed. 1962. Proceedings of Conference on Soybean Products for Protein in Human Foods. Peoria, IL: USDA NRRL. iii + 242 p. See p. 149-56.

• ***Summary:*** Continued. "Once we have obtained a fiber-free milklike fluid from the soybean, containing the water dispersal nutrients of protein, oil, carbohydrate, minerals, and vitamins processed to make them nutritionally acceptable, it no becomes a question as to formulation. No standards have yet been set for the resulting formula. Composition of soy milk today has been a matter largely decided by the respective manufacturers.

"Dr. E. A. Ruddiman working in the early 4O's at Dearborn with the Ford Foundation, tackled this subject in a paper to the A.S.A. suggesting that cow's milk be the standard. Few pediatricians today accept that for infant feeding.

"We know fairly well what are obtained from the hydrated bean with 7 parts of water to 1 part of bean by weight; namely, 3.64 percent protein; 1.8 percent fat; and considering 40 percent of carbohydrate to be edible, a usable 1.5 percent dextrines, sucrose, and starch. In brief, the edible entities extracted from the soybean of fat and carbohydrates are each half that of the protein.

"To this, additives can be added to formulate human milk, cow's milk, cream, and ice cream mixes of any

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variation desired. The types of beans used, methods of manufacture, causes variation in availability of nutrients and elements found in various preparations, so that chemical formulae do not always coincide with usability of nutrient.

"Thus far I have dealt with a nonfiber soy milk made either from the whole soybean, or dehulled, using only the cotyledons. This is the practice of the Orient and it is my belief that human nutrition is so important that we can afford to sacrifice to animal feed the fiber and small amount of ingredients that cling to it in order to obtain the rich ingredients in soluble form. It is still economical compared with other similar products on the market.

"However, some researchers have been making milk from the whole dehulled soybean used in entirety, giving us 3 percent fiber on a dry basis. For older children and adults this can do quite well when formulated. We have objected to the fiber on the grounds that animal milks are fiber free, and on coagulation we get a rough, tough curd as compared with a smooth, jellylike curd made from a fiber-free liquid. Isolated protein, either in entirety or combined with raw soy milk can be processed and formulated into a fiber-free milk. Here we need to be careful of having the proper additives. We have made fiber-free milk from the 70 percent soluble soy flakes or grits, and when fortified with vitamins and minerals, good growth records have resulted in animal feeding.

"We may say that protein is protein from the soybean, but too long processing at too high temperature, and too much exposure to chemical changes leaves a question in our minds as to whether we destroy its soy nutritive values. We do know that all soy milk needs a heat treatment above boiling to destroy the trypsin inhibitors.

"The one outstanding problem of soy milk, whether from the whole soybean, or its extracted solubles, is a characteristic soybean flavor. Since soy milk looks white like animal milk, those accustomed to animal milk think it should taste like cow's milk, especially since it is called a milk. The dairy people object to the word 'milk' used in reference to soy milk, claiming the term 'milk' designates an animal secretion.

"Trying to overcome this prejudice of the laity has led to much experimental work. We shall not be able to simulate the taste of cow's milk unless we use some derivative of animal milk, but we can mask the soy flavor by processing methods, also by additives of distinctive flavors.

"I wish to conclude this paper by referring to the widespread possibilities of the utilization of the soybean, and the economics involved. We assume that for adequate nutrition all nations of mankind need a milk beverage, especially in the very earliest years of life to promote adequate nutrition. The possibility of achieving this lies only with the soybean. The human, as well as all other mammals, require a milk for post-natal feedings. Soybeans can make this possible for the entire human race through improved and extended agricultural production and efficient processing methods, and within the reach of the meager economies of nations.

"Using the formula of animal milk, from l pound of soybeans we can obtain sufficient protein extracted to formulate a gallon of milk. This pound of soybeans yields all needed protein, half of the required oil, and some of the edible carbohydrate. The B vitamins, together with some minerals are present, and other vitamins can be added at low cost. At the market value of the sum total of constituents needed to constitute a gallon of formulated vitamized soy milk less than 15 cents is required, and these figures answer quite well for most parts of the world. While vitamins cost more in certain areas than they do here, added carbohydrates and the oil is cheaper in certain areas. The greatest expense, of course, is in processing equipment. Low-cost small pilot plants operated by cheap labor in countries of low economic resources seem very practical. These figures and statements are verified through the operation of several small pilot plants in Southeast Asia countries. The United States and China produce soybeans abundantly, and with the rising prices of soybeans, they are still the best buy of any agriculture product produced from the soil when their contained nutrients are used to sustain human life.

"It must be remembered that nearly all Afro-Asiatic people cannot afford containers, or the overhead cost of merchandising. They live largely on foods they produce and prepare at a consumer cost little above what the agriculture producer gets for his crops.

"The soybean is rightly called, because of its comparative wealth nutritionally, "gold from the soil." It ranks as the most outstanding product Americans can export if rightly processed for world nutritional relief. Great progress has been made in the adaptation of soy formulated foods for animal and pet diets. The soybean, in the light of what role it has had in preserving the millions of Southeast Asia people for centuries, deserves the combined efforts of scientists, nutritionists, and financiers to lift it into a human acceptable and economical available food.

"The soybean is variously called 'gold from the soil' or 'meat without bones.' With its multitudinous variety of ways to incorporate it in the human diet, I would like to give one more fitting title to it as a 'universal protective factor of diet.' Animal milk has served this role in Western lands, but is of limited availability. Soybeans incorporated in the national diets as a milk and cheese, and its many other recipes, if supplied in adequate quantities insures balanced nutrition. It is a body builder from infancy to the age limit. It is unique compared with other agriculture products in that it is available as a liquid, curd, or solid, as whole beans and flour.

"Yet, as a food supplier, the soybean has had little scientific research or the help of modern trained technicians. We still hark back to the know-how of the Oriental people who have learned to relish the soybean and know of its building power, and enjoy its energy yield.

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"We depend on flash pasteurization and a vacuum pull to de-bitter the beany odor and taste, but no one has come up with the answer, to what it is and from what it comes–the fat or carbohydrate component. We have had some success in a cheddar cheese, but so far have not been able to make a cheese that melts. It is to be hoped as a result of the study and interest that prompted this assembly that chemists, technicians, and dietitians, along with the agriculturists, can solve these interesting problems. It may be that an agronomist will come up with a new soybean with a delicious flavor." Address: M.D., Director Emeritus, International Nutrition Research Foundation, 11503 Pierce Blvd., Arlington, California.

1353. Madison Foods. 1962? The story of Madison Foods. Madison, Tennessee. 17 p. Undated. 22 x 10 cm.

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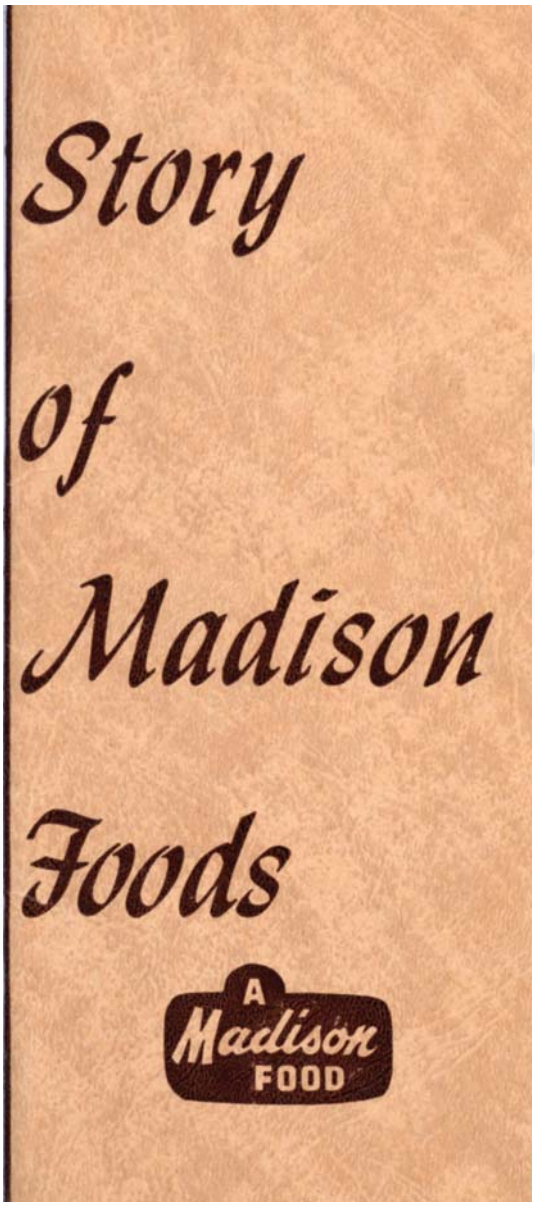

Summary: Contents: The early history of Madison and the story of Madison Foods. Early pioneers (with photo taken in about 1909 including W.C. White, Ellen G. White, Mr. and Mrs. Edson White, P.T. Magan, Mother Druillard, and E.A. Sutherland). Industries. Madison hospital offers you. Tasty, healthful Madison Foods: High in proteins (cans of the following are shown): Cheze-O-Soy, Com-Pro, Dinner Morsels, Kreme-O-Soy, Madison Burger, Madison Links, Not Meat, Soy Beans in Tomato Sauce, Nu-Steaks, Stakelets, Soyburger, Yum, Vigorost, Zoy-Koff.

The home of Madison Foods. Dr. Claxton (former U.S. Commissioner of Education) says. Dr. P.A. Webber. Madison College is vegetarian. Madison meat alternates for all. Kreme-O-Soy (a new double-strength milk-like canned beverage).

J.B. Craw (with photo), manager of Madison Foods, says: "New life has come to Madison Foods! The expansion program is moving forward. In fact, the entire food factory is being remodeled; new equipment is steadily and carefully being installed, and new products manufactured.

"Kreme-O-Soy, double strength liquid, is now on the market. It is an entirely New soy milk, an entirely New Formula... in a little while we will have a powdered soy milk.

"We are glad to have H. Willis Miller, Jr., the son of H.W. Miller (China Doctor) with us. Willis is doing a wonderful job of engineering in the placing and manufacturing of newly designed equipment to fit our special need for the new products that will be coming out one by one. We will soon have a modern plant of which we can be very proud."

Other new products: Madison Links, Com-Pro. A message from the president: Ralph M. Davidson (with photo. Note: He was president of Madison College from 1961 to 1963).

President Davidson notes: "Madison Foods, an integral part of the college educational program accomplishes a three-fold mission. First, the food factory furnishes remunerative work for students to earn their way in school. Secondly, it provides a laboratory where the student may learn to do useful work with his hands, thus giving him a

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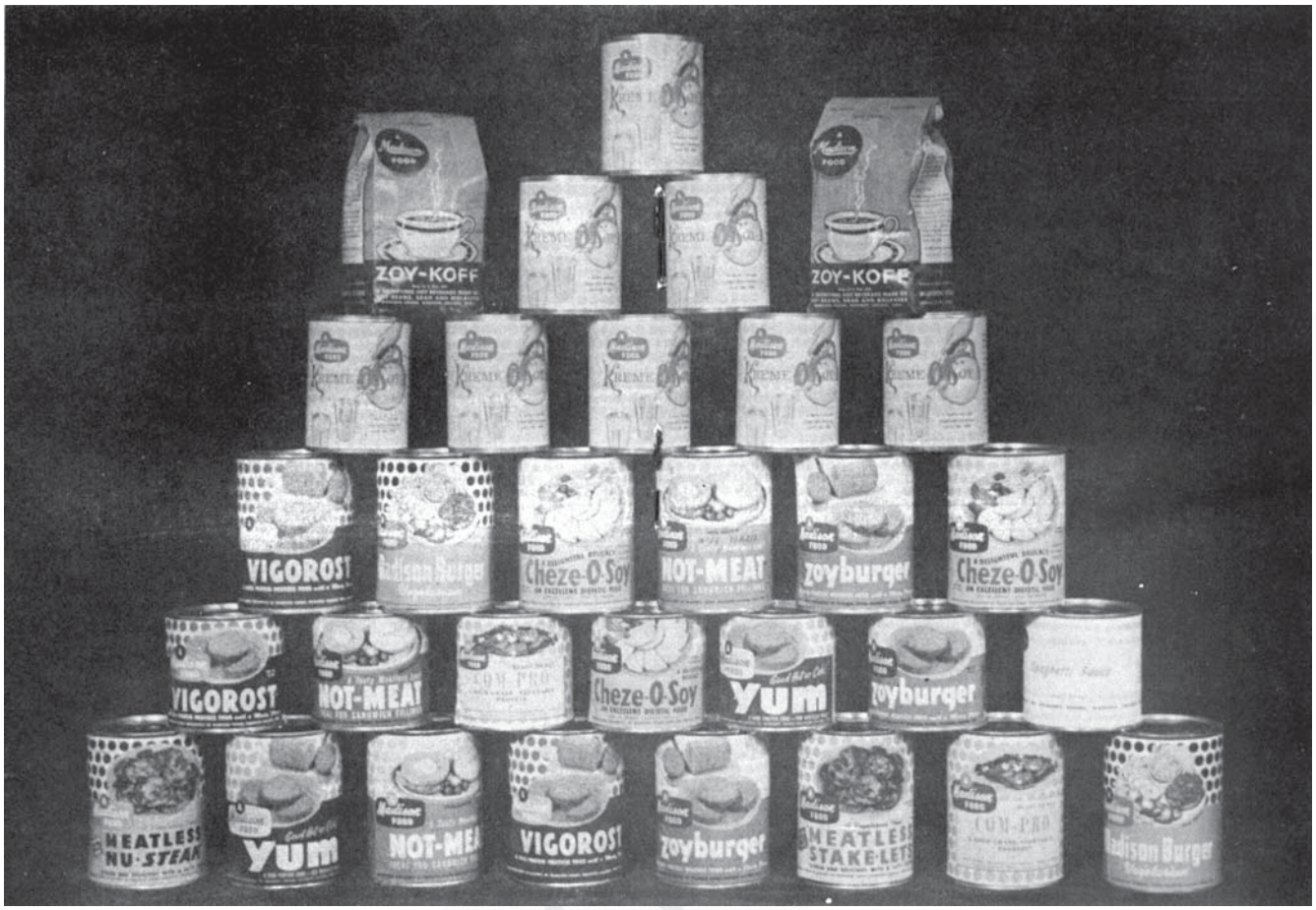

balance to his educational program. Thirdly, the successfully operated food factory will bring in means to subsidize the educational and instructional departments of the college."

Other photos show: (1) The Madison Foods factory. (2) Various other school buildings. (3) E.A. Sutherland. (4) Ellen G. White. (5) Students making foods in the food factory. (6) Dr. Perry Webber with many canned Madison Foods. (7) Four close-ups of a can of Kreme-O-Soy. (8) Group photo: Sam Yoshimura (production manager), P.A. Webber (PhD, consultant in chemistry and nutrition), J.B. Craw (manager), Dr. Harry W. Miller (the China Doctor), and Frank Miller (sales dept.). Address: Madison, Tennessee.

1354. Dysinger, P.W.; Lemon, F.R.; Crenshaw, G.L.; Walden, R.T. 1963. Pulmonary emphysema in a non-smoking population. *Diseases of the Chest* 43(1):17-25. Jan. [26 ref] • ***Summary:*** This is a 5-year emphysema mortality study on an essentially non-smoking population of 64,256 Seventh-day Adventists. Although Seventh-day Adventists do not appear to differ greatly from the general population in respect to exposure to air pollution, they have only 20-25% as much emphysema as would have been expected. "It is concluded that smoking, particularly cigarettes, may indeed be an important differential factor related to the risk of mortality from pulmonary emphysema." Note 1. The references do not appear in the article, but "will appear in the reprints."

Note 2. Loma Linda School of Medicine (Loma Linda, California) is the second organization see in the USA that has a department of "Preventive Medicine." Address: 1-2,4.

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Dep. of Preventive Medicine, School of Medicine, Loma Linda Univ., Loma Linda, California; 3. Thoracic surgeon, Oakland, California.

1355. Omans, W.B.; Leuterer, W.; György, P. 1963. Feeding value of soy milks for premature infants. *J. of Pediatrics* 62(1):98-106. Jan. [10 ref]
• ***Summary:*** Recently soy products have been included in the "Protein-rich food Program of World Health Organization [WHO], Food and Agriculture Organization [FAO], and United Nations Children's Fund" [UNICEF]. This program's goal is to prevent protein malnutrition, which is widespread among infants and preschool children in most tropical countries. A toasted full-fat soybean preparation, Sobee, supported better growth in rats (PER 2.3 ± 0.15) and infants than soybean water extracts like Soyalac, Saridele, and Mull-Soy. The authors found considerably more variability in weight gain than with feedings of cow's milk formula. Formulas made from toasted low-fat soy flour gave the best results (PER 2.43), followed by those made from full-fat soy flour (PER 2.40).

Note: This is the earliest report seen on the results of feeding soy protein formula to premature infants. Address: Dep. of Pediatrics, Philadelphia General Hospital, Pennsylvania.

1356. Honma, Osamu; Ono, H.; Nishihara, K. 1963. Daizu o tanpakushitsu gen toshita nyûji shoku no riyô ni tsuite [On the use of soybeans as a source of protein in infant diets]. *Chiryo* (*J. of Therapy, Tokyo*) 45(4):705-10. April. [28 ref. Jap]
• ***Summary:*** In Germany, soybeans are valued as a food with medicinal uses. There are some products on the market sold as Vollsojamehl (whole soy flour, made by Henselwerk in Magstadt) that are used in regular foods and medicinally by adults, but also by elderly people and young children. Soy-based infant formulas made in the USA include: Mull-Soy Liquid (made by Borden); Sobee Powder and Sobee Liquid (made by Mead Johnson); Soyalac Infant Powder, Soyalac Infant Concentrated, and Soyagen Infant Powder (made by International Nutrition Lab. [Mt. Vernon, Ohio]). Those made in Germany include Soyakraft and Sojabasan (Henselwerk); Lactopriv; and Solactin. Address: Tokyo Keisatsu Byoin Shonika, Icho (Tokyo Police Hospital, Pediatric Div., Head).

1357. James, W.S. 1963. New sources of protein in a hungry world. *British Vegetarian.* March/April. p. 69-77.
• ***Summary:*** The world population is now doubling roughly every 40 years and by the end of this century it is expected to reach 6,000 million. A new source of protein has been found. Scientists have discovered ways of separating protein from the indigestible cellulose and fibre of waste vegetable matter, including leaves, grass, etc. One of the pioneers in this basic research is N.W. Pirie, F.R.S., head of the Biochemistry Department at Rothamsted Experimental Research Station, Herts. Pirie and his colleagues have developed a small "Village Unit" machine for extracting protein from vegetable matter. The leaf protein from these machines is a dark green cheeselike substance.

A chemical company has recently put up the necessary capital to form a subsidiary company named International Protein Products, Ltd., which has built a factory costing £300,000 at Plymouth, England, for extracting protein from various vegetable sources using I.H. Chayen's "Impulse Process." The protein concentrate now produced at Plymouth has been given the trade name Lypro; it consists of about 65% protein and 35% oil loosely combined. It looks very much like flour, has a very pale cream color, and a faint attractive nutty flavor.

The low biological value of some leaf proteins can be greatly improved by mixing them with equal weights of soya protein, in the form of commercial food products such as Soyalac (Loma Linda Foods) or Velactin (A. Wander Ltd.). Address: M.Sc.

1358. Kyd, George H. 1963. Edible soy-protein fibers promise new family of foods. *Food Processing* (*Chicago*) 24(5):122-26, 138. May.
• ***Summary:*** "Products amazingly like meat such as the ham-like product shown below and the chicken-style products shown on page 124 can be fabricated from protein fibers shown opposite" (in a full-page photo), magnified slightly more than two times. Ralston Purina now makes "Textured Edi Pro," an edible spun soy protein fiber made from "an isolated edible soy protein that is almost pure protein. It contains no fat."

Page 124 has the heading: "Is the web of spun soy-protein fibers first of the modern superfoods? Meat-like production. These Textured Edi Pro foods–already on the market–look, taste, and chew amazingly like the meat item they so closely resemble, yet they may have a fat content as low as a fraction of one per cent, and a protein content of almost any level desired." Photos show packages and labels of Chicken Style Roll (Minute Entrees, refrigerated roll), Worthington Soyameat Fried-Chicken Style (canned), Worthington Sliced Whitemeat Style (Frozen Minute Entrees). Shown without a package or label are is a ham-shaped, ham-like product [Wham].

Page 126 states: "Tons of the textured product [Textured Edi Pro] each week go into the following products made by Worthington Foods: canned 'Soyameat': refrigerated Chicken-Style Roll; frozen fried-chicken style Minute Entree; and frozen chicken whitemeat style Minute Entree. These products resemble chicken meat in taste and texture. They are new but already fast-selling products, distributed largely through health food stores."

"The edible soy protein work is being carried on under

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the direction of Dr. H.L. Wilcke, Purina Research Vice President, and D.B. Walker, Vice President in charge of the Soybean Division. Two nationally known scientists who have pioneered soy development have performed much of the development work. They are Robert A. Boyer and Francis E. Calvert. Both at one time were associated with Henry Ford, and, through him, with Thomas A. Edison.

"The work has been coordinated under supervision of W.E. Tjossem, Manager of Purina's Special Soy Products Department, and W.B. Brew, Manager of Special Products Research. Ralston Purina is the largest manufacturer of animal rations, and one of the principal processors of soybeans in this country [USA]. Textured Edi Pro and Edi Pro are developments of Ralston Purina Company, Checkerboard Square, St. Louis 2, Missouri."

"Fifty million people in the U.S... are not able to eat the meat of animal or fowl some or all of the time by reason of their religions, restrictions of their doctors, or by personal preferences. For these many millions who for one reason or another cannot eat meats, the Textured Edi Pro meat-like products will supplement the supply of food items which they approximate... The versatility and adaptability of these new edible soy products make them 'the most exciting and most promising group of new foods of this decade,' says Purina vice president D. B. Walker. 'They are so characteristic of present health theories that they are likely to establish themselves in diets of the future. And the meat- like products will find an eager market among those 50 million who can't eat real meat."

Note: This is the earliest English-language document seen (March 2009) that mentions Textured Edi Pro, made from spun soy protein fiber. Address: Ralston Purina Co., St. Louis, Missouri.

1359. **Product Name:** Chicken Style Roll–Worthington Minute Entrees (Meatless; Resembles White Chicken Meat).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085.
Date of Introduction: 1963 May.
Ingredients: 1990: Textured vegetable protein (soy protein isolate and concentrate), egg whites, soybean and/or corn oil, salt, flavorings (hydrolyzed vegetable protein, onion powder, turmeric, spice extractives), monosodium glutamate, carrageenan, niacinamide, iron (as ferrous sulfate), vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), artificial color, vitamin B-2 (riboflavin), vitamin B-12.
How Stored: Frozen.
New Product–Documentation: George D. Kyd. 1963. *Food Processing.* May. p. 123-26. "Edible soy protein fibers promise new family of foods." The author, an employee of Ralston Purina Co., states that this product, which contains Textured Edi Pro (spun soy protein fibers made by Ralston Purina) is already on the market. A photo shows the product–a cylindrical roll about 2½ inches in diameter and 10 inches long. The label states: "Chicken Style Roll–Worthington Minute Entrees." One end of the roll has been sliced, slivered, and diced. Page 126 describes the product as "refrigerated Chicken-Style Roll." These "are new but already fast-selling products, distributed largely through health food stores."

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. Chicken Roll is a frozen product based on spun soy protein fiber. Each roll weighs 72 oz.

Manufacturer's catalog. 1984, undated. Frozen Products.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1360. Sklarewitz, Norman. 1963. Japanese open door to more U.S. makers of consumer goods. *Wall Street Journal.* July 26. p. 1.
• ***Summary:*** Besides Heinz, the Kellogg Co. is another leading U.S. food producer that has entered into a partnership with a Japanese firm. Its breakfast cereal has been made and marketed in Japan since April through Japan's Ajinomoto Co. "Kellogg and Ajinomoto hope to persuade enough Japanese to substitute corn flakes for their traditional breakfast fare of rice, soybean soup [miso soup] and pickles to take in about $2.7 million in sales within two years." Address: Staff reporter for the Journal.

1361. Sanchez, Albert; Scharffenberg, J.A.; Register, U.D. 1963. Nutritive value of selected proteins and protein combinations. I. The biological value of proteins singly and in meal patterns with varying fat composition. *American J. of Clinical Nutrition* 13(4):243-49. Oct. [21 ref]
• ***Summary:*** Vegetable protein mixtures incorporated into human dietaries compare favorably with meat in growth and biological value studies in rats. Discusses the biological value of proteins singly and in meal patterns with varying fat composition. "Soybean milk" was included in experimental diets for rats. Address: Dep. of Biochemistry, School of Medicine, Loma Linda Univ., Loma Linda, California; International Nutrition Research Foundation, Riverside, California.

1362. Sanchez, Albert; Scharffenberg, J.A.; Register, U.D. 1963. Nutritive value of selected proteins and protein combinations. II. Biological value predictability. *American J. of Clinical Nutrition* 13(4):250-53. Oct. [13 ref]
Address: Dep. of Biochemistry, School of Medicine, Loma Linda Univ., Loma Linda, California; International Nutrition Research Foundation, Riverside, California.

1363. **Product Name:** Prosage (Meatless Sausage Based on

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Spun Soy Protein Fibers) [Links, Patties, or Roll].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1963 October.
Ingredients: In 1971: Water, wheat protein [wheat gluten], soya protein, corn oil, albumin [egg protein], dextrose, salt, hydrolyzed vegetable protein, MSG, vegetable gum, flavorings.
How Stored: Frozen.
New Product–Documentation: Soybean Blue Book. 1965. p. 112. "Prosage." Buller & Klis. 1965. Food Processing. 26(9):115-17, 120. Sept. "Spun Soy Protein Foods Get Supermarket Sales Test." Prosage, a meatless sausage resembling pork sausage, is made with spun soy protein fibers. A photo shows a man rolling a rack of Prosage into a room for quick freezing. "A 1½ ounce of Prosage can be fried without any loss in size or weight, as contrasted with 30 to 40 per cent shrinkage of pork sausage."

Ziemba. 1966. Food Engineering. May. p. 82-93. "Let soy proteins work wonders for you." Photo of package.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 163. Lists the ingredients in "Prosage (Worthington)." This is an institutional product.

Ad (½ page) in *Better Nutrition.* 1974. Dec. p. 43. "New meatless Prosage Links." A photo shows the package.

Manufacturer's catalog. 1984, undated. Frozen Products. Label reads: "Vegetable Protein Food. Artificial Sausage Flavor." Spot in *Soybean Digest.* 1970. April. p. 9. "50% less calories and 75% less fat in Prosage." The product is being test marketed in Columbus, Ohio and South Bend, Indiana.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a frozen sausage-like product based on spun soy protein fiber.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Prosage, frozen (Worthington)" are "wheat protein, corn oil, soy protein concentrate, oats, albumen [egg protein], corn syrup solids, artificial flavors, soy protein, yeast extract, salt, HVP, malt extract, vegetable gum, sucrose, caramel coloring, niacin, thiamin, iron, vitamin B-6, riboflavin, vitamin B-12."

Worthington Foods. 1989. "The Tradition of Healthy Foods" (50th anniversary booklet). p. 21-22. Worthington's first products made with spun soy protein fibers were White Chik, Beeflike, Prosage, Stripples, and Holiday Roast (with a plastic wishbone). All were hits and sales took off. These products were sold frozen. In "October 1963 a series of television, radio and newspaper advertisements featuring the new frozen foods was introduced."

Color photo of package in *Linda McCartney's Home Cooking.* 1990. p. 18.

Talk with Ron McDermott of Worthington Foods. 1992. Oct. 23. In 1968-70 Worthington developed a new generation of products containing wheat gluten; the first of these was Prosage (rhymes with "Sausage"). For the first time, fresh (not dried) wheat gluten was combined with spun soy protein fibers and textured soy protein concentrates to give improved texture, flavor, and nutritional value (through protein complementarity). Later the spun soy protein fiber was removed but the textured concentrate remained. Miles Laboratories, which bought Worthington in March 1970, did a lot of further development on Worthington's products; Breakfast Links, Breakfast Patties, etc. Morningstar Farms Breakfast Patties, a meatless sausage, which are an improved version of Prosage, were introduced to the mass market in 1974, still featuring the gluten-soy combination.

1364. **Product Name:** White-Chik (Meatless Chicken Based on Spun Soy Protein Fibers–Frozen).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085.
Date of Introduction: 1963 October.
Ingredients: Specially processed soybean protein (Fibrotein), corn oil, [egg] albumen, isolated soy protein, salt, monosodium glutamate, vegetable gum, trisodium phosphate, seasonings.
Wt/Vol., Packaging, Price: Paperboard box or canned.
How Stored: Frozen.
Nutrition: Protein 20-26%, fat 18-25%, carbohydrate 2-3%.
New Product–Documentation: Buller & Klis. 1965. Food Processing. 26(9):115-17, 120. Sept. "Spun Soy Protein Foods Get Supermarket Sales Test." "White-Chik" is "simulated white meat chicken" based on spun soy protein fiber. A photo shows the thin paperboard box in which it is sold, frozen.

Hartman. 1966. Food Technology. 20(1):39-40. "Vegetarian protein foods."

"The first textured soybean protein fiber product marketed in the U.S. is Worthington's frozen 'Fri-Chik,' an extruded formulation simulating a small fried portion of white chicken meat. This same formulation was next canned in a light gravy and called 'Soyameat–Fried Chicken Style,' and was also later marketed as frozen and canned 'White-Chik' in large rolls for slicing, dicing, etc. The approximate analysis of these simulated chicken products: protein 20-26%, fat 18-25%, and carbohydrate 2-3%."

Ziemba. 1966. Food Engineering. May. p. 82-93. "Let soy proteins work wonders for you." Photo of box.

Worthington Foods. 1989. "The Tradition of Healthy Foods" (50th anniversary booklet). p. 21-22. Worthington's first products made with spun soy protein fibers were White Chik, Beeflike, Prosage, Stripples, and Holiday Roast (with a plastic wishbone). All were hits and sales took off. These products were sold frozen. In "October 1963 a series of television, radio and newspaper advertisements featuring the

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new frozen foods was introduced."

Talk with Dick Leiss, Director of R&D at Worthington Foods. 1993. June 30. This was an early product that contained spun soy protein fiber but was not deep fried. The un-fried product was sold in 2 forms: A large frozen roll (3-4 lb) or slices of it canned in a light broth.

Label (undated) sent by Dr. Walter Wolf. 2000. July. Since the first ingredient is Fibrotein (spun soy protein fibers), this package is probably from about 1965. Red and white on dark blue. A large color photo on the front panel shows slices of White-Chik served with a few vegetables on a serving dish. On the front panel: "Minute main courses. Foods for 4. New frozen food concept. Contains no meat. Like white meat? Yes ma'm!"

1365. **Product Name:** Soya Meat–Beef Like, or–Chicken Like (Based on Spun Soy Protein Fibers).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085.
Date of Introduction: 1963 October.
Ingredients: Incl. spun soy protein fibers.
How Stored: Frozen.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Soya Meat–Beef like and Chicken each contain 17.23% protein, 13.61% fat, and 6.37% carbohydrate. One serving, 1 slice, weighs 35 or 36 gm, respectively.

Soybean Blue Book. 1965. p. 112. "Canned and frozen soyameats, white meat style, fried chicken style, prime, prime-smoked and chipped, prosage, saucettes, wham, and veja-links."

Worthington Foods. 1989. "The Tradition of Healthy Foods" (50th anniversary booklet). p. 21-22. Worthington's first products made with spun soy protein fibers were White Chik, Beeflike, Prosage, Stripples, and Holiday Roast (with a plastic wishbone). All were hits and sales took off. These products were sold frozen. In "October 1963 a series of television, radio and newspaper advertisements featuring the new frozen foods was introduced."

1366. Larsson, Elisabeth; Webb, Alan T. 1963. Cancer survey: Experiences in mass screening of cervical smears. *Obstetrics and Gynecology* (*Amsterdam*) 22(5):630-35. Nov. [6 ref]
• ***Summary:*** Carcinoma of the cervix can be cured in its early stages. By utilizing the cytologic technic almost all invasive malignancies of the cervix could be prevented. Address: Dep. of Gynecology and Obstetrics and the Dep. of Pathology, School of Medicine, Loma Linda Univ., Loma Linda, California.

1367. Hardinge, Mervyn G.; Crooks, Hulda. 1963. Non-flesh dietaries. I. Historical background. *J. of the American Dietetic Association* 43(6):545-49. Dec. [31 ref]
• ***Summary:*** Contents: Introduction. Biblical account of the diet of man. Oriental nations. Peoples of the Middle East. The Greeks and Romans. The Christian Era. Britain and the Western world. America. War experience (Dr. Hindhede in Denmark during World War I. Similar experience in Norway during World War II. "The period between World War I and II is frequently alluded to as the Golden Era of Vegetarianism. During this time vegetarianism lost much of its stigma of 'cultism' and advanced to a more scientific basis"). Contemporary vegetarian groups in the U.S. The future. Summary.

This is one of the best, most concise, and most accurate and original well-documented histories of vegetarianism up to this time.

In Britain and the Western world, the vegetarian movement was born in Manchester, England, in 1809, when members of the Bible Christian Church under the leadership of William Cowherd, pledged themselves to abstain from alcoholic drinks and flesh foods. "In 1847, the Bible Christian Church, under the leadership of Joseph Brotherton, established a vegetarian society apart from the church."

"The vegetarian organization begun in England was brought to America by the Reverend William Metcalfe and forty-one members of his church. They landed in Philadelphia, Pennsylvania, in 1817 where their number soon grew. Their regimen was strengthened and expanded through the influence of several prominent men who became convinced of the advantages of a fleshless diet. Among these were Reuben D. Mussey (1780-1866), fourth President of the American Medical Association, and Edward Hitchcock (1793-1864), Professor of Science and then President of Amherst College [Massachusetts], whose 'Lectures on Diet, Regimen, and Employment' were published in 1831.

"In 1829, Sylvester Graham, a young Presbyterian minister who believed he had regained his own health on a vegetarian diet, began actively by pen and voice to advocate moderation in eating. His impressive arguments and fiery zeal gave impetus to the vegetarian movement and caused his contemporaries to regard him as the apostle of temperance. He is best remembered by his advocacy of the use of unbolted 'Graham' flour in bread-making." Address: Dep. of Pharmacology, School of Medicine, Loma Linda Univ., Loma Linda, California.

1368. Hardinge, Mervyn G.; Crooks, Hulda. 1963. Non-flesh dietaries. II. Scientific literature. *J. of the American Dietetic Association* 43(6):550-58. Dec. [96 ref]
• ***Summary:*** An excellent review of the English-language literature relating to experimental investigations, group studies, health advantages and disadvantages of a vegetarian diet. Address: Dep. of Pharmacology, School of Medicine, Loma Linda Univ., Loma Linda, California.

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1369. **Product Name:** Loma Linda All Purpose Soyagen (Milk Free Soy Beverage Powder).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505. Phone: 714-687-7800 (3/88).
Date of Introduction: 1963.
Ingredients: Soy solids, corn syrup, soy oil, sugar, soy lecithin, salt, di-calcium phosphate, tri-sodium citrate, calcium carbonate, di-potassium phosphate, artificial flavors, vitamins (ascorbic acid, DL-alpha tocopheryl acetate, vitamin A palmitate, cholecalciferol, riboflavin, phytonadione, cyanocobalamin), ferrous sulfate, tri-potassium citrate.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable.
Nutrition: Per 1 oz. powder (approximately ¼ cup making one cup of liquid): Calories 130, protein 6 gm, carbohydrate 14 gm, fat 6 gm, cholesterol 0 mg, sodium 150 mg, potassium 210 mg.
New Product–Documentation: Label and color photo sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1963; the label is dated "9/78"–Sept. 1978. A less sophisticated version of this product with the same name appeared in 1948.

1370. **Product Name:** Loma Linda Sandwich Spread (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1963.
Ingredients: In 1975: Minced olives, peanut meal, legumes, tomato puree, soy flour, flaked 100% wheat meal, bell peppers, soy sauce, yeast extract, salt, MSG, onion, flavoring.
Wt/Vol., Packaging, Price: 14 oz (397 gm) can. Retails for $2.40 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Sandwich Spread contains 12.90% protein, 16.50% fat, and 7.4% carbohydrate. One serving is 3 tablespoons.

Loma Linda Food Co. 1969. "Wholesale Price List." L.L. Sandwich Spread is now sold in 4.75 oz and 14 oz cans.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Sandwich Spread (Loma Linda)" are given.

Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. The ingredients are now: Water, olives, peanut butter, garbanzos, tomato puree, soy flour, red peppers, natural (vegetable) flavors, salt, dextrose, onion powder, caramel color, vitamins [niacinamide, D-calcium pantothenate, thiamine (vitamin B-1), vitamin B-6, riboflavin (vitamin B-2), vitamin B-12], spices. Label printed Sept. 1989.

1371. **Product Name:** Loma Linda Little Links (Meatless Frankfurters).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce Place, Riverside, CA 92515.
Date of Introduction: 1963.

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Ingredients: In 1971: Wheat protein [wheat gluten], water, vegetable oil, brown rice, defatted wheat germ, dried yeast, soy protein, salt, potato flour, onion powder, MSG, lecithin, caramel color, hydrolyzed vegetable protein, garlic powder, lepine, seasonings.
Wt/Vol., Packaging, Price: 14 oz can.
How Stored: Shelf stable; refrigerate after opening.

New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Little Links contain 16.60% protein, 12.17% fat, and 5.82% carbohydrate. One serving, 2 links, weigh 47 gm.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. Lists the ingredients in "Little Links (Loma Linda)."

Note: This is the earliest English-language document seen (Aug. 2003) that uses the term "Loma Linda Little Links" to refer to meatless soy hot dogs.

1372. **Product Name:** Loma Linda Linketts (Meatless Frankfurters). Renamed Linketts by 1965.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1963.
Ingredients: In 1971: Wheat protein [wheat gluten], water, vegetable oil, dried yeast, salt, soy flour, MSG, caramel, onion powder, lysine, garlic, U.S. certified color, seasonings.
Wt/Vol., Packaging, Price: 20 oz can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: 1988: Per 2 links (2.6 oz–74 gm): Calories 150, protein 15 gm, carbohydrate 5 gm, fat 8 gm, cholesterol 0 mg, sodium 340 mg, potassium 75 mg.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Linketts contain 18.70% protein, 10.38% fat, and 5.70% carbohydrate. One serving, 1 link, weighs 42 gm.

Note: This is the earliest English-language document seen (Aug. 2003) that uses the term "Loma Linda Linkettes" to refer to meatless soy hot dogs.

Loma Linda Food Co. 1969. "Wholesale Price List." Linketts are now sold in 13 oz and 20 oz cans. Big Franks are sold in 20 oz cans. And Little Links are sold in 14 oz cans.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. Lists the ingredients in "Linketts (Loma Linda)."

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned frankfurter-type product.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 175. The ingredients in "Linketts (Loma Linda)" are "Wheat protein [wheat gluten], soy oil, dried yeast, salt, HVP, soy protein concentrate, flavoring, defatted soy flour, mono- and diglycerides of vegetable origin, lecithin, L-lysine, onion powder, caramel, artificial color, garlic powder, hickory smoke flavor."

Recipe booklet. 1979.

Label sent by Loma Linda Foods. 1988. Oct. 5. Ingredients for Linketts are now: Wheat gluten, corn oil, water, dried yeast, soy protein concentrate, artificial and natural (vegetable) flavors, soy flour, vegetable mono- and di-glycerides, soy lecithin, L-lysine, onion powder, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). Broth: Water, salt. This product was introduced in 1982. A less sophisticated version of this product with the same name was introduced in 1953.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1373. **Product Name:** Loma Linda Stew-Pac (Meatless Stew).

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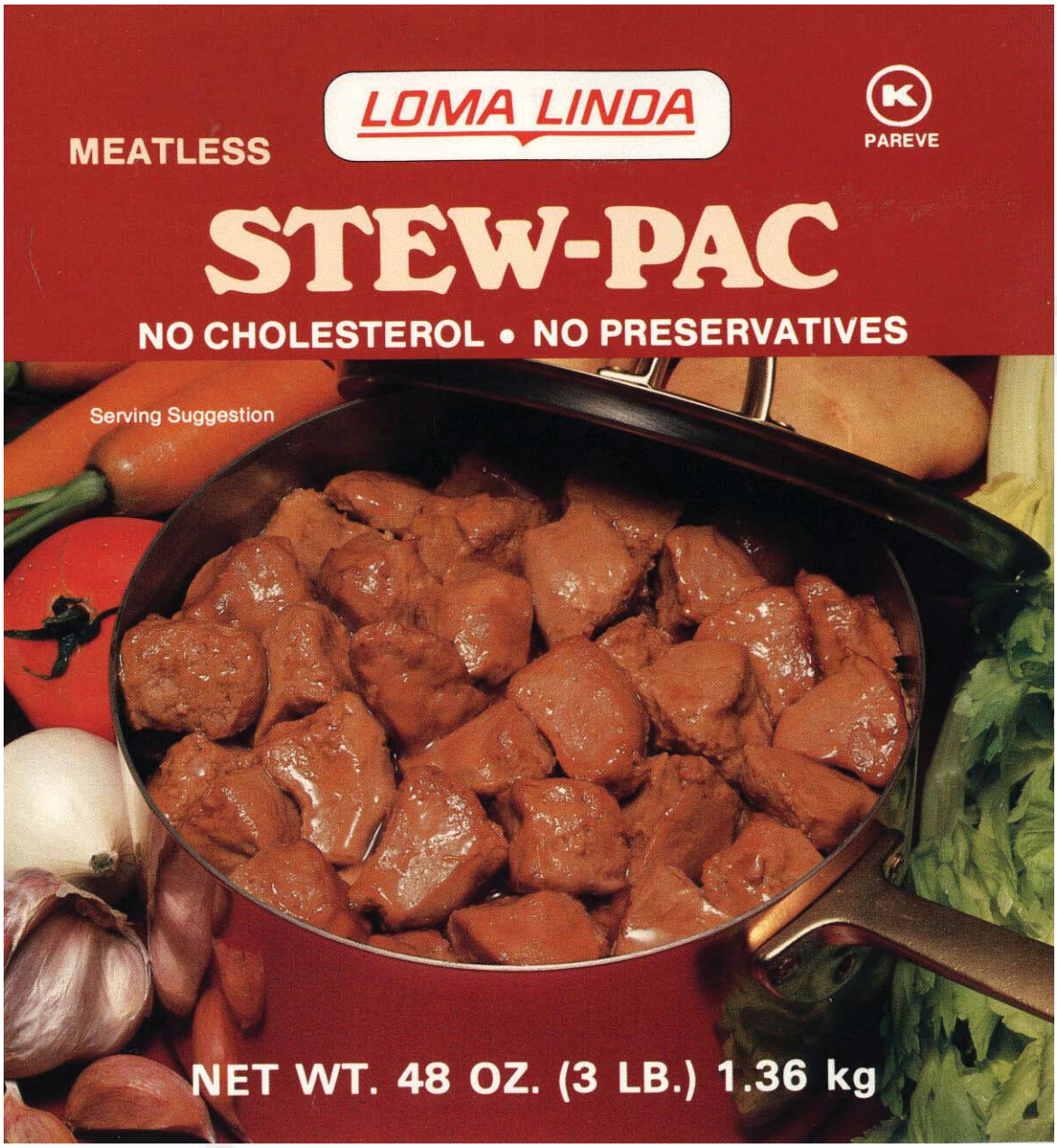

Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1963.
Ingredients: Wheat gluten, corn oil, water, oat flour, soy protein concentrate, dried yeast, onion powder, soy lecithin, caramel color, natural (vegetable) flavors, L-lysine, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin.) Stew broth: Water, natural (vegetable) flavors, salt, dextrose, L-lysine, onion powder.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 2 oz (57 gm): Calories 70, protein 10 gm, carbohydrate 4 gm, fat 2 gm, cholesterol 0 mg, sodium 220 mg, potassium 60 mg.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1963.

1374. **Product Name:** Loma Linda Redi-Burger (Meatless Hamburger).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1963.
Ingredients: Wheat protein [wheat gluten], soy oil, defatted wheat germ, yeast extract, brown rice, soy flour, salt, potato flour, onion powder, MSG, lecithin, caramel color, HVP,

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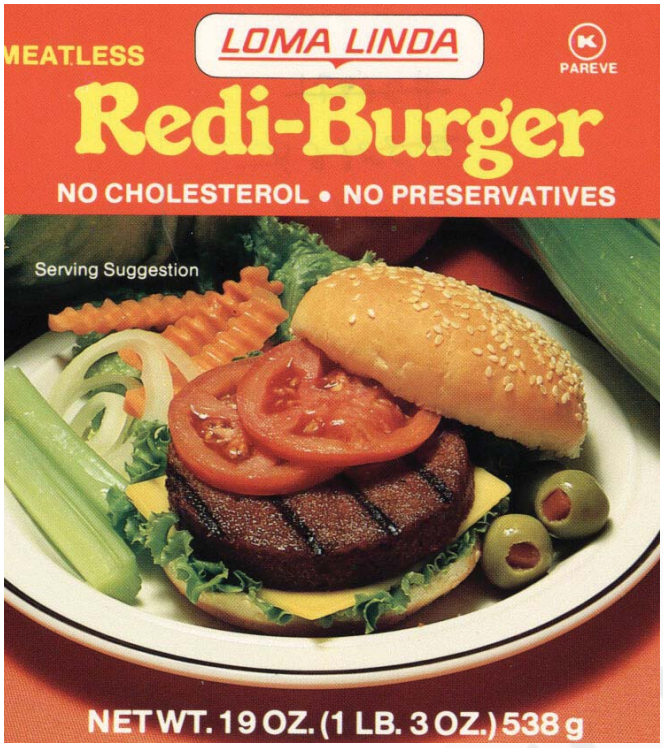
garlic powder, L-lysine, flavoring.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per ½ inch slice (2.4 oz–68 gm): Calories 130, protein 14 gm, carbohydrate 5 gm, fat 6 gm, cholesterol 0 mg, sodium 370 mg, potassium 120 mg.



New Product–Documentation: A less sophisticated version of this product was first introduced in 1953. Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Redi-Burger contains 21.80% protein, 12.20% fat, and 8.58% carbohydrate. One serving, ½-inch slice, weighs 75 gm.

Loma Linda Food Co. 1969. "Wholesale Price List." Redi-Burger is now sold in 19 oz cans.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Redi-Burger (Loma Linda)" are given.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1963. A less sophisticated version of the same product with the same name was introduced in 1953. The ingredients are now: "Wheat gluten, corn oil, water, wheat germ, rice flour, dried yeast, soy flour, natural (vegetable) flavors, potato flakes, onion powder, oat flour, caramel color, salt, soy lecithin, wheat flour, garlic powder, L-lysine, soy protein isolate, spice, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin)."

1375. Delafield, D.A. 1963. Ellen G. White and the Seventh-day Adventist Church. Mountain View, California; Omaha, Nebraska; Calgary, Alberta, Canada: Pacific Press Publishing Co. 90 p. Illust. No index. 18 cm. [44* ref]

1376. Lager, Mildred; Jones, Dorothea Van Gundy. 1963. The soybean cookbook: Adventures in zestful eating. New York, NY: Devin-Adair Co. xiv + 240 p. Foreword by Ruth Stout. Index. 22 cm.
• ***Summary:*** The copyright page states: "Note: This is a revised and updated version of a privately printed book, *How to Use the Soybean*, by Mildred Lager which was first printed in 1955 and reprinted in 1959." This lacto-ovo-vegetarian cookbook contains over 350 recipes, including 72 tofu recipes.

Contents: Preface to 1955 edition. Preface to 1963 edition. Part I: The versatile soybean. History of the soybean. Nutritional value. Abbreviations and special terms. Soup to nuts: Introduction, green soybeans [green vegetable soybeans], dry soybeans, roasted soybeans, sprouted soybeans, the cow of China–soy milk (kinds of soy milk), "the meat without a bone"–tofu or soy cheese, the little giant among protein foods–soy flour, soy grits and bits (puffed grits), soy oil and soy butter, meat replacement foods, sandwich spreads, malts, coffee substitutes, soy sauce, other soy products (soy albumen, Glidden's product that contains on a dry basis 96.6% protein [soy protein isolate]).

Part II: Soybean recipes. Green soybeans. Dry soybeans. Roasted or toasted soybeans. Sprouted soybeans. Meat replacement dishes. Soy noodles, macaroni, and spaghetti. Sauces and gravies. Soy soups. Salads. Soy spreads and soy butter ["a butter resembling peanut butter may be made from finely ground soybeans or soy flour... Roasted soy butter is made from the roasted beans that have been ground into a fine flour."]. Soy milk. Tofu or soy cheese. Soy cereals and breakfast dishes. Soy desserts. Soy candies. Soy flour breads: Full-fat soy flour, low-fat or fat-free soy flour. Pastry. Cookies. Cakes. Extra tips. Appendix. Menus.

The chapter titled "History of the Soybean" (p. 3-7) discusses: W.J. Morse and the U.S. Department of Agriculture, Dr. J.A. LeClerc, the American Soybean Association (which has held a national convention every year since it was founded in 1920), its publication *Soybean Digest*, Henry Ford and his work with both industrial and edible soy products, T.A. Van Gundy, Harry W. Miller, M.D., Dr. Clive McCay of Cornell University (Ithaca, New York), and the Sept. 1961 Conference on Soybean Products for Protein in Human Foods (held at Peoria, Illinois).

Concerning T.A. Van Gundy we read (p. 5): "The father of one of the authors, T.A. Van Gundy, became interested in the nutritional value of soybeans while attending the World's Fair in San Francisco in 1915, where they were featured in the Oriental exhibits. Upon going home he purchased some soybeans and began experimenting in them. As far as we know he was the first person on the Pacific Coast to develop a line of commercial foods from this wonder bean. By 1927

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he had developed a number of palatable products which he manufactured and sold through health food stores. Soybean foods were virtually unknown at this time, and it took courage and perseverance to put them across."

Recipes for "Soy Ice Cream" (p. 175-76) now include vanilla, maple nut, orange, and strawberry flavors. A recipe for "Granola" (p. 161) calls for 1 cup soy flour. The rest of the ingredients (such as wheat and barley flour) appear to be similar to those found in the earliest granola recipes of the mid-1800s. Address: Southern California.

1377. Major, Nettie Leitch. 1963. C.W. Post–The man and the hour. Washington, DC: Published by the author. xx + 318 p. Illust. Index. 27 cm. [50+* footnotes]
• ***Summary:*** This excellent biography of C.W. Post was published six years after another excellent biography of both W.K. Kellogg and Post titled *Cornflake Crusade*, by Gerald Carson. Both books are rich troves of original research, and both are well written and well documented. This book is more sober; Carson's is full of good humor. Address: Washington, DC.

1378. Jones, Dorothea Van Gundy. 1963? Information sheet. Loma Linda, California. 1 p. Undated. Unpublished typescript.
• ***Summary:*** Native of California. Graduated from Dietetic course at Loma Linda University, Loma Linda, California. Finished college (B.S.) at Pacific Union College, Angwin, Calif.

Experience includes: "1. Head of college home economics department. 2. Director of Food Service in Junior College. 3. Therapeutic dietitian in hospital. 4. Administrative dietitian in hospital. 5. Diet counseling in doctor's office. 6. Worked with clinical group as dietary consultant. Present position, for past eleven years nutritionist for International Nutrition Research Foundation, Arlington, California. Just returned recently (1962) from six-weeks tour of Europe studying nutritional habits.

"Mrs. Jones' position has included traveling over the United States and Hawaii, conducting community classes in nutrition and the proper preparation of food. These classes have ranged in size from 50 to 1200, and included men, women and children."

"She is associate editor for *Today's Food*, an eight-page quarterly magazine devoted to better nutrition.

"She has authored many articles on nutrition and food preparation that have been published in national magazines."

Note: This undated mimeographed sheet was apparently written before Mrs. Jones went to Japan in Oct. 1964. Address: Loma Linda, California.

1379. **Product Name:** Loma Linda 7-Grain Cereal [No Sugar Added, or Crunchy].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce Place, Riverside, CA 92515.
Date of Introduction: 1963?
Ingredients: No Sugar Added: Corn flour, rice flour, soy flour, oat flour, barley flour, rye flour, whole wheat flour, buckwheat flour, salt.
How Stored: Shelf stable.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. In the Crunchy flavor, soy flour is the 6th ingredient, and brown sugar is the 7th.

1380. **Product Name:** Soy Chips or Grits.
Manufacturer's Name: Soy Products of Australia Pty. Ltd.
Manufacturer's Address: 69 Power Road, Bayswater, VIC 3153, Australia. Phone: 729-1738.
Date of Introduction: 1963?
Ingredients: Soybeans.
New Product–Documentation: Talk with Paul Smith of Soy Products of Australia Pty. Ltd. 1995. This product was introduced after 1963, when the full mill operation came on stream.

1381. *Quick Frozen Foods.* 1964. Protein controlled simulated meat concept opens unlimited frozen potential: Food of tomorrow, today. 26(6):79-82. Jan.
• ***Summary:*** A whole array of new simulated meats are made from edible soy protein, in the form of spun soy protein fibers, as the basic ingredient. Two companies are presently marketing these new foods: Worthington Foods, Inc., Worthington, Ohio, and Brown's Frosted Foods, Inc., Philadelphia, Pennsylvania. A table lists nine "Major advantages of soy protein 'meat.'"

Worthington has registered the trademark "Fibrotein" to identify its edible soy fibers, which are produced thanks to the aid of a "revolutionary, scientific breakthrough which has converted the soy bean into a magic wonder-bean capable of playing a number of profitable roles." Worthington's president James L. Hagle discusses the nutritional and economic advantages of his company's new foods. Allan R. Buller, general manager, describes how Fibrotein is made using a viscous liquid of soy protein that is "extruded under pressure through platinum spinnerettes having holes 1/4000th of an inch in diameter." The resulting fine filaments of protein are "formed into a 'tow' which can be cut, twisted, chopped, or rolled into various forms for use in foods."

Note: This is the earliest English-language document seen (March 2009) that uses the word "spinnerettes" (or "spinnerette") in connection with edible spun soy protein fibers.

Mr. Buller's firm has been successful in using Fibrotein to make frozen vegetarian foods that resemble fried chicken (Fri-Chik, 8 oz carton), white turkey meat (White-Chik, 8 oz carton), roast beef slices (Prime, 8 oz carton), and ham

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(Wham). Worthington has entered the frozen field with a new line of vegetarian foods it calls "Minute Entrees." Worthington also makes Prosage (like sausage) packed in 1 pound casings.

Worthington is also making seven frozen foods for the institutional market, including chicken style rolls (8 lb roll), chicken sliced or diced white meat (5 lb packages), and fried chicken style (1¼ oz portions). The firm also makes a canned line under the brand "Soyameat."

Photos show: (1) Prime, smoked and chipped, in a 4 oz transparent pouch. (2) A Chicken Style Roll next to a deli slicer. (3) An 8 oz carton of Fri-Chik. (4) An 8 oz carton of Prime. (5) A roll of Prosage.

1382. **Product Name:** Prime (Slices), Prime-Smoked and Chipped (Meatless Meats).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1964 January.
Ingredients: Fibrotein (soybean protein), water, corn oil, vegetable shortening, [egg] albumen, hydrolyzed vegetable protein, salt, caramel coloring, monosodium glutamate, flavorings, U.S. certified color.
Wt/Vol., Packaging, Price: 8 oz. Paperboard box.
How Stored: Frozen.
New Product–Documentation: *Quick Frozen Foods.* 1964. "Protein controlled simulated meat concept opens unlimited frozen potential: Food of tomorrow, today." Jan. Fibrotein is the basic ingredient in Worthington's new "Meat-like but meat-free foods." A photo shows a package of "Prime" identical to that sent by Dr. Wolf in July 2000.

Soybean Blue Book. 1965. p. 112.

Buller & Klis. 1965. Food Processing. 26(9):115-17, 120. Sept. "Spun Soy Protein Foods Get Supermarket Sales Test." A photo shows the thin paperboard box in which Prime is sold, frozen, and a plastic bag in which it is sold in granular form.

Ziemba. 1966. Food Engineering. May. p. 82-93. "Let soy proteins work wonders for you." Photo.

Label (undated) for Prime (slices), Beef flavor sent by Dr. Walter Wolf. 2000. July. Since the first ingredient is Fibrotein (spun soy protein fibers), this package is probably from about 1964. Red and white on dark blue. A large color photo on the front panel shows the slices served with a few vegetables on a white serving dish. On the front panel: "Minute main courses. Foods for 4. New frozen food concept. Contains no meat. Like beef? Yes ma'm!"

1383. Walden, Richard T.; Schaefer, L.E.; Lemon, F.R.; Sunshine, A.; Wynder, E.L. 1964. Effect of environment on the serum cholesterol-triglyceride distribution among Seventh-day Adventists. *American J. of Medicine* 36(2):269-76. Feb. [23 ref]

• ***Summary:*** The authors compared the serum lipid levels of 145 Seventh-day Adventist lacto-ovo-vegetarians (of whom 19 ate meat occasionally) with those of the New York population. Lacto-ovo-vegetarians had lower serum cholesterol and higher triglyceride levels than New York City residents, the differences becoming more pronounced following manipulation of dietary fat by fat restriction or fat substitution diets. Address: New York, New York.

1384. *British Vegetarian.* 1964. Disastrous fire at Stanborough Press, Watford. March/April. p. 92-93.
• ***Summary:*** On Friday, Jan. 3. a terrible fire gutted the buildings at Stanborough Press. Fortunately no one was hurt, but £100,000 damage was incurred in addition to priceless records and an incomparable of library of pictures an back issues of printed materials. The Press, established in 1907 by the British Union of the Seventh Day Adventists, prints and publishes books and periodicals dealing with both religion and vegetarianism. Its bi-monthly magazine *Good Health* has a circulation approaching 50,000. Photos show both the burning buildings and the gutted buildings after the fire. Address: B.A.

1385. **Product Name:** Granogen (Powdered Soymilk for Adults).
Manufacturer's Name: Granose Foods Ltd. (Importer-Marketer). Made in the USA by Loma Linda Foods.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England. Phone: 0923-672281/2.
Date of Introduction: 1964 April.
Ingredients: Soya bean solids, corn syrup, soya oil, sugar, salt, lecithin, vitamins.
Wt/Vol., Packaging, Price: 1 lb can. Retails for 9 shillings 6 pence (4/64, England).
How Stored: Shelf stable.
Nutrition: Protein 22.5%, carbohydrate 46.8%, fat 22.6%, ash 4.2%, moisture 3.9%.
New Product–Documentation: *The British Vegetarian.* 1961. March/April. p. 93. "Soya milk for household use." Granose Foods will soon be in a position to supply two varieties of spray-dried soya milk, Soyalac and Soyagen, made by one of their associated companies, Loma Linda Food Company in Arlington, California. Soyalac is specially prepared for infants, whereas Soyagen is for general use. A table compares the nutritional composition of the two products.

The British Vegetarian. 1964. March/April. "Granogen: Soya Bean Milk Now Available." "Readers will be glad to know that a really delicious general purpose soya bean milk is now available in Britain and will shortly be on sale in Health Food Stores." Made in America, Granose is imported and distributed to the trade by Granose Foods Ltd., Stanborough Park, Watford, Herts. Fortified with vitamin B-12, this fine white powder is sold in a 1-lb can for 9

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shillings 6 pence.

Orr and Adair. 1967. Tropical Products Institute Report G-31. "The production of protein foods and concentrates from oilseeds." p. 72. Soyalac is made in both liquid and powder form by Loma Linda Foods. The powder is imported into the U.K. by Granose Foods Ltd. and sold under their brand name of Granogen. A nutritional analysis is given.

Leah Leneman. 1971. *The British Vegetarian.* Jan/Feb. p. 6. "Plantmilk and sex!" The author (and many other people she knows) prefers the taste of Granogen to that of Plamil as an alternative to cow's milk. Granogen, however is not made in Britain.

Listing in The Vegetarian Health Food Handbook (UK). 1974. p. 155. "Granogen Soya Milk by Granose Health Foods Ltd." Note the new company name.

Manufacturer's catalog. 1980. April. "Soya milk for adults with added vitamins and minerals. Of great value to those with milk allergies." Purves. 1981. Nutrition and Food Science. Jan/Feb. p. 5-6.

Letter from Adrian Peck, production manager at Granose Foods. 1990. July 11. This product has always been imported as a powder. Granose has never sold a liquid Granogen. Before 1988 it was named Granogen and made in the USA by Loma Linda Foods. From 1988 on it was renamed Soyagen and made in West Germany by DE-VAU-GE.

1386. Lemon, Frank R.; Walden, R.T.; Woods, R.W. 1964. Cancer of the lung and mouth in Seventh-Day Adventists: Preliminary report on a population study. *Cancer* 17(4):486-97. April. [34 ref]

• ***Summary:*** "Since 1950, at least 28 reported epidemiological studies have yielded findings consistent with the conclusion that prolonged and regular smoking of cigarettes increases the risk of the development of lung cancer by as much as 20 to 60 times. The use of tobacco and alcohol in a variety of forms has also been implicated as an important etiological factor in buccal cancer."

"A complete roster of the California Seventh-Day Adventist membership was not available in 1958. Individual churches had complete membership lists but without pertinent data such as age, race, and occupation." In 1958, Lemon and Walden identified approximately 47,000 Seventh-day Adventists (SDAs) by the use of a brief census questionnaire mailed to households. "The questionnaire provided for basic information: sex, date of birth, length of church membership, race, marital status, place of birth, occupational and residential history, and the present state of health in general terms."

In 1960, with the assistance of Hammond (of the American Cancer Society) they collected a second mailed questionnaire from approximately 27,000 SDAs age 30 or over. Address: Dep. of Preventive Medicine and Public Health, School of Medicine, Loma Linda Univ., Loma Linda, California.

1387. Madison Foods. Div. of Worthington Foods, Inc. 1964. Wholesale price list–order blank. Worthington, Ohio 43085. 1 p. July 1.

• ***Summary:*** Products in Madison Foods line (now owned by Worthington Foods) include: Cheze-O-Soy [canned tofu]. Com-Pro. Dinner Morsels. Madison Burger. Not Meat (plain or tomato). Nu-Steaks. Stake-Lets. Vigorost. Yum. Zoyburger. Kreme-O-Soy [canned soymilk]. Soy Beans (Boston). Zoy-Koff (regular, or fine grind).

Worthington now has warehouses in Portland, Oregon; Oakland, California (actually San Leandro); Washington, DC; and Madison, Tennessee. Address: Worthington, Ohio. Phone: 614-885-9511.

1388. Longway, E.L. 1964. After many days [Dr. Harry W. Miller in the Philippines]. *Review and Herald.* July 2.

• ***Summary:*** A photo shows Don Toribio handing a check for 10,000 pesos to Dr. Harry Miller. Address: Field Secretary, Far Eastern Div.

1389. Jones, Dorothea Van Gundy. 1964. Quick 'n easy dishes for picnics or patio. *Today's Food* (*Loma Linda Foods, Riverside, California*) 9(2):7-8. Summer.

• ***Summary:*** Loma Linda ingredients in the recipes (p. 7) include: Vegeburger. Kidney Beans. Linketts. Garbanzos. Boston Style Baked Soybeans. Smokene. Soyagen milk. A photo (p. 8) shows nutritionist Dorothea Van Gundy Jones standing by a table.

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1390. Dorothea Van Gundy Jones at a supermarket in Los Angeles holding a carton of Matsuda and Hinode Tofu (Photograph). 1964.

• ***Summary:*** A 3½ by 5 inch color photo. The tofu was probably sold in the produce section.

1391. Dorothea Van Gundy Jones (far right) in Japan at a meeting with staff of the *Yomiuri Shinbun* newspaper (Photograph). 1964.

• ***Summary:*** A 4½ by 7 inch black-and-white photo. Left to right: (1) Photographer for the paper. (2) Yoshie Kanamori reporter in charge of women's affairs for the newspaper. (3) Reporter for the newspaper who acted as interpreter. (4) Mr. K. Yamamoto, interpreter, with public relations company. (5) Dorothea Van Gundy Jones, sponsored by the American Soybean Association.

1392. Dorothea Van Gundy Jones seated at a table at the Loma Linda Foods booth at an exhibition in Japan the fall of 1964 (Photograph). 1964.

• ***Summary:*** See next page. This 4½ by 7 inch black-and-white photo was taken in Tokyo by E. Bradley Davis of the Foreign Correspondents Club of Japan. The exhibition was organized by the American Soybean Association. A sign on the table at which Dorothea is seated is written in Japanese. A sign for "Loma Linda Foods Company" is on a large, round panel, and many canned Loma Linda products are on shelves.

Dorothea described the trip in 1965 in an article titled "Nutritionist Jones praises low-fat foods of Japan: To Tokyo for tofu," published in *Today's Food* (Loma Linda Foods, Riverside, California) 10(1):4-6. Spring.

1393. Edwardy, Fredrik W. 1964. The food fit for the Gods [soybeans]. *Today's Food* (*Loma Linda Foods, Riverside, California*) 9(3):3,7. Autumn. [1 ref]

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• ***Summary:*** Begins with a fanciful account of the early history of the soybean in China. "A fundamental rule in farming was to count the number of persons in the family and plant 5 acres of soybeans for each person."

"The father of our Nutritionist Dorothea Jones, T.A. Van Gundy, became interested in the nutritional value of soybeans while attending the World's Fair in San Francisco in 1915, where he saw them featured in an Oriental exhibit. So far as we know, he became the first person on the Pacific Coast to develop a line of commercial foods from the wonder bean. Soybean foods were virtually unknown at this time, and it took courage and perseverance to put them across."

Loma Linda Foods at present manufactures some twenty-five products which incorporate the use of the soybean in their ingredients–most of them providing a most economical means of adding more protein to the diet." These products include: Loma Linda RediBurger (19 oz can, 6 servings and 116 gm protein, costs $0.72; a blend of soy and other vegetable proteins). Loma Linda Dinner Cuts (20 oz can, 5 servings and 65 gm of protein, costs $0.74).

Note: The Panama Pacific International Exposition took place in San Francisco in 1915. Scores of documents were written about it and an official catalog describing it was published.

1394. Jones, Dorothea Van Gundy. 1964. Soybean magic. *Today's Food* (*Loma Linda Foods, Riverside, California*) 9(3):4-6. Autumn.

• ***Summary:*** See next page. The author is on her way to Tokyo, Japan, where the American Soybean Association has asked her to participate in a soybean seminar and fair; she will lecture and demonstrate the use of soybeans in human nutrition.

"My interest in soybeans goes back many years when our family came in contact with them at the world's fair in San Francisco. They were featured in one of the Oriental displays. My father became so enthusiastic, he promptly bought a hundred pound sack of soybeans and we began experimenting. We discovered they were hard to cook and had a peculiar flavor. It was some time before we found a way to mask their beany taste and prepare them properly... My father [T.A. Van Gundy] became a real pioneer in introducing this king of the legume family and often was referred to as 'Soybean Van Gundy.'

"Many years ago, Loma Linda Foods became aware of the nutritional value of soybeans and began manufacturing a few products. Today there are twenty-five soybean foods under the famous Loma Linda label–some made entirely from soybeans and others incorporating them in some form. One of the latest additions to the Loma Linda line is Boston Style Baked Soybeans.

A photo shows Dorothea Van Gundy Jones with Miss Kojima, assistant manager of the Japanese Soybean Association [sic, Japanese American Soybean Institute], who is visiting the USA as part of her world tour to study uses of the soy bean.

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Page 5 shows that the following Loma Linda brand soy products are now available: Soy Flour, Soyagen (All Purpose or Malt), Sandwich Spread, VegeChee, Smokene, Boston Baked Soybeans, and Soy Sauce. A photo on the cover of this issue of Loma Linda's quarterly magazine shows a can of Loma Linda VegeBits. Address: Nutritionist, Loma Linda Foods, 11503 Pierce Place, Riverside, California.

1395. Hardinge, Mervyn G.; Crooks, Hulda. 1964. Non-flesh dietaries. III. Adequate and inadequate. *J. of the American Dietetic Association* 45(6):537-42. Dec. [34 ref]
• ***Summary:*** This is a summary of the findings of a number of investigators worldwide. Contents: Introduction. Adequate non-flesh dietaries: Lacto-ovo-vegetarian type, pure vegetarian type [vegan]. Adequate, near-vegetarian population group diets. Inadequate near-vegetarian population group diets. Inadequate world food supply. Discussion. Summary.

"A reasonably chosen plant diet, supplemented with a fair amount of dairy products, with or without eggs, is apparently adequate for every nutritional requirement of all age groups...

"Vegetarian and near-vegetarian diets that have proved inadequate include: (a) vegan diets which have been reported to produce vitamin B-12 deficiency in some individuals; (b) grossly unbalanced near-vegetarian diets in which as much as 95 per cent of the calories were provided by starchy foods extremely low in protein, such as cassava root; (c) diets dependent too largely on refined cereals, such as cornmeal or white rice, even though small amounts of animal foods were included; and (d) intake of total calories insufficient for maintenance requirements."

The author concludes that "a reasonably chosen plant diet, supplemented with a fair amount of dairy products, with or without eggs, is apparently adequate for every nutritional requirement of all age groups." Address: Dep. of Pharmacology, School of Medicine, Loma Linda Univ., Loma Linda, California.

1396. **Product Name:** Loma Linda VegeBits.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce Place, Riverside, CA 92505.
Date of Introduction: 1964.
New Product–Documentation: Today's Food. 1964. Note: According to the Soybean Blue Book and to *Today's Food*, the name of the city in which Loma Linda Foods was located was Arlington, California, before 1964 and Riverside, California, after 1964.

Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Vegebits contains 14.60% protein, 8.31% fat, and 5.95% carbohydrate. One serving, 5 bits, weighs 70 gm.

1397. **Product Name:** Loma Linda RediBurger.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1964.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: *Today's Food.* 1964. Autumn. p. 7. A 19 oz. can of Rediburger retails for $0.72, serves 6, and provides 116 gm of protein.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned steak or burger-like product based on wheat protein.

1398. **Product Name:** Sovex Flavoring Concentrate (Thick, Dark Brown Paste).
Manufacturer's Name: Sovex Natural Foods, Inc.
Manufacturer's Address: Basement of Goodbrad home, Collegedale, Tennessee. Later–9104 Apison Pike, Box 310, Collegedale, TN 37315. Phone: 800-227-2320.
Date of Introduction: 1964.
Ingredients: Soy sauce (water, salt, hydrolyzed vegetable protein, corn syrup, caramel coloring), primary grown yeast, lecithin, vegetable flavorings. In 1971: Pure dry yeast, water, salt, soybean protein derivations [hydrolyzed vegetable protein], corn syrup, coloring, vegetable flavoring.
Wt/Vol., Packaging, Price: 9 oz plastic jar. Retails for $2.44 (7/90, California).
How Stored: Shelf stable.
Nutrition: Per 1 teaspoon (6 gm): Calories 11, protein 1 gm, carbohydrate 1 gm, fat 0 gm, cholesterol 0 mg, sodium 300 mg, potassium 50 mg.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 160. Lists the ingredients in "Sovex (Sovex Inc.)."

Talk with John Goodbrad, president of Sovex. 1980.

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Nov. 26. Sovex was founded in 1953 by the Hurlingers in Holly, Michigan. The company's original product was Sovex, a flavor concentrate paste, made from a mixture of brewer's yeast and soy sauce. In 1964 John bought the business [actually the formula and brand name] and moved it to Collegedale, Tennessee. Note: Ruth Goodbrad, John's wife, made the product in the basement of their home.

Talk with Glen Fuller, President and CEO of Fuller Life Inc. 1998. Oct. 28. Glen is interested in the history of Sovex, which is now named Fuller Foods, Inc. John Goodbrad did not buy any business from the Hurlingers in Michigan. Rather, he bought their formula for making Sovex spread and the brand name. The word "Sovex" is derived from the words "soy vegetable extract." The soy part of it was real soy sauce, and still is. Glen has heard of the Hurlingers in Holly, Michigan, but they didn't call their company Sovex. Glen does not know the name of the Hurlinger's company, but he thinks he could find it in the company archives. In about 1961 Ruth Goodbrad, John's wife, began making Sovex in their basement in Collegedale, Tennessee. In the early years, Sovex was basically Ruth's business.

1399. **Product Name:** [TFA Soymilk].
Manufacturer's Name: Taiwan Farmer's Association.
Manufacturer's Address: Taiwan.
Date of Introduction: 1964.
Wt/Vol., Packaging, Price: Glass bottle.
New Product–Documentation: Shurtleff & Aoyagi. 1984. Soymilk Industry & Market. p. 95, 98. This is a cooperative of many small soymilk producers was established in 1946 and began to make soymilk in 1964, using a process introduced by Dr. Harry Miller. By 1980 the TFA had 6 soymilk plants in operation, producing 11.18 million bottles (each 260 ml) or 2.91 million liters. The largest, Lo-Tung produced 5,820,000 bottles, the smallest 350,000.

1400. **Product Name:** Vigorost. Renamed Vigoroast by 1965.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1964.
Ingredients: Wheat gluten, firm tofu and/or okara, whole peanut meal, seasonings.
Wt/Vol., Packaging, Price: 14 and 20 oz cans.
How Stored: Shelf stable.
Nutrition: Protein 19.4%, fat 8.6%, carbohydrates 12.3%, ash 2.1%.
New Product–Documentation: Madison Foods. Division of Worthington Foods, Inc. 1964. July 1. Wholesale price list–order blank. Lists Vigorost.

Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Vigoroast [sic, Vigorost] contains 12.70% protein, 8.00% fat, and 15.60% carbohydrate. One serving, ½-inch slice, weighs 80 gm.

1401. Jones, Dorothea Van Gundy. 1964. The soybean cookbook: Adventures in zestful eating. New York, NY: Gramercy Publishing Co., a divison of Crown Publishers Inc. Paperback published by Arco Publishing Co. Inc. xii + 240 p. Foreword by Ruth Stout. Index. 21 cm.
• ***Summary:*** This lacto-ovo-vegetarian cookbook is identical to the 1963 edition published by Devin-Adair except: (1) Mildred Lager, who died in Aug. 1960, is no longer listed as the author. Note: Mildred's husband, Ed Jones, married Dorothea Van Gundy, the present author. (2) The dust jacket is white, yellow, green and black on a blue background. A face, made of yellow and green soybeans, is wearing a chef's hat. (3) The publisher of the hardcover edition is now Gramercy rather than Devin-Adair. The copyright date (written in hard-to-read Roman numerals) is 1963, the same as the Devin-Adair edition. The date of publication is not given, but it must have been after 1963. We have taken the liberty of giving it as 1964. (4) The title of the second preface has been changed to "Preface to the revised edition" from "Preface to the 1963 edition." Both were written by Dorothea Van Gundy Jones of Arlington, California. Address: Arlington, California.

1402. Lager, Mildred; Jones, Dorothea Van Gundy. 1964. Suggestions for the arthritic. Recipes and menus. Riverside, California: Mrs. E.S. Jones. 68 p. 22 cm.
• ***Summary:*** Contents: Part I. Arthritis–The result of many conditions: Types of arthritis, causes of arthritis, suggestions, foods for the arthritic, my own case. General outline of the diet: Juice diet, limited diet, general diet. Other suggestions: Mental attitude, comments 1957, comments 1961. Part II. Menus. Carbohydrate content of fresh fruits. Carbohydrate content of dried fruits. Carbohydrate content of fresh vegetables. Recipes.

Mildred wrote that proper diet was the greatest factor in her recovery from arthritis. Based on her own experience and that of many others who she helped, she strongly opposed the use of dairy products, and thus used dairylike soy products in their place, especially soymilk, tofu, and soy flour or grits.

Mildred wrote in Aug. 1957 that it has been 32 years since she began her battle with arthritis. In a Feb. 1961 update to this book Dorothea wrote that Mildred died on 25 Jan. 1960. "Hers was a very remarkable life in that while still in her teens she was told, after examination at a noted medical clinic, that she had incurable arthritis and would never walk again, her feet and legs being completely ankelosed at that time. In spite of this verdict Mildred went home with a determination to show those doctors they were wrong, and show them she did, for before long she was back on her feet again. You already know her story. For the next forty years she battled arthritis, never quite winning but keeping it under control to the extent that she lived a

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normal life and made a remarkable contribution to the field of nutrition as, health food store owner and operator, author, lecturer, radio commentator and dietary consultant. She taught many arthritics how to overcome their handicaps, and if that was not possible, how to live with them. Her life made a real contribution and she left many friends as a result." Address: Riverside, California.

1403. Schwarz, Richard William. 1964. John Harvey Kellogg: American Health Reformer. PhD thesis in modern history, University of Michigan. vi + 504 p. 23 cm. [234 + 1,308 footnotes]

• ***Summary:*** This is one of the finest examples of recent Adventist scholarship. John Harvey Kellogg was born on 26 Feb. 1852 in rural Tyrone Township, Livingston County, Michigan. His parents were John Preston Kellogg and Ann Stanley, his second wife. His birth was spaced almost midway between those of his seven half- and eight full brothers and sisters. Contents: Preface. 1. The making of a health reformer. 2. "What manner of man." 3. Biologic Living: The Kellogg "Gospel of Health." 4. Kellogg and the Battle Creek Sanitarium. 5. Lecturer, author, publisher. 6. Surgeon and inventor. 7. His brother's keeper. 8. Kellogg's break with the Adventist church. 9. Food manufacturer and eugenist. 10. Concluding years. Bibliography: Primary sources (Manuscript collections, books by John Harvey Kellogg, articles by John Harvey Kellogg, newspapers and periodicals, official reports and records, interviews, other primary sources, secondary sources).

Concerning the invention of peanut butter: (p. 283-84): "Another important item in the modern American diet first introduced by Dr. Kellogg was peanut butter. Shortly after 1890, John Harvey had a quantity of roasted peanuts ground up into a paste for use by patients who had difficulty in masticating nuts well enough to digest them properly. Later the doctor decided that roasting caused the fat content of the nuts to begin to decompose and that this irritated the digestive organs. From that time forward Sanitarium peanut butter was made from nuts which had been steam-cooked rather than roasted. Kellogg devised a variety of other nut butters which he claimed were 'sweeter, more palatable, and more digestible' than regular butter. He directed that these nut butters be used as shortening in the preparation of all baked goods produced at the Sanitarium. John Harvey made no attempt to control through patents the production of either peanut butter or any of his other nut butters. He announced that he believed that these were products that 'the world ought to have; let everybody that wants it have it, and make the best use of it.'" Address: Univ. of Michigan.

1404. Vollmer, Marion W. 1964. Food: Health and efficiency. Lessons in nutrition and healthful food preparation. Revised ed. Nashville, Tennessee: Southern Publishing Association. 136 p. 23 cm.

• ***Summary:*** In this Seventh-day Adventist vegetarian cookbook, soy-related recipes include: Farmer soy breakfast hash (with Proteena, p. 34). Granola (with soy flour, p. 34). Bit o' soy waffles (with soy flour, p. 35). Cashew milk (p. 52). Soy nut milk (with soy milk powder, almonds & cashews, p. 52). Baked soybeans (with cooked whole soybean, p. 62). Gluten–how to prepare and serve it (incl. Gluten stroganoff, gluten cheeseburgers, 64-67). Soy cheese–how to make and serve it (tofu made from full fat soy flour and curded with lemon juice, p. 67-68). Soy cheese loaf (with tofu, p. 69). Soy cheese croquettes (with tofu, p. 69). A note on p. 69 states: "Tofu is fresh soybean curd. Sold in blocks under water in Oriental and some other markets. Canned soy cheese called Vegechee, Cheez-o-Soy, etc., may be substituted." Note: An earlier edition was published in 1954.

1405. White, Ellen G. 1964. Life at its best. Mountain View, California: Pacific Press Publishing Assoc. 314 p. Illust. Index. 17 cm.

• ***Summary:*** This book is comprised of major selections from Ellen G. White's book *The Ministry of Healing,* which was first published in 1905.

1406. Wokes, F.; Ellis, Frey R. 1964. Vitamin B-12 deficiency and serum cholesterol levels in strict vegetarians. In: Proceedings of the Sixth International Congress of Nutrition. Edinburgh and London: E. & S. Livingstone Ltd. xv + 683 p. See p. 508. Held 9-15 Aug. 1963 at Edinburgh, Scotland.
Address: Vegetarian Nutritional Research Centre, Garston, Watford, Herts. [Hertfordshire], England.

1407. James, W.S. 1965. The Vegetarian Nutritional Research Centre, 1959-1964. *British Vegetarian.* Jan/Feb. p. 29-32.

• ***Summary:*** Discusses the history and activities of the Centre, Wanderlac and Velactin, Frank Wokes, N.W. Pirie, Cyril Vesey, vitamin B-12, leaf proteins, etc.

The article begins: "Since the Research Centre was inaugurated in Stanborough Park near Watford in 1959, I have, as a member of its scientific sub-committee, been in close contact with its activities of which the following is a brief summary.

"Scientific investigations must be based on much previous experience. The Research Centre was fortunate in starting in 1959 under the guidance of Dr. Frank Wokes with over thirty years' experience of nutritional research especially on vegetarian foods. In 1958 [sic, 1959] this culminated in the marketing of the first British vegetable milk Wanderlac, now called Velactin (A. Wander Limited). At the inaugural meeting of the Research Centre there were several vegetarian experts whose investigations during the previous ten to fifteen years had done much to help directly

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or indirectly in the development of Wanderlac. These included Dr. W.W. Payne and Dr. Cyril Pink, who carried out clinic trials on babies at Great Ormond Street Children's Hospital and at the Vegetarian Nursing Home, Blackheath, respectively. Dr. Lester Smith, F.R.S., whose discovery of vitamin B-12 in 1948 gave a clue to the successful use of vegetable protein, was also present. As the Royal Society's adviser to the research project on vitamin B-12 in Stanborough School, in which the Research Centre has played a leading part, Dr. Lester Smith has taken increasing interest in its work.

"In October, 1959, the Research Centre helped to arrange a meeting in Manchester on leaf proteins, addresses being given by the leading expert Mr. N.W. Pirie, F.R.S., and by Dr. Wokes, who had for some years previously been studying these problems with Mr. Pirie."

"When the Research Centre started in 1959 its administrative headquarters were at Stanborough School where the headmaster, Mr. Richard Syme, its chairman until February, 1961, and his colleagues gave great help. Mr. Cyril Vesey, B.Sc., head of the school's science department, first functioned as Secretary and as Treasurer, but towards the end of 1960 handed the latter duties over to Mr. Ted Cox. Mr. Vesey, as well as taking an active part with Dr. Wokes and his son Richard in establishing the research laboratory, remained Secretary until 1964, when his secretarial duties were taken over by Mr. Ronald Luxton, another member of the school science department. Mr. Harry Leonard, B.A., a third member of the school staff, served as Committee Chairman in 1961 and again in 1963-1964.

"Steady increase in the Research Centre's activities showed the need for its own headquarters. In 1961 these were established at Dr. Wokes' residence, on the outskirts of Stanborough Park, close to the research laboratory. They contain the registered office of the Centre, also a library housing its books and records, providing a unique collection of information on vegetarian nutrition." Address: M.Sc., Chairman.

1408. Wynder, Ernst L.; Lemon, F.R.; Mantel, N. 1965. Epidemiology of persistent cough. *American Review of Respiratory Disease* 91(4):679-700. April. [30 ref] Address: 1. Div. of Environmental Cancerigenesis, Sloan-Kettering Inst., New York, NY; 2. Dep. of Preventive Medicine, School of Medicine, Loma Linda Univ., Loma Linda, California; 3. National Cancer Inst., National Institutes of Health, U.S. Public Health Service, Bethesda, Maryland.

1409. Jones, Dorothea Van Gundy. 1965. Nutritionist Jones praises low-fat foods of Japan: To Tokyo for tofu. *Today's Food* (*Loma Linda Foods, Riverside, California*) 10(1):4-6. Spring.
• ***Summary:*** In the fall of 1964 Dorothea was invited by the American Soybean Association to travel to Tokyo, Japan, to participate in a soybean seminar and fair. It was held in August and sponsored jointly by the U.S. Government and the American Soybean Association. She also lectured and demonstrated the use of soybeans in human nutrition. This article describes the trip. Part of her time was taken up with television, radio, and newspaper interviews. Miss Kojima went along to interpret. On a side trip to rural Japan, they had the privilege to stay in a Japanese Inn. Photos show: (1) Nutritionist Dorothea Van Gundy Jones demonstrates Western cookery at a stove while Soybean Institute Vice-President Miss Kojima translates for the audience. (2) Ingredients for making sukiyaki (incl. Loma Linda Tender-Bits and Loma Linda Soy Sauce). (3) Dorothea Jones and her husband standing behind ace carvings at a banquet.

1410. Miller, Harry W. 1965. Meeting the world's nutritional needs with soy milk. *Soybean Digest.* May. p. 19-21.
• ***Summary:*** In East Asia, milk is in short supply and expensive. A replacement made from soybeans has proved acceptable both tastewise and nutritionally. Moreover, animals are not an efficient means of producing protein. In East Asia, soybeans for food use have traditionally been soaked and then milled. Thus a "wet milling operation" is used instead of dry milling, as to make flour. "For adult use, they have built up a number of soy protein dishes, called 'meat without bones'. However they have not taken into consideration the nutritional needs of infants and growing children, and malnutrition is seen everywhere in these developing countries."

"In Japan, 30 pounds per capita of soybean are consumed as food but to provide soy milk for infants and children another 15 pounds per capita need to be added." For soy milk processing two systems are in use: the small community soy milk plant (the fresh milk may be dispensed from the conventional milk can without bottling, thus lowering the cost) and the large commercial bottling plant. "In Hong Kong, soy milk is made, bottled, and distributed everywhere in the colony for 3½ cents for a 7-ounce bottle. It has the largest sale of any bottled beverage in the colony... In Hong Kong are two factories of the most modern type, with upwards of 40 large delivery beverage trucks, under the genius and leadership of K.S. Lo, general manager. These plants daily manufacture some 25,000 cases each containing 24 bottles of soy milk [i.e. 600,000 bottles/day]. These are delivered to hospitals and schools, and this milk is on sale at all beverage places..." In Singapore, in Bangkok, Thailand, and in Manila, Philippines, soy milk is also made and well accepted. In Formosa, where 2-3 years ago there was only one soy milk plant in Taipei, today more than a dozen rural pilot plants have sprung up all over the country.

Photos show: (1) A bottling machine at a soy milk plant in Hong Kong. (2) Boy scouts in Hong Kong drinking bottled soy milk. Address: M.D., Director Emeritus,

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International Nutrition Research Foundation, Arlington, California.

1411. Worthington Foods, Inc. 1965. New food concepts made with Fibrotein (Leaflet). Worthington, Ohio. 2 p. May 15. Single sided. On letterhead. 28 cm.
• ***Summary:*** Contents: What is Fibrotein? Varieties of simulated meats made from Fibrotein. Form in which Fibrotein meat is available. Applications and uses of Fibrotein. Advantages of Fibrotein. Food value of Fibrotein. Price of Fibrotein. For further information. Address: 900 Proprietors Rd., Worthington, Ohio 43085. Phone: (614) 885-9511.

1412. Thrapp, Dan L. 1965. Thousands owe lives to doctor's soybean "milk." Noted surgeon nutritionist, now 86, devised formula as missionary in 1925 [Dr. Harry Miller]. *Los Angeles Times.* July 31. p. 19. Saturday.
• ***Summary:*** "Starving babies, often cast out to die because the parents have no way to feed them, inspired Dr. Miller to undertake his research [on milk from soybeans 40 years ago]... Today in Hong Kong about 25,000 cases of 24 bottles in a case are delivered daily... In America, the use of soybean formula for infants is growing rapidly–at a rate of 15-20% a year. Dr Miller has seen plants to create his product rise in China, Japan, Formosa, the Philippines, Singapore, Thailand, and, of course, Hong Kong. 'The nutritional qualities of the soybean are a gift to the world,' he said, 'and I have not copyright.' He said that U.S. studies showed that 14% of the people here are allergic to some degree to cow's milk and 7% of new-born infants get severely ill from cow's milk formula. There is no allergy rate from soybean milk, he said... Since 1960 he has been in Hong Kong raising money for two hospitals." One served refuges from Red China. As a surgeon, he has performed more than 3,000 goiter operations during his lifetime. Address: Times religion editor.

1413. De, Sasanka S. 1965. The present state of protein-rich food development in Asia and the Far East. *J. of Nutrition and Dietetics* (*India*) 2(3):166-76. July. [23 ref]
• ***Summary:*** Gives an excellent account of soymilk production in Asia during the mid-1960s and a brief history of the FAO/WHO/UNICEF/Protein-rich food program. "The First International Conference sponsored by FAO, WHO and Josiah Macy Jr. Foundation (New York) held in Jamaica in 1953, discussed the biological, technical and pathological aspects of protein malnutrition. The next Conference on 'Human protein requirements and their fulfillments in practice' held in Princeton in 1955 under the same sponsorship, gave detailed consideration to the testing of new protein rich foods before their use in child feeding was recommended.

"The Protein Advisory Group (PAG) was established by the Director-General of WHO in 1955 to 'act on behalf of WHO in rendering advice to FAO and UNICEF on the safety and suitability for human consumption of proposed new protein-rich foods.' The PAG... became a tripartite FAO/WHO/UNICEF Protein Advisory Group in 1961."

Soybean milk: "In 1939, K.S. Lo established a firm known as 'Hong Kong Soyabean Products' to produce sterilized bottled soya milk. The two plants of the firm in Hong Kong produce 12,000 cases (24 x 7-oz. bottles per case) a day."

Also discusses miso, natto, tempeh, full-fat soya flour, soya presscake and meal, groundnut protein isolate. Address: Regional Office for Asia and Far East, FAO, Bangkok, Thailand.

1414. Todhunter, E. Neige. 1965. Biographical notes from the history of nutrition: Lenna Frances Cooper–February 25, 1875–February 23, 1961. *J. of the American Dietetic Association* 47(1):28. July.
• ***Summary:*** "To be responsible for the birth of a new profession, to have been a teacher, to be a dean of home economics, a dietitian, the first head of the Army dietitians (1918), an author of books on food and dietetics, and recipient of honorary degrees–these are not everyday accomplishments. But these were the achievements of Lenna Cooper, whose ancestors were used to being among the first to do things. The first members of the Cooper family in this country arrived in the early seventeenth century with George Calvert who founded Maryland. The Coopers settled first in Virginia, then in the Carolinas. Later generations pioneered the settlement of Springfield, Illinois, and others 'moved westward to Kansas. There Lenna Frances Cooper was born on February 25, 1875, when there were still many hazards to life and existence in that young state.

"Her early education was in a country school; then, when the family moved to town, she attended high school in Hutchinson, Kansas. Needing money for further education, she taught in a country school for two years and then went to Battle Creek, Michigan, where her brother was a doctor. There, she enrolled in the nurses' course at Battle Creek Sanitarium. Mrs. Kellogg, the wife of Dr. John Harvey Kellogg, the famed vegetarian, encouraged Miss Cooper to go to the Drexel Institute in Philadelphia to study cookery.

"When Miss Cooper completed the course and returned to Michigan, Dr. Kellogg appointed her Chief Dietitian at the Battle Creek Sanitarium. Within the limitations of the foods permitted, Miss Cooper worked wonders in serving attractive food. Then Dr. Kellogg opened a training school for dietitians and appointed Miss Cooper as its head (1906); this later became part of Battle Creek College, and Miss Cooper served as Dean of Home Economics until 1926. She was an inspiring teacher, and loyal alumnae of Battle Creek College still gather regularly at the Annual Meeting of The American Dietetic Association."

"Her first [sic] book, *How to Cut Food Costs* (1917),

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met a wartime need. Soon she dreamed of a text in dietetics and invited the help of co-authors to produce *Nutrition in Health and Disease* (1928), which has gone through so many editions and remains a basic text in the field, familiarly referred to more often as 'Cooper-Barber-Mitchell-Rynbergen' than by its title."

Note: Her first book, published in 1913, was *The New Cookery: A Book of Recipes, Most of Which Are in Use at the Battle Creek Sanitarium* (v + 298 p.).

"Lenna Cooper... is buried at Memorial Park Cemetery, Battle Creek, Michigan." Address: PhD, Dean, School of Home Economics, Univ. of Alabama, Tuscaloosa.

1415. Winters, Rhett Y. 1965. Charles William Dabney: Educator, administrator and scientist. *North Carolina State University at Raleigh, School of Agriculture and Life Sciences, History Series.* No. 2. 23 p. July. [6 ref]

• ***Summary:*** A photo inside the front cover shows Dr. Dabney. He was born in Hampden-Sydney, Virginia on 19 June 1855. He graduated at Hampden-Sydney College in 1873 with the degree of Bachelor of Arts. He entered the University of Virginia in 1874, and remained for 3 years studying chemistry, physics, and mathematics. He then went to Germany and studied at the Univ. of Goettingen, where he studied under the pioneers of agricultural chemistry and in 1880 he earned a PhD degree in organic and agricultural chemistry, cum laude, in 2 years. In Europe, Dabney also studied at the Agricultural Institute at Goettingen and added to his knowledge of scientific field work in agriculture by studying the reports of the Director of the Rothamsted Farm in England. During holidays he attended lectures at Berlin, under Friedrich Woehler [lived 1800-1882], then considered the foremost chemist in Germany and, with Justus von Liebig [lived 1803-1873], one of the two founders of the field of agricultural chemistry.

Dr. Dabney returned to America in 1880 with the personal goal of helping to rebuild the South, and especially its natural and human resources, which had been devastated by the Civil War (1861-65). That year he was offered the position of professor of chemistry at the University of Virginia, but instead in Nov. 1880 he accepted a position as the second director of the North Carolina Agricultural and Fertilizer Control Station (established in 1877) and State Chemist. During the 7 years that he held this position, he carried out his work, with emphasis on fertilizers and soils, with vigor and professional skill. "The soybean received its first study at this station, as to varieties, soil, fertilizers, cultivation, and yield. Chief interest in the bean at this time was as a livestock feed and parts of the plant were compared with cow peas and other fodders." Note 1. In the Station's 1883 Annual Report, Dr. Dabney wrote a detailed section titled "The soja bean–*Soja hispida"* (p. 116-27).

Note 2. This is the earliest scientific publication seen on the soybean in North Carolina (April 2002) and the earliest publication seen on soybeans from a North Carolina Agricultural Experiment Station. It is also the earliest document seen (April 2002) that clearly referred to the cultivation of soybeans in North Carolina. This document contained the earliest clear date seen for the cultivation of soybeans in North Carolina (1882).

Dr. Dabney saw the need for establishing a separate land-grant college in North Carolina, apart from the University in Chapel Hill, and took an active role among the leaders of the state who promoted the approval of the legislation of 1887 to establish in Raleigh the North Carolina College of Agriculture and Mechanic Arts (known today as North Carolina State University). In fact, in early 1887 he wrote the bill that established the college. The bill was enacted into law on 3 March 1887 and the college opened on 3 Oct. 1889. Dabney Hall, which houses the Department of Chemistry, was later named in his honor.

Dr. Dabney did not remain in the state to see the opening of A&M on October 3, 1889. In 1887 he became President of the University of Tennessee (Knoxville) and served there until 1904. "While serving as president of the University of Tennessee, Dr. Dabney accepted President Grover Cleveland's appointment as Assistant Secretary of Agriculture and was granted temporary leave from the University [he was gone from 12 Dec. 1893 to 27 March 1897]. When McKinley succeeded Grover Cleveland as President [in 1897], he invited Dr. Dabney to remain as Assistant Secretary, and as an added inducement the appointment carried the title Director of Scientific Research with continuing status when new administrations came into office." While serving as Asst. Secretary of Agriculture, Dabney introduced soybeans to Seventh-day Adventist soyfoods pioneer Dr. John Harvey Kellogg of Battle Creek, Michigan.

From 1904 until 1920 Dr. Dabney was President of the University of Cincinnati. Honorary degrees were conferred upon Dabney by Davidson College in 1899, Washington and Lee University in 1900, Yale University in 1901, Johns Hopkins University in 1902, and the University of Cincinnati in 1937.

Note 3. Dr. Dabney died on 15 June 1945 (Friday) of acute coronary thrombosis at age 90 in a hospital in Asheville. He was buried in Cincinnati, Ohio. He was survived (in 1945) by two daughters, Mrs. Alexander Thompson and Mrs. John Ingle. For about 3 years Dr. Dabney had maintained a summer home in Montreat, near Asheville, North Carolina. During the winter, he resided at Winter Park, Florida, and was en route from there when he suffered the fatal attack. Address: Director, North Carolina Agric. Exp. Station, 1925-1937.

1416. Buller, Allan R.; Klis, John B. 1965. Spun soy protein foods get supermarket sales test: Duplicating meat fibers, protein value. Improved meat substitutes, recently

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established in health food stores, win chain-store distribution. *Food Processing* (*Chicago*) 26(9):115-17, 120. Sept.
• ***Summary:*** "Health food stores have been the traditional outlets for meat-alternate products, but Worthington Foods, Inc. Worthington, Ohio, has taken the initial steps toward moving these products into general distribution.

"Using spun soy protein fiber as the basic ingredient, Worthington Foods has developed a full line of products that look, taste, and chew like chicken, pork and beef products. Test marketing of two items is being done in three chains in Columbus, Ohio–Alber's, Big Bear, and Kroger. The two spun soy protein foods, Wham, a ham-like product, and White-Chik, simulated white meat chicken, are both being well received by consumers in these marketing tests... Use of the fibers in foods is subject to a patent owned by Ralston Purina Company. In Columbus, both Wham and White-Chik are priced at $0.69 for an 8-oz package. New foreign distribution, principally in Norway and Sweden, has already added some volume."

A large photo bears the caption "Worthington's line of spun soy protein meat-like products are packed in canned, frozen, and dehydrated forms." Frozen products is thin paperboard boxes include White-Chik, Fri-Chik, Prime, and Wham. Canned moist products include Veja-Links, Soyameat (many flavors), Saucettes. Meat Loaf Mix is a dry canned product. Prime is in a plastic pouch.

A newspaper ad for frozen Wham stresses the product's low fat content ("65% less fat than cured ham"), convenience, and the fact that it contains no meat." A photo shows a rack of meatless Prosage, which resembles a pork sausage made by Worthington, ready for quick freezing. Prosage does not shrink when fried.

"Edible spun soy protein fibers, sold under the trademark Fibrotein, are supplied in fresh frozen and dehydrated forms to the food processing industry by Worthington Foods, Inc., 900 Proprietors Rd., Worthington, Ohio 43085. The company also supplies imitation meats made from Fibrotein in fresh, frozen and dehydrated forms. The imitation meats are available in slices, cubes, chips, granules, round rolls, square logs and in other shapes and sizes."

Note: This is the earliest English-language document seen (Jan. 2004) that contains the term "imitation meats" (with any combination of quotation marks). Address: 1. General Manager, Worthington Foods, Inc; 2. Assoc. Editor.

1417. **Product Name:** Wham (Meatless Ham) [Slices, or Rolls].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1965 September.
Ingredients: In 1965: Specially processed soybean protein (Fibrotein), corn oil, egg albumen, hydrolyzed vegetable proteins, salt, lactose, brown sugar, monosodium glutamate, vegetable gum, flavorings, U.S. certified color. In 1971: Soybean protein, corn oil, albumin [egg protein], hydrolyzed vegetable protein, corn syrup solids, salt, MSG, flavorings, U.S. certified color.
Wt/Vol., Packaging, Price: 8 oz paperboard box or can.
How Stored: Frozen or canned (Sept. 1965).
New Product–Documentation: Soybean Blue Book. 1965. p. 112. Buller & Klis. 1965. Food Processing. 26(9):115-17, 120. Sept. "Spun Soy Protein Foods Get Supermarket Sales Test." Wham, a ham-like product, is made with spun soy protein fiber. A photo shows the thin paperboard box in which Wham is sold, frozen, and the large can in which it is sold in canned form. An ad announces that Wham contains 65% less fat than cured ham. "What a menu-maker for Lent and meatless days."

Ziemba. 1966. Food Engineering. May. p. 82-93. "Let soy proteins work wonders for you."

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 164. Lists the ingredients in "Wham (Worthington)." This is an institutional product.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned or frozen product based on spun soy protein fiber. The frozen slices are available in 8 oz. or 24 oz. sizes.

Photo. Manufacturer's catalog. 1984, undated. Frozen Products.

Label (undated) for "New Wham imitation ham" sent by Dr. Walter Wolf. 2000. July. Since the first ingredient is Fibrotein (spun soy protein fibers), this package is probably from about 1965. Red and white on dark blue. A large color photo on the front panel shows slices of Wham served a white serving dish surrounded by sliced pineapple rounds with a red cherry at the center of each. On the front panel: "Contains no meat. 65% less fat than cured ham."

1418. **Product Name:** Fibrotein (Spun Soy Protein Fibers) [Fresh, Frozen, or Dehydrated].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1965 September.
New Product–Documentation: Buller & Klis. 1965. Food Processing. Sept. p. 117. "Edible spun soy protein fibers, sold under the trademark Fibrotein, are supplied in fresh frozen and dehydrated forms to the food processing industry by Worthington Foods, Inc., 900 Proprietors Rd., Worthington, Ohio 43085. The company also supplies imitation meats made from Fibrotein in fresh, frozen and dehydrated forms. The imitation meats are available in slices, cubes, chips, granules, round rolls, square logs and in other shapes and sizes."

Ziemba. 1966. Food Engineering. May. p. 91. "Let soy proteins work wonders for you." "Worthington's simulated

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meats made from spun soy protein fibers (Fibrotein) come in cubes, slices, chips, granules, rolls, square logs, or other shapes and sizes. They are in fresh, frozen, or dehydrated forms."

Soybean Digest. 1969. Nov. p. 44. "Since 1966, Worthington Foods has manufactured its own spun protein, which it formerly purchased from Ralston Purina Co., for its meatless meats."

Shurtleff & Aoyagi. 1983. History of Worthington Foods. p. 8.

1419. **Product Name:** Veja-Links (Made with Spun Soy Protein Fibers–Canned or Frozen).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 614-885-9511.
Date of Introduction: 1965 September.
Wt/Vol., Packaging, Price: Can.
How Stored: Canned or frozen.

New Product–Documentation: Buller & Klis. 1965. Food Processing. 26(9):115-17, 120. Sept. "Spun Soy Protein Foods Get Supermarket Sales Test." Photos show: (1) The can in which Veja-Links are sold; the caption says that they contain spun soy protein fibers. (2) Two women packing Veja-Links into cans. The caption states that these meatless frankfurters are packed in both canned and frozen forms.

Hartman. Ziemba. 1966. Food Engineering. May. p. 82-93. "Let soy proteins work wonders for you." A photo shows the package.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. Veja-Links is a canned frankfurter-type product.

American Soybean Assoc. 1974? "Soybeans: From America's fertile soils the world's versatile protein resource." A photo shows the can.

1420. **Product Name:** Prime Vegetable Burger. Renamed Prime Vegetarian Burger by 1971.
Manufacturer's Name: Battle Creek Foods. A Div. of Worthington Foods.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 614-885-9511.
Date of Introduction: 1965.
Ingredients: Wheat protein [wheat gluten], water, yeast extract, salt, soy sauce, Brewer's yeast, MSG, seasonings, algin, caramel color.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Prime Vegetable Burger contains 15.60% protein, 0.20% fat, and 3.70% carbohydrate. One serving, ½-inch slice, weighs 66 gm.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. Lists the ingredients in "Prime Vegetarian Burger (Battle Creek)."

1421. **Product Name:** Loma Linda Soyagen (Milk Free Soy Beverage Powder) [Carob].
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505. Phone: 714-687-7800 (3/88).
Date of Introduction: 1965.
Ingredients: Soy solids, brown sugar, soy oil, carob powder, soy lecithin, salt, tri-sodium citrate, calcium carbonate, vegetable mono- and di-glycerides, artificial and natural (vegetable) flavors, vitamins (ascorbic acid, beta-carotene, DL-alpha tocopheryl acetate, vitamin A palmitate, cholecalciferol, phytonadione, cyanocobalamin).
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable.
Nutrition: Per 1 oz powder (approximately ¼ cup): Calories 140, protein 6 gm, carbohydrate 16 gm, fat 6 gm, cholesterol 0 mg, sodium 160 mg, potassium 290 mg.

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New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1965; the label is dated "3/77"–March 1977. A less sophisticated version of this product with the same name appeared in 1948.

A color photo (taken in Sept. 1980 in California) shows different flavors and sizes of canned Soyagen and Soyalac.

1422. **Product Name:** Loma Linda Dinner Rounds.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1965.
Ingredients: In 1971: Wheat protein [wheat gluten], water, vegetable oil, soy flour, oat flour, dried yeast, salt, onion powder, MSG, dextrose, lecithin, caramel.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Dinner Rounds contain 15.91% protein, 8.95% fat, and 6.26% carbohydrate. One serving, 1 patty, weighs 40 gm.

Loma Linda Food Co. 1969. "Wholesale Price List." Dinner Rounds are now sold in 20 oz cans.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. Lists the ingredients in "Dinner Rounds (Loma Linda)."

1423. **Product Name:** Kreme-O-Soy, and Infa-Soy (Hypoallergenic Baby Formula).
Manufacturer's Name: Nutrition International Corp. (Formerly Madison Foods).
Manufacturer's Address: Box 415, Madison, TN 37115.
Date of Introduction: 1965.
New Product–Documentation: Soybean Blue Book. 1965. p. 115. Also listed in 1970. Note: Kreme-O-Soy was soymilk.

1424. **Product Name:** Cheze-O-Soy.
Manufacturer's Name: Nutrition International Corp. (Formerly Madison Foods).
Manufacturer's Address: Box 415, Madison, TN 37115.
Date of Introduction: 1965.
Ingredients: In 1971: Soybeans, vegetable oil, tomato paste, onion, monosodium glutamate, hydrolyzed vegetable protein, seasonings, water.
New Product–Documentation: Soybean Blue Book. 1965. p. 114. Note new spelling of product name.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 160. Lists the ingredients in "Cheze-o-Soy (Madison)."

1425. **Product Name:** Soy Protein Concentrates, and Isolates (Promine, Edi-Pro).
Manufacturer's Name: Worthington Foods, Inc. (Handler, not manufacturer).
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1965.
New Product–Documentation: Soybean Blue Book. 1965. p. 112. They also now operate International Nutrition Laboratories. *Soybean Digest Blue Book.* 1970. p. 118. Name of INL is now Nutrition International Corp., Box 415, Madison, Tennessee 37115.

1426. **Product Name:** Saucettes (Meatless Sausage-like Links).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1965.
Ingredients: In 1971: Wheat protein [wheat gluten], water, corn oil, soya protein (Fibrotein spun soy protein fibers), albumin [egg protein], dextrose, salt, hydrolyzed vegetable protein, MSG, seaweed extractive, flavorings, U.S. certified color.
Wt/Vol., Packaging, Price: 19 oz can. Retails for $2.85 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Note: This product was originally introduced by Battle Creek Food Co. in about 1936. Buller & Klis. 1965. Food Processing. 26(9):115-17, 120. Sept. "Spun Soy Protein Foods Get Supermarket Sales Test." A photo shows the small can in which Saucettes are sold. A caption states that the product contains spun soy

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protein fibers. Soybean Blue Book. 1965. p. 112. Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 164. Lists the ingredients in "Saucettes (Worthington)." This is an institutional product.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned frankfurter type product based on spun soy protein fiber.

Shurtleff & Aoyagi. 1983. History of Worthington Foods. p. 11.

1427. **Product Name:** Fri-Chik (Meatless Chicken Based on Spun Soy Protein Fibers–Frozen).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1965.
Ingredients: Water, textured soy protein isolate, egg whites, soybean and/or corn oil, flavorings (hydrolyzed vegetable protein, onion, turmeric, spice extractives, disodium guanylate, disodium inosinate), modified corn starch, salt, monosodium glutamate, carrageenan, niacinimide [niacinamide], iron (as ferrous sulfate), vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), artificial color, vitamin B-2 (riboflavin), vitamin B-12.
Wt/Vol., Packaging, Price: 25 oz can. Retails for $4.89 (12/80). 12.5 oz can retails for $2.35 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Buller & Klis. 1965. Food Processing. 26(9):115-17, 120. Sept. "Spun Soy Protein Foods Get Supermarket Sales Test." A photo shows the thin paperboard box in which Fri-Chik is sold, frozen.

Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Frozen Fri-Chik contains 25.61% protein, 25.06% fat, and 2.04% carbohydrate. One serving, 2 pieces, weighs 84 gm.

Hartman. 1966. Food Technology. 20(1):39-40. "Vegetarian protein foods." "The first textured soybean protein fiber product marketed in the U.S. is Worthington's frozen 'Fri-Chik,' an extruded formulation simulating a small fried portion of white chicken meat. This same formulation was next canned in a light gravy and called 'Soyameat–Fried Chicken Style,' and was also later marketed as frozen and canned 'White-Chik' in large rolls for slicing, dicing, etc. The approximate analysis of these simulated chicken products: protein 20-26%, fat 18-25%, and carbohydrate 2-3%."

Ziemba. 1966. Food Engineering. May. p. 82-93. "Let soy proteins work wonders for you." Photo of box. Consumer Reports. 1980. June. p. 357-65. The protein PER is 2.60. Sensory comments: Too moist. Perceived as

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chickenlike or spongelike.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. Contains no cholesterol. Certified Kosher/Pareve. Shelf life is approximately 3 years under proper storage conditions.

Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. 12.5 oz can. The main ingredients are now: Textured vegetable protein (soy protein isolate and concentrate), egg whites, soybean oil, corn oil, natural and artificial flavors from non-meat sources, salt, dextrose, vegetable gum, onion, turmeric, celery, niacin, iron, etc.

Talk with Dick Leiss, Director of R&D at Worthington Foods. 1993. June 30. This was an early product that contained spun soy protein fiber and was deep fat fried.

1428. **Product Name:** Vegetable Skallops (Regular, or Without Added Salt or MSG).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1965.
Ingredients: Regular: Skallops: Textured vegetable protein (Wheat gluten, soy protein concentrate). Broth: Water, salt, monosodium glutamate, L-lysine hydrochloride (an essential amino acid).
Wt/Vol., Packaging, Price: 20 oz (567 gm) can. Regular retails for $2.60, and "No salt or MSG" retails for $2.70 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Vegetable Skallops contain 16.80% protein, 0.60% fat, and 10.70% carbohydrate. One serving, 3 pieces, weighs 62 gm.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned fish-like product based on spun soy protein fiber.

Ad in Whole Foods. 1983. Sept. p. 45. in 20 oz. cans. This product and Vegetarian Burger are being promoted as "Salt Shakers." Both are available in versions with and without salt and MSG. For the hypertensive and sodium-conscious. A black-and-white photo shows the can and label. The text reads: "Contains no meat. A vegetable protein product. No added salt or MSG."

Products with Labels purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. The regular flavor is red, white, yellow, and blue. The "No added salt or MSG" is blue, black, and yellow on white.

Soyfoods Center Product Evaluation. 1992. Feb. 16. This product is delicious when prepared as follows: Drain, break large pieces into smaller ones, dust in wheat flour, dip in beaten egg, dust in Japanese bread crumbs (which are made without sugar, and are bigger and flatter than their Western counterparts), then deep fry. Serve with Japanese-style Tonkatsu sauce or tartar sauce.

Talk with Dick Leiss of Worthington Foods. 1993. July 30. This was an old Battle Creek Foods product. Dick is quite sure that it never contained spun soy protein fibers. It was also based on gluten.

1429. **Product Name:** Big Pat.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 614-885-9511.
Date of Introduction: 1965.
Ingredients: In 1971: Wheat protein [wheat gluten], mushrooms, dehydrated onion, pecan meal, salt, rolled oats, soy grits, sunflower seeds, MSG, garlic powder, hydrolyzed vegetable protein, starch, corn oil, natural extractive flavorings.

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New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1965. *Diet Manual. 2nd ed.* p. 104. Big Pat contains 21.80% protein, 8.00% fat, and 16.60% carbohydrate. A serving, 1 Pat, is 64 gm.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 160. Lists the ingredients in "Big Pat (Worthington)."

1430. Robinson, Dores Eugene. 1965. The story of our health message: The origin, character, and development of health education in the Seventh-day Adventist Church. 3rd ed. Nashville, Tennessee: Southern Publishing Assoc. 445 p. No index. 17 cm. First edition was 1943. 2nd ed. 1955. [100* ref]

• ***Summary:*** This book is perhaps the most useful and carefully documented history of health reform among Seventh-day Adventists. Sadly, however, it has no index. The author (a man) was Ellen White's personal secretary and grandson-in-law. Contents: 1. "The times of this ignorance." 2. Movements toward therapeutic reform. 3. Temperance and diet reforms (The American Temperance Society was organized in Boston, Massachusetts, on 10 Jan. 1826. It was the founders' hope "by light and love to change the habits of the nation, with regard to the use of intoxicating liquors." Several years passed before the goal switched from moderation to abstinence or "teetotalism.") 4. Joseph Bates, a health reformer ("In heart-searching preparation for the expected return of Christ," he resolved in Feb. 1843 to eat no more meat. He was the first Adventist to become a vegetarian.) 5. Health reforms among Seventh-day Adventists (Following Ellen White's vision in the autumn of 1848, the emphasis was on discontinuing use of tobacco, tea and coffee.) 6. The vision at Otsego, Michigan. 7. Early health literature. 8. Launching a campaign for health. 9. The popular dress reform. 10. The quest for moderation. 11. Days of affliction. 12. "Let us arise and build." 13. The ministry as teachers of health. 14. A lesson in institutional finance. 15. Lost confidence restored. 16. Opposing extreme views. 17. Reaching for high standards. 18. On to world leadership. 19. Uniting with the temperance forces. 20. Training for service. 21. Training of physicians. 22. For medical missionary service. 23. Launching a medical college. 24. Variant views arise. 25. Steps toward unity. 26. Final steps in separation. 27. A remarkable coincidence. 28. Rapid moves in southern California. 29. The call for a third sanitarium. 30. Purchase of Loma Linda property. 31. How the payments were met. 32. "An educational center." 33. "We wait for light." 34. A bold venture in faith. 35. Faith further tested. 36. Through "rivers of difficulty." 37. By the providence of God. 38. Retrospective and prospective. Appendix: Guiding principles in dress reform.

1431. Seventh-day Adventist Dietetic Assoc. 1965. Diet manual, utilizing a vegetarian diet plan. Revised edition. Loma Linda, California: Seventh-day Adventist Dietetic Assoc.

• ***Summary:*** The title page reads: "Prepared by the Department of Dietary Service, White Memorial Medical Center, Los Angeles, California. In cooperation with the Seventh-day Adventist Dietetic Association" (SDADA). Revised Edition, edited by Phyllis Acosta, M.S., Ardis Beckner, M.S., Esther Lee, M.S., Darlene Manullang, M.S., Martha Miller, M.S., and Elizabeth Wenz. It was published and distributed by the SDADA. All subsequent editions (1971 (later listed as 1970), 1975, 1978, 1982, 1990) were prepared by the SDADA.

A comprehensive loose-leaf handbook for the planning, selection, and coordination of vegetarian diets.

Table VI, titled "Protein, fat, and carbohydrate composition of some meat alternates" (p. 104), lists 39 product names alphabetically. Most (perhaps all; the names of the manufacturers are not given) are made by Seventh-day Adventist food companies, especially Loma Linda Foods, Worthington Foods, and Madison Foods. These products are: Big Pat, Burger, Chic-ketts, Chili, Cho-Pats, Choplets, Com-Pro, Dinner Cuts, Dinner Rounds, Entree, Frozen Fri-chic, Linketts, Little Links, Meatless Nu-steak, Madison Burger Miller's Main Course, Numete, Nuteena, Nut Meat, Prime Vegetable Burger, Proast, Proteena, Protose, Redi-Burger, Sandwich Spread, Soya Meat–Beef Like, Soya Meat–Chicken-like, Vegebits, Vegeburger, Vegechee, Vegecuts, Vegelona, Vegetable Skallops, Vegetable Steaks, Vegetarian Patties, Vegetarian Products, Vega-Links, Vigoroast, Zoyburger.

Note: This is the earliest English-language document seen (Nov. 2010) that uses term "Soya Meat" to refer to a meatless meatlike product made from soy. Address: Main Office, Box 75, Loma Linda, California.

1432. Worthington Foods, Inc. 1965? A food plan for fitness (Leaflet). Worthington, Ohio. 2 p. Undated. Front and back. 28 cm.

• ***Summary:*** This glossy color leaflet contains a "Daily food guide for growth, energy, maintenance and resistance." It recommends a vegetarian diet containing: 4 or more servings daily of fruits and vegetables. 3 or more servings daily from the milk and cheese group (incl. Soyamel–A Powdered Soy Milk). 2 or more servings daily of protein foods (incl. many canned or frozen Worthington products). 4 or more servings daily of breads and cereals. Limited servings daily of "Plus foods" such as oils and fats, sweets, desserts, etc.

On the back panel is a description of the vitamins and minerals needed in a healthy diet. Color photos show: Prime, White-Chik, Big Pats, Soyameat, Chili, Choplets, Veja-Links, Entrée, Prosage. Address: 900 Proprietors Rd., Worthington, Ohio 43085.

1433. Worthington Foods, Inc. 1965? Recipes: Delight the

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family with Worthington... "Foods of the future" today! (Brochure). Worthington, Ohio. 12 panels. Undated. Each panel: 21 x 10 cm.

• ***Summary:*** On the cover of this brochure, printed with dark blue ink on white, is a woman holding up an oval serving plate on which are round sliced meat-like products. The Worthington products called for in these recipes and shown in these photos are all made with Fibrotein, which Worthington's registered trademark used to refer to spun soy protein fibers. Photos shows five cans of Soyameat in Fried Chicken Style, Sliced Chicken Style with Gravy, Diced Chicken Style, Beef Style Slices with Gravy, and Diced Beef Style. They also show three frozen products in cartons: White-Chik, Fri-Chik, and Wham (like ham). Prime–Smoked & Chipped is in a plastic pouch, and Prosage is in a 1 lb sausage-shaped chub pack. Recipes are given for each. On the back panel is information about these products and Fibrotein, which is produced under U.S. Patent No. 2,682,466. Address: 900 Proprietors Rd., Worthington, Ohio 43085.

1434. Worthington Foods, Inc. 1965? Typical analyses–New Fibrotein products (Leaflet). Worthington, Ohio. 2 p. Undated. Front and back. 14 x 22 cm.

• ***Summary:*** This is a table, printed with black ink on glossy white paper, with 3 holes punched along one of the long sides. For each product is given the nutritional composition: Product name, serving size and weight of one portion, slice, link, etc., protein, fat, carbohydrate, ash, fiber, moisture, iron, calcium, sodium, calories, diabetic exchange list values.

Side 1: Worthington frozen products: Fri Chik, White Chik (roll), White Chik (diced), Prime (roll & sliced), Prosage, Veja Links, Wham (like ham).

Side 2: Worthington canned products–Soyameat label: Fried Chicken Style, Diced Chicken Style, Sliced Chicken Style, Beef Style with gravy, Veja Links.

Dehydrated product: Meat Loaf Mix. Address: 900 Proprietors Rd., Worthington, Ohio.

1435. Southern Union Conference of Seventh Day Adventists. 1966. Warranty deed. 4 p. Jan. 27. Unpublished manuscript.

• ***Summary:*** Note that during the year 1937 the name of the school was changed from the Nashville Agricultural and Normal Institute to Madison College. Yet as late as 1966 some officials still used the name "Nashville Agricultural and Normal Institute" (NANI). The warranty deed begins: "Whereas, Southern Union Conference of Seventh Day Adventists, the area governing body of the Seventh Day Adventist religious organization, has by proper resolution decreed that its affiliate, Nashville Agricultural and Normal Institute, a Tennessee Corporation, convey to another of its affiliates, to-wit: Kentucky-Tennessee Conference Association of the Seventh-Day Adventists, Inc., also a Tennessee Corporation, the hereinbelow described lands..."

The deed was signed by the president of NANI, H.H. Schmidt.

1436. Hardinge, Mervyn G.; Crooks, H.; Stare, F.J. 1966. Nutritional studies of vegetarians. V. Proteins and essential amino acids. *J. of the American Dietetic Association* 48(1):25-28. Jan. [12 ref]

• ***Summary:*** This study of lacto-ovo-vegetarians, pure vegetarians, and non-vegetarians found that all subjects consumed more than twice their minimum requirements of protein. "Summary and conclusions: The amounts of essential amino acids, as well as of cystine and tyrosine in the diets of vegetarians and non-vegetarians, have been calculated and compared. All groups met and generously exceeded twice their minimum requirement." Address: 1-2. Dep. of Pharmacology, School of Medicine, Loma Linda Univ., California; 3. Dep. of Nutrition, Harvard School of Public Health, Boston, Massachusetts.

1437. Hartman, Warren E. 1966. Vegetarian protein foods. *Food Technology* 20(1):39-40. Jan.

• ***Summary:*** "Early Worthington products bore the mark and influence of John Harvey Kellogg and the Seventh-Day Adventists. In 1866 the Adventists established the forerunner of the Battle Creek Sanitarium and the Battle Creek Food Company, in Michigan. Continuous experimentation with materials and methods to provide a wholesome palatable non-flesh diet led to the invention of breakfast cereals, peanut butter, cereal coffee substitutes, and decaffeinated coffee. It is not generally realized that these products, now a regular part of the diet of both meat-eaters and vegetarians, emanated from the vegetarian habits of the early Adventists."

"Until recently, the majority of the U.S. population was totally unaware of the so-called vegetarian protein food products, and the food industry gave them little more than passing attention. Undoubtedly, the greatest contribution to the present technology and status of vegetarian protein foods was that of Robert A. Boyer and his method of processing edible protein, first by solubilizing and then utilizing textile spinning techniques to orient the molecules in continuous filaments. Convinced of a future for vegetarian protein foods, Worthington obtained a license in 1957 under the Boyer patent..."

"In 1960, Worthington acquired Battle Creek Food Company, pioneer of the vegetarian protein foods industry. And in line with its modernization and diversification policy, Worthington has recently acquired Nutrition International Corporation and its subsidiary, Madison Foods, Tennessee. Prime interest focused on 'Infa-soy,' Nutrition International's highly palatable hypoallergenic liquid soy formula for infants. Another important addition to the Worthington complex is the new Research and Development Center...

"The first textured soybean protein fiber product

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marketed in the U.S. is Worthington's frozen 'Fri-Chik,' an extruded formulation simulating a small fried portion of white chicken meat. This same formulation was next canned in a light gravy and called 'Soyameat–Fried Chicken Style,' and was also later marketed as frozen and canned 'White-Chik' in large rolls for slicing, dicing, etc. The approximate analysis of these simulated chicken products: protein 20-26%, fat 18-25%, and carbohydrate 2-3%."

Note: This is the earliest English-language document seen (Dec. 2004) that uses the term "soybean protein fiber" to refer to edible spun soy protein fiber. Address: Worthington Foods, Inc., Worthington, Ohio.

1438. Johnson, Danetta. 1966. Spices and condiments. Prepared for Nutrition Seminar, Dr. Barnard. 8 p. April 5. Unpublished manuscript. [25 ref]

• ***Summary:*** This carefully documented paper sets forth the Seventh-day Adventist position against the use of most spices and condiments. They can be classified as: (1) Irritating, stimulating, harmful (cayenne pepper, chili, horse-radish, pepper [black or white]), (2) strongly aromatic, irritating (cloves, ginger, paprika (Hungarian), curry), (3) slightly irritating, and (4) sweet herbs, not irritating. Citations from scientific publications are then given in support of the following statements: Spices and condiments irritate the digestive tract, may produce hypertension, may be carcinogenic in rats, are kidney irritants, may have toxic effects, are but slightly antiseptic, and nutmeg produced the same physical effects as marijuana.

Similar statements are then supported by the writings of Ellen G. White. Stimulants are generally considered undesirable.

1439. **Product Name:** Soya Porridge (Sweetened Soy-Fortified Corn Flour–Precooked).
Manufacturer's Name: Africa Basic Foods Inc.
Manufacturer's Address: Kampala, Uganda.
Date of Introduction: 1966 May.
Ingredients: Maize flour 46%, soy flour 35%, sugar 15%, nonfat dry milk 3%, salt 1%.
Wt/Vol., Packaging, Price: 1 lb polyethylene bags, or 2 lb or 50 lb paper bags.
How Stored: Shelf stable.
Nutrition: Protein 20.1%, moisture 11%.
New Product–Documentation: Economist Intelligence Unit. 1969. Demand for Soya-Based High Protein Foods in Uganda. p. 50. Harrison. 1969. Analysis of the Uganda Experience Based on Africa Basic Foods Inc. p. 19, 33-35. Recommended as a weaning food for children 5-6 months or older.

E. Orr. 1972. Tropical Products Inst. G73. The use of protein-rich foods for the relief of malnutrition in developing countries: an analysis of experience. Table II (p. 66) shows that this product contained 38% soya and 5% DSM (dry skim milk), and 42% maize.

Note: This is the earliest known commercial soy product made in Uganda, or made by Dr. D.W. Harrison of Africa Basic Foods in Uganda.

1440. Thurston, Claude E. 1966. *Today's Food* passes 10th birthday. *Today's Food* (*Loma Linda Foods, Riverside, California*) 11(1):3. Spring.

• ***Summary:*** "As this *Today's Food* goes to press we are beginning our eleventh year of publication. Begun as a two-color paper in the spring of 1956, with a circulation of only a few thousand–mostly in California–*Today's Food* is now printed in full color and is circulated from coast to coast to every member of the Seventh-day Adventist church who wishes to receive it. Many thousands of non-Adventists have also requested that their names be placed on our subscription list because they are interested in our vegetarian program."

The Associate Editor, Dorothea Van Gundy Jones is "daughter of the late T.A. Van Gundy, pioneer developer of vegetarian protein loaves and soy milk... Upon completion of her Bachelor of Science Degree at the CME [College of Medical Evangelists] School of Dietetics, she served as a dietetic counselor to a Beverly Hills physician for a number of years before accepting a call to La Sierra College as Director of Food Service. For the past eleven years (during which she became Mrs. Edwin Jones) our nutritionist has traveled widely both in this country and abroad while conducting cooking classes, lecturing before civic groups, camp meetings, and professional organizations of physicians and dentists. Mrs. Jones has also made numerous TV appearances from coast to coast."

Photos show nice portraits of Editor F.W. Edwardy and Associate Editor Dorothea Jones. Address: PhD, Director, Research Lab., Loma Linda Foods.

1441. *Today's Food* (*Loma Linda Foods, Riverside,*

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California). 1966. Celebrating our 60th anniversary [Loma Linda Foods]. 11(1):5 (back cover). Spring.

• ***Summary:*** Loma Linda Foods has been guided by the wise counsel of Ellen G. White, who began discussing healthful nutrition in 1863. "Actually, the nutrition work of Seventh-day Adventists, who own and operate Loma Linda Foods, began 100 years ago at Battle Creek Michigan... But the denominational affiliation with the old Battle Creek San breakfast foods ended in 1903 and it was not until 1906 that it was reactivated at the Loma Linda Sanitarium in California. Here stoneground wheat bread and healthful cookies and fruit crackers were made in the sanitarium bakery, and in 1907 demand for the products from residents of the growing community forced the construction of a separate building. Here in a combination bakery and store, the business thrived for 30 years.

"Now known as Loma Linda Foods, the new factory continued making fine bread and cookies but added high protein products perfected to take the place of meat in vegetarian menus; whole grain breakfast foods; Breakfast Cup cereal drink [coffee substitute]; and about 1930, began making the first soy milk.

"Demand for Loma Linda Foods quickly outgrew the small delivery truck service developed within a 125 mile area, and when land for a new plant was offered by what was then La Sierra Junior College, ten miles west of Riverside, the move was made.

"Our present plant and Western Division general offices opened in 1938, and in 1951 the Eastern Division headquarters opened in Mount Vernon, Ohio. Developed for 25 years under the leadership of George T. Chapman from Australia, and now managed by Charles P. Miles, Loma Linda Foods is one of 30 food factories owned and operated by Seventh-day Adventists in Australia, New Zealand, South America, England, France, Denmark, Germany, Switzerland, Africa and Japan.

"Some 300 workers, plus nearly 100 salesmen, are dedicated to the production and distribution of more than three dozen tasty products bearing the Loma Linda Foods label..."

Color photos show: The general offices and main Loma Linda Foods plant at Riverside. Sales representatives and management personnel of the Western Division of Loma Linda Foods.

1442. *Today's Food* (*Loma Linda Foods*, *Riverside*, *California*). 1966. None of these healthy youngsters was reared on milk. 11(1):1-3. Spring.

• ***Summary:*** Photos show many healthy infants and children. Commercial soymilk products include:

Soyagen: all-purpose, malt flavored, or carob flavored; in liquid or powdered form.

"Multigen: This new soy milk just now being placed on the market, is specially formulated to supply a total diet for those on a restricted menu. It supplies a higher fat and carbohydrate content and all the nutrition needed for those on a liquid dietary.

High-So-Pro: a high-protein powdered soymilk, low in fat, salt, and carbohydrates that is especially good for those on weight-reducing programs and ideal for diabetics.

"Instagen: an isolated protein soy milk, fortified to provide the essential vitamins and minerals. Instagen has a little lighter color, a little milder flavor, and is a little lower in price.

Whether or not you have dietary

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problems, if you wish to lower your cholesterol level, or would like to become a complete vegetarian, Loma Linda soy milks provide the easy answer.

"As to those who in years past complained of a 'beany' flavor in soy milk: try it once more–today's product is vastly improved! And for the diehard who still demands a completely different taste, the new Carob Soyagen with its rich chocolate-like flavor comes not only ready to drink, but may be used in any number of tasty recipes for puddings, ice cream, and other dishes."

1443. Ziemba, John V. 1966. Let soy proteins work wonders for you. *Food Engineering* 38(5):82-84, 87-90, 93. May.
• ***Summary:*** The subtitle reads: "With far better quality and functional properties, soy proteins are finding ever-increasing uses in foods. You can 'engineer' new foods or improve your current products–at more profit, too."

Contents: Introduction to soy proteins–flours, concentrates, and isolates. Soy flours and grits. Who's supplying what. Benefits in quality, cost. Values of soy concentrates. Varieties of concentrates. Highest protein: Isolates. Soy proteins added to egg albumen. Versatility of isolates. Foams and gels. Fiber technique emerges: Worthington's accomplishments ("First textured soy protein fiber product marketed as Worthington's frozen Fri-Chik–an extruded formulation simulating a fried portion of white chicken meat"), problems ahead. Texturizing in other ways.

"New process techniques have been 'engineered' into making soy proteins better so far as quality and function are concerned... Last year about 250 to 300 million lb of soy flours and grits went into formulating food products. About 7 million lb of concentrates and 9 million lb of isolates were used. Present estimates indicate that flours and grits are increasing at a 5% per year rate, concentrates and isolates at about 10% each." Who supplies what? Soy flours and grits: ADM, Central Soya, Crest Products, Staley. Soy protein concentrates: ADM, Central Soya, Crest, Griffith, Gunther Products, Ranell Labs., Swift & Co. Isolated Soy Proteins: Central Soya, Crest, Gunther, Ralston Purina. Spun isolate fibers: ADM, General Mills, Ralston Purina, Worthington Foods. Textured Soy Proteins (extruded grit-type): ADM, H.B. Taylor.

"Archer Daniels Midland is currently researching with a patent-applied-for extrusion process. Product (about 50% protein) can be shaped into many fibrous, textured forms Ä chips, chunks, flakes, slabs, wafers, or puffs. But whole meat-resembling pieces can't be formed.

"Company's selling product-development lots in various sizes, shapes and flavors. Customers are planning or test-marketing ADM's 'fabricated protein' in stews, chili, and casserole products. Potential market for chunky, ground or snack-type products is likely to be much greater than the one for simulated whole meats." Note: This is the earliest document seen (Sept. 2003) that mentions textured soy flour or grits produced by an extrusion process–later widely known by its ADM trademark as TVP.

"Worthington's simulated meats made from spun soy protein fibers (Fibrotein) come in cubes, slices, chips, granules, rolls, square logs, or other shapes and sizes. They are in fresh, frozen, or dehydrated forms" (p. 93).

Photos show: (1) Soy protein fibers, plus chunks and cubes made from fibers. The caption reads: "Simulated meats can be 'engineered' readily from soy protein fiber shown in the center of these General Mills products." At lower left, going clockwise: 'bacon' chips, 'beef' granules, 'chicken, 'beef' chunks, 'ham,' and 'seafood.' (2) Many of Worthington Foods' packaged foods made from textured soy protein fiber; they are canned, frozen, smoked, diced, sliced, or formed into rolls or sausages. (3) Spun soy protein fiber coming our of a spinnerette head (in a glass beaker). (4) Joseph Rakosky operating an electrophoresis apparatus at USDA's Northern Regional Laboratory (NRRL, in Peoria, Illinois). (5) Edible soy protein foam on a meringue pie, developed by USDA at NRRL. (6) A.K. Smith watching Tokuji Watanabe making "tofu cake" by an improved process at NRRL. Address: Senior Assoc. Editor, Food Engineering magazine, Chicago.

1444. *Time.* 1966. Commotion in the bean pit. 88:77-78. July 8.
• ***Summary:*** The soybean is now "the hottest item in the seething U.S. commodities market. Last week futures for soybeans, soybean oil and soybean meal set seasonal records after a month of wild trading." Prices tripled during the month.

"Introduced to the U.S. from Asia in 1804, the soybean did not become a significant agricultural product until World War II cut off normal U.S. imports of fats and oil. From a crop of 193 million bu. in 1945, output rose to 843.7 million bu., worth nearly $2.5 billion last fall. Soybeans are the U.S.'s most valuable agricultural export, ranking ahead of wheat and corn...

"Worthington Foods Inc. takes edible soybean fiber produced by Ralston Purina, turns it into meatless frankfurters, roast beef and fried chicken, sells them to Seventh-day Adventists and vegetarians. Archer-Daniels-Midland Co. is testing a soy beverage to be sold in powder form, and Central Soya has developed an ice cream-like frozen dessert made of soybeans.

"What interests researchers the most about the soybean is its high protein content (up to 50%), and this month Central Soya will begin mass production of Promine, an isolated soybean protein, at a new Chicago plant. Promine binds and emulsifies pulverized meats, such as sausages, meat loaf and bologna."

1445. *Business Week.* 1966. Soybeans move up on the menu. July 23. p. 82, 84, 87.

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• ***Summary:*** "General Mills, under its Betty Crocker Red Spoon trademark (A.D. Odell in charge), is test marketing the first of a series of projected foods spun out of a protein isolated from soy. Called Bac*Os, it is designed as a condiment and looks and tastes like lean, crumbled, cooked bacon. Priced at $0.69 for 3.25 ounces, the jar is equal to 1 lb of cooked bacon." Corn Products' (CPC) Best Foods Div. is marketing Skippy peanut butter containing the product. "Thomas J. Lipton, Inc., a Unilever subsidiary, recently launched four dried gourmet main dish meals including beef stroganoff and chicken la scala. Lipton has patented a process to use isolated soy protein (ISP) as a binder for dried meats... Ralston Purina has developed a series of spun soy protein foods resembling ham, chicken, and turkey out of ISP. It is selling its spun ISP base, Edi-Pro, to Worthington Foods Inc. Worthington has developed its own line of chicken and ham-like products for sale to religious groups.

"Central Soya makes an isolated soy protein binder called Promine, which goes into sausage and other processed meats. Sales of the binder at $0.35/lb–twice the cost of the binder it is replacing–are so promising that production will be doubled to 2.5 million lb monthly when a new plant opens in Chicago next month... In addition the company this fall hopes to start exporting a frozen soy dessert to tropical countries with no dairy industries." General Mills, Ralston, ADM, Central Soya, and Worthington combined spend some $4 million annually on research. Half of this sum is going into basic research and half into product development. ADM recently shipped 3 million lb of a new protein rich soy beverage to Latin America and the East Asia under a USDA program.

1446. **Product Name:** Roasted Whole Soy Flour (Full-Fat).
Manufacturer's Name: Africa Basic Foods Inc.
Manufacturer's Address: Kampala, Uganda.
Date of Introduction: 1966 July.
Ingredients: Soybeans.
Wt/Vol., Packaging, Price: 3 oz or 1 lb polyethylene bags, or 2 lb or 50 lb paper bags.
How Stored: Shelf stable.
Nutrition: Protein 38.5%, moisture 10%.
New Product–Documentation: Economist Intelligence Unit. 1969. Demand for Soya-Based High Protein Foods in Uganda. p. 50. In 1969 this was the company's most important product: 28,920 kg were produced from January to June. Harrison. 1969. Analysis of the Uganda Experience Based on Africa Basic Foods Inc. p. 14, p. 33. Interview with Dr. D.W. Harrison. 1982.

1447. Odell, A.D. 1966. Meat analogues: A new food concept. *Cornell Hotel and Restaurant Administration Quarterly* 7:20-24. Aug.
• ***Summary:*** "Despite spectacular increases in food production, the stupendous growth in total world population spells drastic food shortages ahead." Food science is focusing efforts on the development of new solutions to the food dilemma. The conversion of "feedstuffs by animals into meat is often less than, and seldom better than, 10 percent." We can shorten the food chain by developing new man-made protein sources. "One such candidate is the new class of textured, high-protein foods which has been made possible by the application of textile technology to the purified proteins which may be extracted and isolated from soybean meal, for example."

"The name Bontrae has been coined for General Mills' spun specialties." A diagram shows how Bontrae granules, cubes, bits, and slices are made from "protein spinning dope" by spinning to give "protein fibrils." Photos show: (1) A "tow" or "tissue" of "16,000 individual, endless monofilaments, spun from soy protein through a spinneret with holes of 0.003 inch diameter" [by General Mills]. (2-4). Smoky Chips (a soy product tasting like crisp bacon), ham, chicken, and fish analogs, Sloppy Joe, etc. A product closely similar to General Mills' Smoky Chips "is being supplied to the Best Foods Division of Corn Products as 'Smoky Crisps' for inclusion in a new version of Skippy Peanut Butter."

"The Isolated Protein Program of General Mills represents a major research effort involving nearly fifty people, which is dedicated to the above objectives. Although currently still in the research phase, various Bontrae items are now emerging into the commercial test market. Full scale commercialization, if warranted, will probably not be achieved before early 1968. Other commercial firms, notably Ralston-Purina Company and Worthington Foods, are engaged in similar programs."

Note 1. This is the earliest English-language document seen (Nov. 2003) that uses the term "meat analogues" (or "meat analogs") in the title.

Note 2. This is the earliest English-language document seen (Dec. 2004) that uses the word "monofilaments" to refer to edible spun soy protein fibers. Address: PhD, Manager, Isolated Protein Program, General Mills, Inc., Minneapolis, Minnesota.

1448. Lemon, Frank R.; Walden, Richard T. 1966. Death from respiratory system disease among Seventh-Day Adventist men. *J. of the American Medical Association* 198(2):137-46. Oct. 10. [40 ref]
• ***Summary:*** "The total number of deaths observed and death from respiratory disease were approximately one half and one fourth, respectively, of that expected at comparable ages for California men. In the SDA group, the 28 deaths contributed to by emphysema or lung cancer were concentrated in a minority with a history of heavy tobacco usage; only one such death occurred among 3,913 (35%) SDA 'lifetime' members who had never smoked. The findings from this study are consistent with previous epidemiologic studies and predictions of a large reduction

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in lung cancer and other mortality in any nonsmoking US population."

"The present study was initiated in 1958 when questionnaires were mailed to California SDAs and distributed in each of their 341 churches. That questionnaire was essentially a census instrument, and we were able to enroll almost 85% of the actually available membership... The data were organized on IBM punch cards for follow-up study and analysis. Our 1958 enrollment involved over 47,000 individuals, approximately 60% of whom were women. Of the nearly 18,000 men who enrolled, 11,071 (61.5%) were age 30 years or older. The latter group and their experience through five years of follow-up study form the basis for this report. Three fourths of this group of SDA men were also enrolled subsequently (1960) in the current epidemiological study of the American Cancer Society (ACS) under Hammond's direction. The latter study has provided information regarding the smoking patterns in our SDA study population. Contact has been maintained with enrollees by annual (sometimes semi-annual) mailing of interval questionnaires and other notices." Address: Dep. of Preventive Medicine, School of Medicine, Loma Linda Univ., Loma Linda, California.

1449. *British Vegetarian.* 1966. "Soya Steaks." Sept/Oct. p. 411. [1 ref]
• ***Summary:*** This article is excerpted from *SCATS Sentinel, Journal of the Southern Counties Agriculture Trading Society,* June 1966.

A recent technical report from Trouw & Co., N.V., of Amsterdam, states that products resembling steaks, chickens, and ham are now being made from soya, using spun soy protein fibers. In the USA, General Mills, Ralston Purina Co., and Worthington Foods (Ohio) are working on spinning, and in England Unilever is reported to be interested. Worthington Foods has developed a full line of products that look, taste, and chew like chicken, beef, and pork products. Wham is a ham-like product and White Chic is simulated chicken. A photo shows a label of Worthington Soyameat Salisbury Steak Style.

1450. Miles, Charles P. Assignor to Pacific Union Association of Seventh Day Adventists, doing business as Loma Linda, Foods (Riverside, California; a corporation of California). 1966. Process of producing milk from soy beans. *U.S. Patent* 3,288,614. Nov. 29. 3 p. Application filed 2 Nov. 1964. [2 ref]
• ***Summary:*** Miles was manager of the Loma Linda plant at Mt. Vernon, Ohio at the time. The process involves cracking, dehulling, flaking, blending with water (hot or cold), pressure cooking, homogenization, centrifugation, and formulation. Address: Riverside, California.

1451. Worthington Foods, Inc. 1966. Dealer wholesale price list–order blank. Worthington, Ohio 43085. 1 p. Dec. 1. 36 cm.
• ***Summary:*** New products in the Worthington Foods line include: Soyameat [or Soya-Meat] (Fried chicken, sliced chicken, diced chicken, sliced beef, diced beef, Salisbury steak). Bakon Yeast.

Worthington now owns the Madison Foods line of products including: Cheze-O-Soy, Dinner Morsels. Madison Burger, Not Meat (Regular or tomato). Nu-steaks. Yum. Zoy burger. Kreme-O-Soy. Infasoy.

Worthington now has warehouses in Battle Creek, Michigan; Dallas, Texas; Denver, Colorado; Los Angeles, California; Madison, Tennessee; South Lancaster, Massachusetts; Oakland, California (actually San Leandro); Portland, Oregon; Washington, DC. Address: Worthington, Ohio. Phone: 614-885-9511.

1452. Sanchez, Albert; Porter, G.G.; Register, U.D. 1966. Effect of entrée on fat and protein quality of diets. *J. of the American Dietetic Association* 49(6):492-96. Dec. [19 ref]
• ***Summary:*** The nutritive value of various diets was tested by the rat growth method. Two cafeteria diets (each containing soy proteins), a hospital diet, and a selected vegetable diet were evaluated for protein quality. Diets which contained milk resulted in the best growth rates. Address: Dep. of Biochemistry, Loma Linda Univ., Loma Linda, California.

1453. Glass, R.L.; Hayden, J. 1966. Dental caries in Seventh-day Adventist children. *J. of Dentistry for Children* 33:22-23. *

1454. Hartman, Warren E. 1966. Research and development in synthetic foods. *New York State Association of Milk and Food Sanitarians, Annual Report* [19 ref]
• ***Summary:*** "Research and development in synthetic foods is no longer a skeptical venture. Today it is fast becoming an alarming necessity! Two most basic and major problems face the world today (1) The world population explosion accompanied by (2) The skyrocketing need for food. Synthetic foods are already a part of big business."

"Worthington Foods has been in the vegetarian protein food business for some 25 years. Primarily, the business was concerned with supplying such foods to consumers who had medical, philosophical, or religious reasons for wanting them. Early products were based on wheat proteins or 'gluten.' Worthington had accumulated considerable flavoring 'know-how' by the time soy products such as flakes, toasted grits and isolated protein became available. One of the first Worthington products based on soy protein was a powdered milk-like product, Soyamel, which was designed primarily as a hypoallergenic formula for infants and children who were allergic to milk... Perhaps one of the first companies to explore the protein spinning technique

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developed by Robert Boyer (U.S. Pat. # 2,682,466) was Worthington Foods. For the past ten years Worthington has pioneered in the field of vegetarian protein foods; seeking suitable protein isolates for spinning, developing spinning technology, formulating and adapting these spun protein fibers to acceptable consumer end-products."

"The present technology of spinning as practiced by Worthington Foods, uses as a raw material relatively pure soy protein isolate as obtained from Ralston Purina, Central Soya or other suppliers of protein isolates."

A photo shows Hartman, who has been with Worthington Foods since 1947. "His academic training was acquired at Andrews University, Berrien Springs, Michigan; University of Michigan, Ann Arbor; and at Massachusetts Institute of Technology. Dr. Hartman was employed as a biochemist- bacteriologist for four years by the Michigan State Department of Health Laboratories in Lansing, Michigan, and was a consultant-instructor for a year for the U.S. Public Health Service." Address: Director of Research and Development, Worthington Foods, Inc., Worthington, Ohio.

1455. **Product Name:** Loma Linda Hi-So-Pro (Powdered Soymilk for Diabetics. Low in Fat and Salt and Carbohydrates).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1966.
Wt/Vol., Packaging, Price: 12 oz. can.
New Product–Documentation: Today's Food. 1966. Wholesale price list. 1968. Sold in 12 oz. cans for $1.42 retail.

1456. **Product Name:** Loma Linda Instagen (Based on Isolated Soy Protein) [Fortified Concentrated Liquid].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1966.
Wt/Vol., Packaging, Price: 16 oz. can.
New Product–Documentation: Today's Food. 1966. Apparently not an infant formula; Wholesale price list. 1968. Instagen All Purpose Fortified. Sold in 16 oz. cans for $1.05 retail. Shurtleff & Aoyagi. 1984. Soymilk Industry and Market. p. 28. Later renamed "i-Soyalac."

1457. **Product Name:** Loma Linda Chili Beans (Meatless with Pinto Beans and Soy Protein).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1966.
Ingredients: Water, pinto beans, tomato puree, textured soy granules, corn oil, salt, paprika, spice, natural (vegetable) flavor, wheat flour, onion powder, sugar, monosodium glutamate, garlic powder, soy lecithin.
Wt/Vol., Packaging, Price: 15 oz or 48 oz cans.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1987, undated. "Meatless chili with a zesty flavor. Made of pinto beans and tasty soy protein. Heat and serve."

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1966.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1458. **Product Name:** Loma Linda Multigen (Soymilk).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1966.
Wt/Vol., Packaging, Price: 16 oz. can.
New Product–Documentation: Today's Food. 1966. "This new soymilk is specially formulated to supply a total diet for those on a restricted menu. It supplies a higher fat and carbohydrate content and all the nutrition needed for those on a liquid dietary." Wholesale price list. 1968. Sold in 16 oz. cans for $1.51 retail.

1459. **Product Name:** Loma Linda Big Franks (Meatless Hot Dogs).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1966.
Ingredients: In 1971: Wheat protein [wheat gluten], vegetable oil, water, dried yeast, wheat germ, garlic, paprika, soy flour, MSG, onion, flavorings, caramel and U.S. certified color.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per one frank (1.8 oz–51 gm): Calories 100, protein 10 gm, carbohydrate 4 gm, fat 5 gm, cholesterol 0 mg, sodium 220 mg, potassium 75 mg.
New Product–Documentation: See next page. Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 160. Lists the ingredients in "Big Franks (Loma Linda Foods)."

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned frankfurter-type product.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 174. Lists the ingredients in "Big Franks (Loma Linda)." Lysine has been added.

Label sent by Loma Linda Foods. 1988. Oct. 5. This

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product was introduced in 1966. The ingredients are now: Wheat gluten, corn oil, water, dried yeast, soy protein concentrate, artificial and natural (vegetable) flavors, wheat germ, soy flour, onion, vegetable mono-and di-glycerides, garlic powder, salt, soy lecithin, caramel color, L-lysine, paprika, artificial color, spice, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). Broth: Water, salt.

A less sophisticated version of this product with the same name was introduced in 1953.

1460. **Product Name:** Soyamel Banana Beverage (Soymilk).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1966.
New Product–Documentation: Wholesale price list. 1966. Dec. 1.

1461. **Product Name:** Soyameat (Meatless Meats) [Fried Chick, Sliced Chick Style, Diced Chick Style, Sliced Beef, Diced Beef Style, or Salisbury Steak].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1966.
Ingredients: Beef: Slices: Textured soy protein isolate, egg whites, soybean oil, wheat flour, partially hydrogenated soybean and cottonseed oil, yeast extract, flavorings (hydrolyzed vegetable protein, monosodium glutamate, onion powder, artificial flavor), caramel color, corn syrup solids, salt, dextrose, niacinamide, iron (as ferrous sulfate), artificial color, vitamin B-1 (thiamine mononitrate), disodium guanylate, disodium inosinate, vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12. Broth: Water, modified corn starch, soybean oil, yeast extract, flour, flavorings (onion powder, celery extract), dextrose, caramel color.
Wt/Vol., Packaging, Price: 13 oz can. Sliced Beef Style (13 oz) retails for $2.20. Sliced Chik (13 oz) retails for $2.30. Diced Chik (13 oz) retails for $2.45 (7/90, California).
How Stored: Shelf stable; refrigerate after opening. Or, Frozen.
Nutrition: Per 2 slices (56 gm drained): Calories 90, protein 8 gm, carbohydrate 4 gm, fat 5 gm, cholesterol 0 mg, sodium 290 mg, potassium 45 mg.
New Product–Documentation: Soybean Blue Book. 1965. p. 112. "Canned and frozen soyameats, white meat style, fried chicken style, prime, prime-smoked and chipped, prosage, saucettes, wham, and veja-links." Worthington Wholesale price list. 1966. Dec. 1.

W. Hartman. 1966. Food Technology. 20(1):39-40. "Vegetarian protein foods." The first textured soy protein fiber marketed in the U.S. was frozen "Fri-Chik." "This same formulation was next canned in a light gravy and called "Soyameat–Fried Chicken Style," as was also later marketed as frozen and canned "White Chik" in large rolls for slicing, dicing, etc."

Ziemba. 1966. Food Engineering. May. p. 82-93. "Let soy proteins work wonders for you." Photo of 6 cans.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 163. Lists the ingredients in "Diced Beef Style Soyameat (Worthington)." This is an institutional product. The ingredients are now: Water, soybean protein (Fibrotein), vegetable shortening, corn oil, albumin [egg protein], yeast extract, hydrolyzed vegetable proteins, salt, flavorings, caramel color, MSG, starch, U.S. certified color.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. "Soyameat–Salisbury Steak-like flavor" and "Soyameat–slices with beef-like flavor" are canned beef-like products based on spun soy protein fiber.

Product with Label purchased at Adventist Book Center, Pleasant Hills, California. 1990. July 8. Sliced Chicken is now called Sliced Chik, Diced Chicken is called Diced Chik, and Sliced Beef is called Sliced Soyameat–Sliced Beef Style. The main ingredients for Diced Chik are now: Textured vegetable protein (soy protein isolate and concentrate), egg whites, water, soybean oil, natural and artificial flavors from non-meat sources, modified food starch, salt, vegetable gum, onion, turmeric, celery, niacin, iron, etc.

1462. **Product Name:** Salisbury Steak.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.

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Date of Introduction: 1966.
Ingredients: In 1971: Wheat protein [wheat gluten], water, textured soybean protein, vegetable shortening, oats, albumin [egg protein], yeast extract, hydrolyzed vegetable protein, plant extractives, flavorings, caramel color, MSG, vegetable gum, U.S. certified color.
How Stored: Frozen (in 1975).
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 163. Lists the ingredients in "Salisbury Steak (Worthington)." This is an institutional product.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Salisbury Steak, frozen (Worthington)" are "wheat protein [gluten] and soy protein, Fibrotein [spun soy protein fiber], corn oil, vegetable shortening, albumin [egg protein], mushrooms, modified corn starch, yeast extract, artificial flavorings, salt, HVP, caramel color, MSG, dextrose, vegetable gum, wheat and soy flours, sucrose, niacin, U.S. certified food color, iron, thiamin, vitamin B-6, pantothenic acid, riboflavin, vitamin B-12."

1463. **Product Name:** Soyameat–Beef Style with Gravy.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1966.
Ingredients: In 1971: Water, soybean protein, vegetable shortening, albumin [egg protein], yeast extract, hydrolyzed vegetable proteins, salt, plant extractive flavorings, caramel color, monosodium glutamate, starch, U.S. certified color.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 164. Lists the ingredients in "Soyameat–Beef Style with Gravy." This is an institutional product.

1464. **Product Name:** Soyameat Diced Chick Style.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1966.
Ingredients: In 1971: Water, textured soybean protein [Fibrotein spun soy protein fiber], corn oil, albumin [egg protein], soybean protein, salt, monosodium glutamate, vegetable gum, starch, hydrolyzed vegetable proteins, flavorings.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 164. Lists the ingredients in "Soyameat Diced Chick Style (Worthington)." This is an institutional product.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 174. The ingredients in "Chick Style, canned plain (Worthington)" are: Fibrotein [textured soy protein fiber], corn oil, egg white solids, HVP, starch, soy protein, salt, seasoning, MSG, carrageenan, certified color.

1465. **Product Name:** Soyameat Fried Chick.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1966.
Ingredients: In 1971: Water, textured soybean protein [Fibrotein spun soy protein fiber], corn oil, egg albumin, soybean protein, salt, MSG, vegetable gum, starch, hydrolyzed vegetable proteins, flavorings.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 164. Lists the ingredients in "Soyameat Fried Chick (Worthington)." This is an institutional product.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 174. The ingredients in "Chick Style, fried (Worthington)" are "Fibrotein [textured soy protein fiber], corn oil, egg white solids, HVP, modified corn starch, soy protein, salt, MSG, artificial flavoring, carrageenan, niacinamide, thiamin, iron, vitamin B-6, U.S. certified color, riboflavin, vitamin B-12."

1466. **Product Name:** Soyameat Sliced Chick Style.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1966.
Ingredients: In 1971: Soybean protein [spun soy protein fiber], corn oil, albumin [egg protein], isolated soybean protein, salt, MSG, vegetable gum, hydrolyzed vegetable protein, seasonings.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 164. Lists the ingredients in "Soyameat Sliced Chick Style (Worthington)." This is an institutional product.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. "Soyameat–Sliced Chicken-like flavor" is a canned chicken-like product based on spun soy protein fiber.

1467. Neufeld, Don F. ed. 1966. Seventh-day Adventist encyclopedia. Washington, DC: Review and Herald Publishing Assoc. xviii + 1452 p. Commentary Reference Series, Vol. 10.
• ***Summary:*** This indispensable reference work contains excellent basic information and short histories. Entries

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related to food, diet and health include: Preface. Abbreviations. Alimentos Granix, Sociedad Anónima ("Granix Foods"; Buenos Aires Health Food Co., Argentina). American Temperance Society. Battle Creek College–See Andrews University. Battle Creek Health Center–See Battle Creek Sanitarium. Battle Creek Sanitarium (Michigan). Boulder-Colorado Sanitarium–See Boulder Memorial Hospital (est. 1896) and its health food factory (1897). Boulder Memorial Hospital. Cedar Lake Academy (founded 1898), Copenhagen Food Company (Denmark). De-Vau-Ge Gesundkostwerk GmbH ("DVG Health Foods Factory"; German Health Food Factory). Diet. Fábrica de Productos Superbom (Brazil Food Factory).

Food companies (Church-owned, making health foods of various kinds, especially vegetarian protein foods and whole-grain cereal products. SDA Food manufacture began as a department of the Battle Creek Sanitarium, which produced Granola and other cereals and wafers for the patients. Sales were a by-product of diet therapy, as patients ordered foods for their own use after leaving the institution. Thus originated the Battle Creek Sanitarium Health Food Co.).

Good Health (magazine). Graham, Sylvester. Granose Foods Ltd., (began as The London Health Food Company importing foods from Dr. J.H. Kellogg. In 1899 a manufacturing company was formed under the name The International Health Association Limited, changed in 1926 to Granose Foods Ltd.). Boulder Memorial Hospital. Health and Temperance Missionary School. Health education–See Health evangelism. Health evangelism. Health food manufacture–See Food companies. Health journals (the first was *The Health Reformer*). Health principles. Health reform–See Diet; Health evangelism; Health principles; Medical work. Health Reform Institute–See Battle Creek Sanitarium. India–Medical Work–Sanitarium Health Food Co. Instituto Adventista del Uruguay (Uruguay Academy, Produtos Frutigran). International Health and Temperance Association–See American Temperance Society. International Health Association Limited–See Granose Foods Ltd. International Nutrition Research Foundation. International Temperance Association. Kellogg, John Harvey (1852-1943; M.D.). Kellogg, John Preston (1807-1881). Kellogg, Merritt Gardner (1832-1922). Kellogg, Will Keith (1860-1951; Cornflakes manufacturer). Loma Linda College of Evangelists–See Loma Linda University. Loma Linda Foods. Loma Linda University. Madison Institutions (incl. Madison College, Madison Foods, articles about Madison in periodicals). Medical work. National True Foods (Pty) Limited (Johannesburg, South Africa). Nebraska Sanitarium (1895). New England Memorial Hospital (1899). Nihon San-Iku Gakuin (Japan Missionary College, 1898, 1919, 1926, incl. Perry A. Weber). Noncombatancy (like conscientious objector, not bearing arms in wartime). PHAG (Produits Alimentaires Hygiéniques, Gland–Switzerland). Produits Alimentaires Hygiéniques, Gland–See PHAG. Prohibition (see also Temperance). Pur-Aliment (Food Factory; Clichy, France). St. Helena Sanitarium and Hospital (incl. health food factory, established in 1901). San-Iku Gakuin–See Nihon San-Iku Gakuin. Sanitarium principle (replaced by hospital principle). Sanitarium Health Food Company (Australia and New Zealand). Sanitariums and hospitals. Spicer, William Ambrose. Spicer Junior College. Spicer Memorial College. Stanborough College–See Stanborough School. Stanborough Press Limited (British Publishing House at Stanborough Park, Watford, Hertfordshire). Stanborough School. Stanborough Nursing and Maternity Home. Sunnydale Academy (Centralia Missouri; Sunnydale Foods started in 1946). Washington Adventist Hospital (1907). White, Ellen Gould (Harmon) (1827-1915). White, Ellen G., writings of. White, James Edson (1849-1928; 2nd son of James and Ellen White). White, James Springer (1821-1881). White, William Clarence (1854-1937, "Willie").

Note: The *Advent Review and Sabbath Herald* of 23 Oct. 1860 states (p. 179, col. 2): "Resolved, that we take the name of Seventh-day Adventists." Address: Washington, DC.

1468. Neufeld, Don F.; et al. ed. 1966. Seventh-day Adventist encyclopedia: Granose Foods Limited. Washington, DC: Review and Herald Publishing Assoc. 1640 p. See p. 527-28.

• ***Summary:*** "A health-food factory situated in Stanborough Park, Watford, Hertfordshire, England, manufacturing several kinds of nut foods and breakfast cereal biscuits, one of the latter being called Granose. In 1962 business volume [sales] totaled £250,000.

"The SDA [Seventh-day Adventist] health food work in Great Britain was begun by a group of laymen who, under the name The London Health Food Company, purchased health foods from Dr. J.H. Kellogg, of Battle Creek, Michigan, and distributed them to the public. After a few years SDA leaders in Great Britain sent J. Heide, a master baker, to Battle Creek to learn how to make the foods. In 1899 a manufacturing company was formed under the name The International Health Association Limited, changed in 1926 to Granose Foods Limited. The company purchased a flour mill in Salford, near Redhill, Surrey, to serve as the factory. Disused plant equipment obtained from Battle Creek, together with machinery purchased in Great Britain, formed the nucleus from which the present business has grown. W.T. Bartlett was the first manager and secretary and A. Rodd was the first factory superintendent.

"Before electricity was available, candles were often used, a practice that led to a fire that burned the factory to the ground in [Aug.] 1900. Health foods were again temporarily imported from America, but gifts and loans from SDA's re-established the company, in Birmingham.

"In 1907 all SDA institutions in England, including the

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food factory, were centralized at Stanborough Park, Watford. The factory has grown until in 1963 it had a floor space of approximately 25,000 square feet, and still further extensions were planned.

"Former managers included H. Osborne, J. Rigby, and George Adair. Joint managers in 1963 were George Norris and B. Goulstone."

Note 1. This is the earliest document seen (June 2009) that mentions the "London Health Food Company" or that explains its work importing health foods from Dr. Kellogg in Battle Creek, Michigan, and "distributing them to the public." Presumably the foods were sold.

Note 2. Concerning the term "Granose": Richard W. Schwarz in his book John Harvey Kellogg, M.D. (1970) discusses Granose Flakes on pages 119-20, and 209-10. The first flaked breakfast cereals were developed from wheat jointly by Dr. J.H. Kellogg and his brother Will, in about 1894. Dr. Kellogg named their first successful wheat flakes product Granose Flakes, and on 31 May 1894 he applied for a U.S. patent on "Flaked cereal and process for preparing same." But in 1903 courts declared the doctor's patent invalid. Will Kellogg developed the product into a great commercial success, in part by adding sugar to the malt and corn combination from which he made the flakes. "The sugar greatly enhanced the cereal's taste appeal, and, as a result, the Corn Flakes business was booming by late 1905." The term "Granose" appears in 1904 in a "Chart of Food Elements" in the magazine *Good Health* (Jan. Insert after p. 48) published by John Harvey Kellogg in Battle Creek Michigan. It appears to be a grain-based breakfast cereal. Address: Washington, DC.

1469. Loma Linda University, School of Health. 1966? Summary of results of Adventist mortality study, 1958-1965. Loma Linda, California: Loma Linda University. 2 p. Undated. 28 x 19 cm. Black on yellow.

• ***Summary:*** "During the period 1958-65 a study was conducted by Loma Linda University among approximately 50,000 California Seventh-day Adventist (SDA) church members. During this eight year period, all deaths among Adventists were identified and the cause of death determined. Death rates in Adventists were calculated and compared to the published death rates in all California residents of the same age and sex. These comparisons are shown below for several causes of death. Using lung cancer as an example, for every 100 lung cancer deaths that occur in a group of California residents we would find only 20 lung cancer deaths in an equal size group of Adventists of the same sex and age." Footnote: "The figures on this sheet are for men and women age 35 and over during 1958-65..."

1. Causes of death strongly related to smoking: Lung cancer 20%. Mouth, throat, larynx cancer: 5%.

2. Causes of death strongly related to drinking [alcohol]: Liver cirrhosis 13%. Esophagus cancer 34%. Single vehicle traffic accidents 54%.

3. Other causes of death: Coronary heart disease 55%. Stroke 53%. Diabetes 55%. Peptic ulcer 42%. Suicide 31%. Breast cancer 72%. Leukemia 62%. Uterus cancer 54%.

"Because of the lower death rates in Adventists from many different causes of death the life expectancy is longer among Adventists than among all California residents. Death rates for all causes of death and life expectancy at age 35 are shown below.

"All causes of death life expectancy at age 37:

"California men–71 years.

"Adventist men–77 years.

"California women–77 years.

"Adventist women–80 years.

"Seventh-day Adventists are known to abstain from smoking and drinking alcoholic beverages. It is clear why Adventists seldom die from diseases that are strongly related to smoking or drinking. But it is not yet known why risk of death from other diseases is lower among Adventists. A further study will be conducted during l974-80 to determine which components of the Adventist lifestyle may account for their lower risk of death from many different diseases.

"Because of a high interest in health among Adventists they tend to follow good health practices in general which likely contributes to their low death rates. Many Adventists have unusual dietary practices such as vegetarianism and frequent use of unrefined foods. Other possible factors that may influence the low death rates are high educational background, good medical care and less stress and anxiety." Address: Adventist Health Study, School of Health, Loma Linda Univ., Loma Linda, California 92354.

1470. **Product Name:** Chickettes (Meatless Chicken).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1966?
Ingredients: Incl. tofu, gluten, seasonings.
New Product–Documentation: Chickettes are based on Sam's Chicken (developed by Sam Yoshimura), which was made from tofu, gluten and seasonings. Worthington substituted soy protein for the tofu.

1471. Worthington Foods, Inc. 1966? Soyamel–Fresh tasting: Five different ways (Leaflet). Worthington, Ohio. 4 panels each side. Each panel: 22 x 9 cm. Undated.

• ***Summary:*** In the middle of the front panel is a photo of a boy and girl drinking soymilk from glasses. At the bottom of this panel is a photo of 5 cans of Worthington Soyamel: All Purpose, Instant Malt Flavor, Instantized All Purpose. Banana Beverage. And Fortified Soyamel: A Powdered Soy Milk.

Two pages of the leaflet describe these products and their nutritional composition. "Regular Soyamel, Fortified

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Soyamel, and Soyamel Banana Beverage are packed in a 1 lb. can, 4 lb. can and a 20 lb. carton. Instant Soyameal and Instant Malt Soyamel are packed in a 12 oz. can, 3 lb. can and 15 lb. carton." The ingredients of Soyamel are: "Soy bean protein [probably soy protein isolate], soy bean oil, dextrose, soy bean lecithin, dextrins and maltose, sucrose, barley malt, salt, dicalcium phosphate, and added vitamin B-12. To make 1 glass of regular Soyamel place 1 cup of water in high-speed mixer or blender and add 6 level tablespoons of Soyamel. Mix until powder is dissolved. Refrigerate until used. To make instant Soyamel, add 1/3 cup of powder to 1 cup water. Stir until dissolved, or use blender. One pound of Soyamel will make a gallon of delicious, wholesome soy drink. When mixed, a quart of Soyamel will cost a little as $0.25 depending upon the richness desired."

Four pages of recipes are given. Address: 900 Proprietors Rd., Worthington, Ohio 43085.

1472. International Nickel Co., Inc. 1967. Where no metal but Platinum will do the job as well: Worthington Foods, Inc. uses platinum alloy spinnerettes to guard product purity of synthetic meat fibers (Ad). *Industrial Research.* Jan. p. 40-41.

• ***Summary:*** Soy protein is extruded through the 15,000 tiny holes of a three-inch-diameter platinum spinnerette. Platinum is non-corrosive and non-reactive. Photos show: (1) A 3-inch-diameter platinum alloy spinnerette. (2) Strands of spun soy protein fibers after extrusion. Address: 67 Wall St., New York, NY 10005.

1473. Deutsch, Ronald M. 1967. The nuts among the berries: An exposé of America's food fads. New York, NY: Ballantine Books (mass market paperback). 320 p. Foreword by Frederick Stare, M.D. Index. Feb. 18 cm. Revised in 1977 as The new nuts among the berries. Palo Alto, CA: Bull Publ. Co. 359 p.

• ***Summary:*** The rear cover states that "this book tells the astonishing story of a hundred years of health foods and faddists. It names the promoters and the products. It cites the findings of the Food and Drug Administration. It quotes the warnings of the American Medical Association. It completely exposes the hokum and ballyhoo of the health food business–now bilking the public of $2,000 million ever year–and shows why crackpot food fads are a waste of money at best and a serious danger to the health of those suffering from real illnesses."

Contents: Foreword. Introduction. 1. Of cabbages and things (a brief history of "health-foodism"). 2. Mr. Graham bakes a cracker (Sylvester Graham). 3. Little men, little women, little food (Amos Bronson Alcott, Louisa May Alcott, and vegetarianism). 4. Father Kneipp and his watering can. 5. Mother White casts her brood upon the waters (Ellen G. White and James Caleb Jackson). 6. Snap! Crackle! Enter Dr. Kellogg! (Dr. John Harvey Kellogg). 7. The battle of Battle Creek (Michigan and Seventh-day Adventists). 8. From pillar to Postum. 9. Kickapoo and Kellogg, too. 10. The Jungle, the sausage, and the law (Upton Sinclair, Harvey W. Wiley, and the formation of the FDA). 11. Chew, chew, baby (Fletcher, Chittenden). 12. Life along the alimentary canal (Metchnikoff and yogurt). 13. The bare torso king (Bernarr Macfadden). 14. The bare torso king rampant (Macfadden). 15. I see America starving. 16. How to keep your cow from drooling (selling nutrition). 17. A plague on both your Hausers (Gayelord Hauser). 18. How to write about health foods (Lelord Kordel, Cathryn Elwood). 19. Mrs. Spratt's millions (fat and dieting). 20. My mother squeaked (Don Dale Alexander and arthritis). 21. The poisons in your health food (how the public is being duped by health food hucksters). 22. How to be an expert. 23. What the law can do. 24. Taller in the saddle. 25. The unteachables. 26. To market, to market. 27. On learning to be a faddist. Address: Popular scientific and medical reporter.

1474. Harkins, Robert W.; Sarett, Herbert P. 1967. Methods of comparing protein quality of soybean infant formulas in the rat. *J. of Nutrition* 91(2):213-18. Part I. Feb. [13 ref]

• ***Summary:*** Discusses: Prosobee and Sobee (Mead Johnson), Mull-Soy (Borden), and Soyalac (Loma Linda, Riverside, California). Address: Dep. of Nutritional Research, Mead Johnson Research Center, Evansville, Indiana.

1475. *Soybean Digest.* 1967. Arkansas Soybean Assn. in step toward checkoff. Feb. p. 106, 108.

• ***Summary:*** "More than 400 Arkansas Soybean Association members held their third annual meeting at Helena, Arkansas, Jan. 12 to explore new ways of keeping soybeans the top cash crop in the United States and abroad." Laurel C. Meade (of West Lafayette, Indiana), president of the American Soybean Association addressed the group, noting that the greatest growth in soybean production since 1945 has occurred in the South. "The Delta has the largest soybean fields in the world, which will bring $215 million to Arkansas farmers from the 1966 crop."

R.W. Fischer, president of Soypro International (Cedar Falls, Iowa) said "Soybeans as an economical food could end starvation and wars in the world." Walter Grant of Worthington Foods showed the audience samples of high protein foods made by his company that are now on the market.

"During the annual business session a resolution was passed directing the officers to proceed toward state legislation to make legal the collection of a per-bushel deduction at the market place for financing research and market promotion. The checkoff program would become operative on a favorable vote by soybean producers. Of the 12 major southern soybean producing states, according to secretary Hartz [Jake Hartz, Jr.], Georgia and North Carolina

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already have appropriate acts, and Louisiana has permissive legislation not specifically dealing with soybeans. In northern states, similar bills are being entered in the current legislative sessions of Minnesota, Iowa, and Illinois."

A photo shows Laurel C. Meade with Sam Howe, president of the Arkansas Soybean Association (Wabash) and R.W. Fischer, president, Soypro International, Cedar Falls, Iowa (only the right half of Fischer's face is visible).

1476. Thulin, W.W.; Kuramoto, S. 1967. "Bontrae"–A new meat-like ingredient for convenience foods. *Food Technology* 21(2):64-67. Feb. [14 ref]
• ***Summary:*** Bontrae is made from spun soy protein fibers. "Although regeneration of oriented protein systems had been studied earlier (Lundgren, 1949), techniques for spinning protein were reduced to practice in the early 1930s by a group at the Ford Motor Company led by Robert A. Boyer. The Ford efforts were directed toward textile applications." In 1954 Boyer was granted a patent for using spun protein fibers to create edible structures. Research directed to this end has been undertaken by a number of food processors including Swift & Co., Unilever, General Foods, National Biscuit Co., Worthington Foods, Ralston Purina, and General Mills.

A photo shows two hands holding a "protein ribbon expanded to display individual filaments." A note at the end of the article states: "Presented at IFT 25th Annual Meeting."

Note: The 25th Annual Meeting of the Institute of Food Technologists was held 16-20 May 1965 in Kansas City, Missouri. An abstract (10A) of this paper appears on p. 43 of the program. Address: James Ford Bell Research Center, General Mills, Minneapolis, Minnesota 55427.

1477. Fischer, R.W. 1967. The use of soy in food products. *Oil Mill Gazetteer.* March. Also published in Soybean Digest, May 1967, p. 29-38. Translated into Spanish by Polaquimia, S.A., Ciudad, Mexico. *
Address: Soypro International Inc.

1478. Hartman, W.E. 1967. Vegetable base high protein food product. *U.S. Patent* 3,320,070. May 16. *
• ***Summary:*** Describes a method for preparing from spun soy protein fibers a bacon-type product resembling the natural product in being sliceable and in having zones resembling the fat and lean portions of the natural product.

1479. Fischer, R.W. 1967. The use of soy in food products. *Soybean Digest.* May. p. 29, 31-32, 35-36, 38.
• ***Summary:*** An excellent overview, with considerable history. Contents: Introduction. Grisly hand of hunger. Soybean oil. Oriental soy foods. Soy flour and grits (with a good history of Berczeller, A.E. Staley, Shellabarger, Allied Mills, J.R. Short Milling Co. and Wytase). Isolates and concentrates. The war years (during and immediately after World War II, soy flour and grits come to be widely disliked). New products and know-how.

"Oriental soy foods:... In the Orient soybeans have, for centuries, played an important part in human diets as soy milk for infants, shoyu, or soy sauce as we call it, miso, tofu, tempeh, kinako, natto, yuba, etc."

"Isolates and concentrates: In the mid-1930's processes for further refining the protein factors of soy began to appear. The first 70% soy protein concentrate was turned out by Mead Johnson Co. using the Bonato process of sulfur dioxide and sulfurous acid extraction, but was discontinued for lack of adequate markets for the product. In 1936 the Glidden Co. began working on the production of an isolated protein [90-100% protein] from extracted soy flakes for industrial uses. Glidden, as a major manufacturer of resin, wanted the isolate as a stabilizer for the resin used in sizing paper to provide wet strength. By 1939 Glidden was producing an enzyme hydrolyzed isolated protein to be used with egg albumen for its whipping capacity in producing food toppings... Over the years soy protein isolates have found their greatest application in the industrial field, particularly as paper coatings for high gloss products."

A photo shows cans of Worthington Choplets, Soyameat (3 varieties), and Numete–all made from spun soy protein fibers. Address: Soypro International Inc.

1480. Orr, Elizabeth; Adair, David. 1967. The production of protein foods and concentrates from oilseeds. *Tropical Products Institute Report* No. G31. 104 p. June. Also titled T.P.I. Report (London). [44 ref]
• ***Summary:*** Contents: Foreword. Acknowledgements. Introduction. 1. The use of oilseeds as a source of protein. 2. Oilseed resources. 3. The manufacture of protein flours by standard oil milling processes. 4. Some cost aspects of the manufacture of protein flour by standard oil milling processes. 5. Examples of the use of edible flours made by standard oil milling processes. 6. Full fat soya flours. 7. Oriental methods of processing soya. 8. Other processes for making protein products. 9. The distribution of protein products. 10. Current experience of making protein flours and foods from oilseeds. 11. The initiation of protein food programmes with particular reference to the role of the administrator. Appendices. 1. Protein nutrition. 2. Oilseed statistics. 3. Toxic hazards. 4. P.A.G. Guides [PAG]. 5. Aflatoxin. 6. Questionnaire. 7. Some examples of the cost of packaging oilseed-based protein foods. 8. Prices of edible oilseed products and protein flours and foods made from oilseeds. Bibliography. Chapters 6 and 7 are especially relevant to soyfoods.

"Full fat soya flour (FFSF) is manufactured in the USA by Archer Daniels Midland Co. and Central Soya, and in the UK by 3 firms: British Arkady Co. Ltd., Soya Foods Ltd., and British Soya Products Ltd. There are no official statistics for production in either country. A trade source of

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information has estimated UK usage of soya flour at 30,000 tons per annum, but this figure includes defatted soya flour made from meal imported from the USA. Full fat soya flours can be divided into 2 main categories: (a) flours used primarily for bleaching purposes in bread, and (b) general purpose flours. When the flour is to be used mainly for bleaching it is made from uncooked beans, since the natural enzymes in the bean must remain active until the bleaching process has been completed. It is estimated that about half the full fat soya flour made in the UK is used in bread manufacture."

A table lists all known commercial full-fat soy flours, their composition and prices. Describes the Promo Process and Wenger Process for making FFSF, with cost data. Gives case histories for Pronutro in South Africa and Nutresco in [Southern] Rhodesia.

Chapter 7. Oriental methods of processing soya beans: Kinako ("a flour made from ground toasted [soy] beans, used in making cakes"). Fermentation products: Soya sauce (shoyu), miso, natto, tempeh. Developing the use of fermented products. Aqueous extracts: Soya milk and tofu, kori-tofu. Soya milk as a substitute for cow's milk. The package soy milk shop (including Tetra Pak and Prepac packaging; the Prepac system, developed by the S.E.A.B. Co., Villejuif, France, has a capacity of 1,500 packs/hour). Case histories for soya milk: Rural cooperatives in Taiwan, Saridele in Indonesia, and Vitasoy in Hong Kong. Soya milk made from soya flour: The 4 known manufacturers of soya milk are Promo Ltd. of the U.K. ("The product made by Promo is marketed under the brand name of 'Velactin' by the Wander company."), and Loma Linda Foods (Soyalac and Granogen), Mead Johnson (Sobee or Soybee), and Borden's Soy Processing Co., all of the USA. Promo and Loma Linda use the traditional Oriental method rather than using soy flour.

Note: This is the earliest document seen (Aug. 2013) concerning Tetra Pak and soy. Address: TPI, 56/62 Gray's Inn Road, London WC1.

1481. Horton, Yvonne. 1967. Soybean products: Candid consumer. *Christian Science Monitor.* July 6. p. 10.
• ***Summary:*** Increasingly sophisticated edible plant proteins are now available to American consumers, after getting their start in institutions.

Synthetic bacon bits, named Bac-Os, made by General Mills, Inc. from isolated soy protein under the trade name Bontrae, resemble crisp fried pieces of lean bacon without fat. They are being test marketed in Buffalo and Syracuse, New York; in Sacramento and Stockton, California; and in Denver, Colorado.

Before being test marketed at retail outlets, Bac-Os were used for salads on Eastern Airlines flights and for bacon, lettuce and tomato sandwiches in restaurant chains, university dining halls, etc.

Another high-protein product made from Soybeans by General Mills is Modern Protein Food (MPF), also called Multi-Purpose Food; it is recommended by the maker for stocking fallout shelters, for stretching food budgets, and for vegetarian or other special (religious) diets.

Many other food manufacturers are doing research on "vegetable protein products." Archer Daniels Midland Co. of Minneapolis [Minnesota] makes TVP (Textured Vegetable Protein), which contains no waste, less than 1% fat, and can be cooked in many ways. Other companies involved in the field are Central Soya Co., Ralston Purina Co., Swift and Co., and Worthington Foods. Address: Home economics writer, Christian Science Monitor.

1482. Register, U.D.; Inano, M.; Thurston, C.E.; Vhymeister, I.B.; Dysinger, P.W.; Blankenship, P.W.; Horning, M.C. 1967. Nitrogen-balance studies in human subjects on various diets. *American J. of Clinical Nutrition* 20(7):753-59. July. [26 ref]
• ***Summary:*** Using nitrogen balance tests on human subjects for 16 days each to evaluate the quality of vegetable protein mixtures as meat substitutes, the authors found no significant difference in the ability of pure vegetarian [vegan], lacto-ovo-vegetarian, and non-vegetarian diets to maintain positive nitrogen balance, and thus to get enough protein. Average nitrogen values were all positive.

Many of the diets contained no meat, but did use vegetable protein mixtures prepared to simulate meat products. Commercial products used in the tests include Dinner Rounds, Rediburger, Soyagen, and Mocha Mix. There is no indication than any of the 16 subjects were Seventh-day Adventists. Address: Loma Linda Univ., Loma Linda, California.

1483. Winawer, S.J.; Streiff, R.R.; Zamcheck, N. 1967. Gastric and hematological abnormalities in a vegan with nutritional vitamin B-12 deficiency: Effect of oral vitamin B-12. *Gastroenterology* 53(1):130-35. July. [23 ref]
• ***Summary:*** Discusses a case of vitamin B-12 deficiency and megaloblastic anemia in a Seventh-day Adventist Negro female who had been a vegan for almost 50 years, since age 15. Treatment with vitamin B-12 corrected the megaloblastic anemia. Address: Mallory Gastrointestinal Lab., and Thorndike Memorial Lab., Second and Fourth (Harvard) Medical Services, Boston City Hospital; the Dep. of Medicine, Harvard Medical School, and the Dep. of Pathology, Boston Univ. School of Medicine.

1484. Holmes, Carl B.; Quade, D.; Collier, D. 1967. Comparative study of nine variables for Seventh-day Adventist and non-Adventist teenagers. *J. of Dental Research* 46(4):650-55. [17 ref]
Address: School of Public Health, Univ. of North Carolina, Chapel Hill, North Carolina, and Tennessee Dep. of Public

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Health, Nashville, TN.

1485. Lijinsky, W.; Ross, A.E. 1967. Production of carcinogenic polynuclear hydrocarbons in the cooking of food. *Food and Cosmetics Toxicology* 5(3):343-47. Aug. [2 ref]

• ***Summary:*** These substances are formed in charcoal-broiled meat. Perhaps as a result of their vegetarian diet, Seventh-day Adventists have a lower intake of benzo(a)pyrene and nitrosamines [pronounced nai-TRO-suh-meens]. Address: Div. of Oncology, Chicago Medical School, Chicago, Illinois.

1486. McCay, Jeanette B. 1967. Re: Biography and obituary of Clive M. McCay–1898-1967. Letter to Ralph for Clive McCay's memorial service at Cornell, Sept. 23. 13 p. Typed, with signature.

• ***Summary:*** This long, interesting typewritten letter is written to "Ralph," whose surname is unknown. Later it formed the solid foundation of "Clive Maine McCay (1893-1967): A biographical sketch," by J.K. Loosli, published in the prestigious *Journal of Nutrition* (Vol. 103, No. 1, Jan. 1973).

"During his first year in a study on fish blood and its relation to water pollution he wrote: "The mass of men (fail) to realize that their welfare is closely interwoven with the condition of everything that lives."

"Clive was interested in everything that lives and during his more than 40 years of scientific work he made studies of: Cold blooded animals (fish, eels, turtles), farm animals (such as dairy cows, calves, bulls, goat, sheep, pigs), laboratory animals (such as white rats, cotton rats, mice, guinea pigs, hamsters, rabbits, and monkeys), fur bearing animals (chinchillas, mink), insects (such as clothes moths, bean weevils, flour beetles, cockroaches), dogs (Cairn terriers, beagles, danes, dalmations, and old dogs over ten years of age)–and finally man [humans].

Some quotations of his: "A century ago, Sylvester Graham stumped the nation in attempts to impress upon housewives the importance of high-quality bread to their families' health, Today, poor Sylvester would probably roll his lean bones over in his long grave if he realized how little attention the average housewife pays to the nutritive value of the bread she buys."

"In addition to bread, Clive felt that other foods could also be improved. One might find him almost any day entertaining house guests... making chop suey with soy beans that he had sprouted. In the laboratory he developed a large scale bean sprouter [see illustration], and for a while he was taking down bushels of sprouted soy beans to sell at the Co-op."

"Human experience has long shown the value of temperance in the consumption of food. Luigi Cornaro (1464-1655) stressed this in the series of essays written in the late years of his life. Francis Bacon stated: 'It seems to be approved by experience that a spare diet, and almost a pythagorical,–such as is either prescribed by the strict rules of a monastical life, or practiced by hermits, which have necessity and poverty for this rule,–rendereth a man long-lived.' Such statements as these comprise the content of many of the works written about diets for the aged."

1951 in Empire State Jersey Journal: "Every pound of sugar that goes into an American home pushes off the table more than five pounds of wholesome natural foods such as milk, potatoes, and apples."

In a 1950 hearing on Poisonous Chemicals in Foods before a Congressional Committee he stated: "We have made numerous studies of the effect of these cola beverages upon the teeth of rats, dogs and monkeys... We have published data indicating that the molar teeth of rats are dissolved down to the gum line if the rats are well fed but given nothing to drink except cola beverage for a period of six months."

In 1953, in the Introduction to a paper on "Diet as a Factor in Aging he wrote: "The object of nutrition research is to discover diets that will preserve the best possible health and the greatest productivity throughout the life of man and his domestic animals. Research upon aging is not concerned with protracting the worthless years at the end of life when a senile body and a deteriorated brain make living nothing but a heavy burden."

"Almost at the beginning of his research life, Clive began the famous series of studies on prolonging the span of life through retardation of growth." The following are quotations from some of his papers:

1928–In a paper titled "The nutritional requirements and growth rates brook trout"–"The growth of the animal body has occupied the attentions of students of natural science as long as we can have historical records. It remains the outstanding concern of all those engaged in animal industry, whether they be rearing swine or trout." Yet is life span not as important as growth?

"Although Clive has been a loyal and enthusiastic Unitarian for years, he developed a great interest and respect for the dietary practices and teaching of the Seventh-Day Adventists and Jehovah's Witnesses. This also carried over to other health groups such as Friends of the Land, Natural Food Associates and those that some of his academic friends called faddists or fringe fanatics. He spent a good deal of time writing and speaking to these groups, and was always ready to welcome them in his home or laboratory.

"In general he felt that their ideas were correct and he admired their sincerity and the tenacity in actually practicing what they believed to be good nutrition. He felt that they stand as a block against the steady erosion and deterioration of natural foods by the tampering of the food industries eager to make dollars without respect to nutritive value.

"He thought that learning about food and its health values was an excellent hobby for older people, and that

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gardening was a sure way to obtain pure and wholesome diets. '... gardens are stable investments for good nutrition and health. On our small home place we even produce our own meat by raising an occasional calf and keeping a small flock of sheep. We also produce our own apples, cherries, plums, strawberries, gooseberries and currants... plus vegetables.

"There was no sharp division between Clive's professional life and his recreation and home life. His friends were his fellow workers and other scientists from near and far... He must have hiked hundreds of miles with Dr. Maynard and Dr. Sumner."

"In the garden, he would include plants in which he happened to be interested at the moment such as soybeans,..."

Reading was Clive's great delight, and if reading maketh a full man, he was very full indeed. Clive's happiest hours at Cornell were spent in the libraries. He loved to study old book catalogs and browse in second hand book stores to find treasures for his own library or for the University."

A long and very interesting section concerns four reasons for studying the history of any science. Plus several paragraphs of additional thoughts on that subject.

"When Clive was 22 years old [ca. 1920] and an instructor in Chemistry at Texas A. and M. College, he filled out an "Individual Analysis Card," which I just found among his papers. I am amazed to see how well he knew his own characteristics at this age. He checked for himself: Common sense; industry, persistence, moral courage, conscientiousness, self control and self respect–attributes that carried through his whole life.

"Likewise there were the following traits. Regularity in habits, purpose and coordination in work, ability to profit [learn] from experience, breadth of view, given to facts, lives at high tension.

"These are the same traits and characteristics that I would have checked after knowing him these 45 years. Perhaps most revealing of his personality was his answer to the questions of how he reacted to success and adversity. To the first he wrote 'elation,' to the second 'renewed energy.'" Address: 39 Lakeview Lane, Englewood, Florida.

1487. Marsh, Alice G.; Ford, D.L.; Christensen, D.K. 1967. Metabolic response of adolescent girls to a lacto-ovo-vegetarian diet. *J. of the American Dietetic Association* 51(5):441-46. Nov. [17 ref]
Address: Depts. of Home Economics and Chemistry, Andrews Univ., Berrien Springs, Michigan.

1488. **Product Name:** Extrusion Cooked Whole Soy Flour (Full-Fat).
Manufacturer's Name: Africa Basic Foods Inc.
Manufacturer's Address: Kampala, Uganda.
Date of Introduction: 1967.
New Product–Documentation: Interview with Dr. D.W. Harrison. 1982. Sold in 3 oz. and 16 oz. bags.

1489. **Product Name:** Soya Maize or Baby Formula (Unsweetened Soy Fortified Corn Flour with Nonfat Dry Milk).
Manufacturer's Name: Africa Basic Foods Inc.
Manufacturer's Address: Kampala, Uganda.
Date of Introduction: 1967.
Ingredients: Maize Flour 72%, soy flour 25%, nonfat dry milk 2%, salt 1%.
Wt/Vol., Packaging, Price: 1 lb polyethylene bags, or 2 lb or 50 lb paper bags.
How Stored: Shelf stable.
Nutrition: Protein 17%, moisture 12%.
New Product–Documentation: Economist Intelligence Unit. 1969. Demand for Soya-Based High Protein Foods in Uganda. p. 50. "Soya Maize." Harrison. 1969. Analysis of the Uganda Experience Based on Africa Basic Foods Inc. p. 18. Interview with Dr. D.W. Harrison. 1982. This product resembled CSM (Corn-Soy-Milk) and was precooked.

1490. **Product Name:** [Nutana Beeflike Slices, and Chickenlike Slices].
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1967.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. John. 1981. Adventist Food Industries: Recent Developments. Spectrum. Feb. Interview with Eric Howse. 1981. Feb. In 1981 Nutana was doing the most advanced work with soy of any Adventist food company outside the U.S. They started in the early 1960s importing spun protein fibers (SPF) from the U.S. Now they import soy fibers spun by DE-VAU-GE in Germany and use them to make a range of meat analogs. Labels in Danish, Dutch, and Finnish.

Note: This is the earliest known commercial soy product made in Denmark.

1491. Berg, Sally; Berg, Lucian. 1967. New food for all palates: A vegetarian cook book. London: Victor Gollancz Ltd. 192 p. 23 cm. [10 ref]
• ***Summary:*** The glossary of ingredients (p. 17) discusses soy sauce and recommends Kikkoman for dipping. Page 85 gives a recipe for watercress cooked in soy sauce.

Gluten is mentioned repeatedly. Granose Meatless Steaks are made of wheat gluten (p. 15-16). Klops, a typical Russian-Jewish savoury, can easily be prepared with a can of wheat gluten (meatless steaks; p. 62-63). There are also gluten recipes for: Fried gluten and eggs (p. 80). Homemade gluten. Breaded gluten sweet and sour. Breaded gluten

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pineapple. Cold breaded gluten (p. 85-87; all in the chapter on China). Curried gluten (p. 109; India). Burgers (p. 116-17; America). Protein sources (p. 178). Address: England.

1492. Loma Linda University, School of Medicine, Women's Auxiliary to the Alumni Association. 1967. An apple a day: Vegetarian cookery by doctors' wives. Pasadena, California: Typecraft Inc. & WAAA. 296 p. 23 cm. Recipe index.
• ***Summary:*** A Seventh-day Adventist lacto-ovo vegetarian cookbook. Soy-related recipes include: Tofu loaf (p. 51). Soy cheese scallops (with tofu, p. 54). Soyameat–vegetable loaf (with 1 lb. Soyameat Chicken Style, p. 95; many recipes on pages 95-103 use Soyameat, which comes in 13 oz cans or frozen, and is made by Worthington Foods). Roasted soybeans (Nepalese, p. 258). Soy cheese roast (Korean, with tofu, p. 268). Chop Chai #1 (Korean mixed vegetables with 2 cups soy bean threads, p. 269). Pineapple soy chicken curry (Polynesian, with Chicken Style Soyameat, p. 274). Polynesian soya meat with cling peaches (with Chicken Style Soyameat, p. 274). Address: Loma Linda Univ., School of Medicine, Los Angeles, California.

1493. Marsh, Edward E. 1967. How to be healthy with natural foods. New York, NY: Gramercy Publishing Co. 157 p. No index. 21 cm. [23 ref]
• ***Summary:*** The message of this unusual, copycat book on "natural foods" is largely borrowed from Linda Clark, Adelle Davis, Carlton Fredericks, Gayelord Hauser, D.C. Jarvis, and other health-food authors of the 1950s and early 1960s. The book has no clear publication date, no index, and we are told nothing about the author. It advocates a diet based on fatty meats plus various "extraordinary foods" such as apple cider vinegar, honey, bone meal, brewer's yeast, lecithin, sea kelp, sunflower seeds, and yogurt.

Soybeans are mentioned as follows: Most vegetable proteins (except soybeans, sunflower seeds, peanuts and a few other foods) do not contain all the essential amino acids in the correct amounts to be first-class or complete proteins. Be sure that at least two-thirds of your protein intake comes from animal protein; the other third can come from other complete proteins such as soya products (p. 22-23). Soybeans are listed as a good source of vitamin D (p. 43), B-complex vitamins (p. 44), vitamin B-1 (p. 47), choline (p. 51), folic acid (p. 51-52), niacin (p. 53-54), pantothenic acid (p. 54-55), vitamin C (p. 60), vitamin E (p. 66), vitamin F (soybean oil, p. 67-68, 71), calcium (p. 76), copper (soy flour, p. 78), magnesium (soy flour, p. 83), and phosphorus (p. 84).

Lecithin, one of the "extraordinary foods," is "not a drug, but a granular form of soybean lecithin, free from objectionable elements." It can help relieve stress, quiet nerves, promote good health, improve mental poise, and induce a renewed feeling of well-being. Lecithin is found only in natural foods, such as soybean oil (p. 95-97).

Note: Edward Marsh was born in 1900. This edition was published by Gramercy, a division of Crown Publishers, Inc., by arrangement with Arco Publishing Co., Inc. Copyright Arc Books Inc., 1963. Library of Congress Catalog Card No. 67-14909. On the rear cover is a full-page ad for *The Soybean Cookbook*, by Dorothea Van Gundy Jones.

1494. Mozar, Harold N.; Farag, S.A.; Andren, H.E.; Peters, J.R. 1967. The mental health of Seventh-day Adventists. *Medical Arts and Sciences* 21(2):59-63, 65. [3 ref]
• ***Summary:*** This study of 265 white Seventh-day Adventist church members and an equal number of white nonmembers suggests that abstention from alcoholic beverages, tobacco, and meat can be consistent with good mental health. Address: 1. Chief, Dep. of Medicine, Brooke General Hospital, Fort Sam Houston, Texas.

1495. *SoyaScan Notes.* 1967. Chronology of the work of Arran Stephens with natural foods, vegetarianism, and Lifestream Natural Foods Ltd. (Vancouver, then Richmond, BC, Canada). Part II (1967–1971). 24 Sept. 1992. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** Continued: 1967–Arran begins his first food business when he starts the Golden Lotus restaurant at 2936 West 4th Ave. (at Bayswater), Vancouver. Serving natural, vegetarian and macrobiotic foods, it is the city's first vegetarian restaurant. Before he left India, his Master had encouraged him to take up this "right livelihood" and promised to extend "all feasible help, both inside and outside." A place was found and the necessary money appeared as if by magic. Most of the workers were spiritual seekers. All lived upstairs, above the restaurant.

Arran was one of the cooks; he had learned how to cook brown rice, veggies, hijiki, wakame and miso soup while working as a waiter at the Paradox Restaurant in New York City in 1964; he learned the rest by trial and error, including the use of macrobiotic and vegetarian cookbooks such as *Vegetarian Cookery*, by Pietro Rotondi, and (later) *Ten Talents* by Frank and Rosalie Hurd.

"Amazingly, the rather monastic rules–including regular meditation and celibacy–were accepted and enthusiastically followed. In the communal setting, all worked without pay for the first 9 months. "Before the year was out, bills and loans were entirely repaid and all began receiving hourly wages, benefits, room and board. The numbers attending our weekly satsangs outgrew the upstairs, and the venue shifted downtown to the YMCA." One photo shows Arran standing in front of the Golden Lotus restaurant in 1968 and another standing inside in 1969.

1968 Oct.–Arran and three others return to India to be with Master Kirpal Singh, having received his written permission. On the way they visit Ram Das (the former Richard Alpert) who was in retreat at his father's large New Hampshire estate. In India Arran lives close to Kirpal Singh.

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The Master will not initiate those who beg for food, only those who earn an honest living.

1969 March 4.–Arran, with the Master's blessing, marries an Indian woman, Rattan Mala Bagga, age 22, in a traditional Sikh marriage. She comes from a good family, has an M.A. degree, and is a lecturer at a girls' school in Moradabad. The Master, who changes her name to Ratana ("jewel") encourages family life and the tender bonds of matrimonial love and responsibility.

1969 April–Arran and sari-clad Ratana return to Vancouver, Canada, after nearly 6 months in India. He has changed from ascetic to householder. They settle into a little room above the restaurant, sharing a bathroom with 14 others and working, on average, 12-16 hours a day to get the restaurant firmly established. In May and December, Kirpal Singh writes with wise advice. As a result: "In three months we saved $1,000 to make a down payment on a little two-bedroom house with a garden. Ratana was already pregnant with our first child, and we had had our fill of communal living."

"Considerable agitation began among the more left-leaning workers to turn the Golden Lotus into a commune. After a lot of soul-searching, we decided to make a clean break, and sold the restaurant to the group for a paltry $3,000, wishing them all success." Soon after the Golden Lotus restaurant became defunct.

1970 Jan.–Arran opens a little store named Jyoti Importers and Natural Foods at West 4th Ave., near Yew Street on the same street as the Golden Lotus, but on top of the hill. He sells "Indian bedspreads, clothing, classical musical instruments, and healthy and organic foods. Food soon edged out the other wares. It became obvious that my destined vocation was connected to organic foods and wholistic living." After several years of growth, the business moves into a much larger building at 1813-1817 West 4th Ave., a corner location and opens as Lifestream Natural Foods on 1 Jan. 1971. Then Lifestream expanded to a second store on Broadway at Traflagar (See: *Shared Vision* 1990, p. 9).

1970 April 4–Arran and Ratana's first child is born at St. Paul's hospital in Vancouver by natural childbirth. Master telegrammed. "You may name the baby Shanti" (the ancient Sanskrit word for "peace"). Note: All the Stephens' children were born at this same hospital. Arran writes: "I was present at the miracle of each birth. On the birth of two of our children, Ratana was blessed with the vision of our Master, and she also experienced great light within."

1970 spring–On an impulse, Arran gives half of his business, Jyoti, to Peter Harwood, his friend and fellow disciple of Kirpal Singh; Peter becomes a working partner.

1970 June–Arran attends the founding meeting of Organic Merchants (OM), held outdoors on the side of Mt. Shasta. Lifestream becomes one of the founding members. OM was the first trade association for natural food retailers on the West Coast and the first organic trade association. Arran also remembers OM meetings at Blake Rankin's, at Lifestream, and at Pajaro Dunes.

1971 (1990 Shared Vision article says Lifestream opened 1970 Jan. 1). Jan. 1–Arran opens Lifestream Natural Foods in Vancouver, British Columbia, Canada, just north of the U.S. border, at 1813-1817 West 4th Ave. (at Burrard). It is Canada's first large natural foods retail store. His father suggests the name. "Free fresh carrot juice drew in crowds; an electric powered 20-inch stone-buhr mill, visible through a window from the street, ground tons of fresh whole-grain flour every day; alfalfa sprouts were grown in our nearby warehouse / factory; fresh nut butters were roasted and milled to order; natural candy bars and cookies were extruded and baked; egg-free cakes and muffins popped from the ovens; pies, crunchy granola, bulk foods, and wholesome artisanal breads were baked and sold by the hundreds. These were all firsts in Canada." The inspiration came from many sources, but was not macrobiotic. The Lifestream brand was represented by a woman gathering sheaves of wheat into a basket. "Teachers brought classes of school children on tours to see how wholesome foods were made. The store became so busy that it was often difficult to wade through the crowds of shoppers and hangers-on... Sales doubled every year for seven years, and the business quickly branched out into wholesale distribution."

1971 or 1972–A separate small vegetarian restaurant, named Mother Nature's Inn (MNI) was started as a *separate* business in the rear of the large retail store (on West 4th Ave.) by Victor Yankowich,..." But after about a year MNI was purchased from Victor (for a pittance) for Ratana, who showed her business skills by running it very successfully and profitably. The company's best-known products are its line of Essene sprouted grain breads–moist, heavy, and delectable.

1972–Lifestream opens its own Bread of Life bakery (100% owned by Lifestream) in North Vancouver because of the area's scarcity of organic and natural baked items. The original Lifestream Essene Bread, developed by Arran at that bakery, was one of the Lifestream's first baked products. Essene Bread was always made with organic grain–from the Alvin Scheresky and David Orchard organic grain farms in Saskatchewan province.

A 1971 color photo shows Arran, smiling, holding a loaf of Essene Bread.

1971–At about this time Lifestream Natural Foods Ltd. moves to 724-26 W. 6th Ave., Vancouver 9, BC, Canada. This was a combination headquarters, warehouse, manufacturing and packaging facility. It housed a flour mill, alfalfa sprout operations, nut butter operation, tamari nut roasting and packaging, plus packaging a wide range of organic grains, beans, nuts, seeds, flours, etc. When this facility opened, the only other Lifestream operation was the retail store.

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1971–Since there was a scarcity of natural and organic foods, Lifestream began to do wholesale distribution. Frank Ford, founder of Arrowhead Mills in Texas, appointed Lifestream as distributor in Canada for the entire Arrowhead Mills' range of organic grains, beans, flakes, hot cereals, and flours. Hundreds of products were developed and marketed under the Lifestream brand: Breads, other baked goods, fruit & nut-based energy bars, juices, trail mixes, tamari roasted nuts and seeds, preserves, yogurt, granolas, mueslis, sprouts, soyfoods, expeller-pressed oils, and a wide range of imported Japanese macrobiotic products. During the 1970s Lifestream's profits came from a blend of manufacturing, wholesaling, and retailing–but not even the accountants knew what percentage of the total came from each of these activities. Continued. Address: 724-26 W. 6th Ave., Vancouver 9, BC, Canada.

1496. **Product Name:** Prime Stakes: A Vegetable Protein Product.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085. Phone: 800-628-3003.
Date of Introduction: 1967?
Ingredients: Textured vegetable protein (soy protein concentrate and isolate, wheat gluten), egg whites, soybean and/or corn oil, flavorings (hydrolyzed vegetable protein, onion, turmeric, spice, spice, salt, extractives of celery & spice), potatoes, partially hydrogenated soybean and cottonseed oil, modified corn starch, oat flour, wheat flour, modified tapioca starch, yeast extract, caramel color, onion, carrageenan, niacinimide [niacinamide], iron (as ferrous sulfate), vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12.
Wt/Vol., Packaging, Price: 13 oz (368 gm) can. Retails for $2.35 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1980. Sept. 11.

Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19.

1497. Sanford, David. 1968. Unfoods: Do you know what you're eating? *New Republic* 158(2):13-15. May 18.
• ***Summary:*** Discusses (critically) the meat-like products made by Thomas J. Lipton Co., Loma Linda Foods, Worthington Foods, and General Mills (Bac*Os). "Swift & Co. markets a soy larded chili, salisbury steaks, canned meat loaf and sloppy joes to restaurants, which call them pretty much what they like.

"The transforming of soy protein into edibles involves, in the case of Worthington Foods, General Mills and Ralston Purina a process licensed by Robert Boyer, an inventor and

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protégé of Henry Ford." Note: No mention is made of Loma Linda using spun soy protein fibers. Many legitimate issues regarding the labeling of modern soy protein products are raised.

"Bac*Os, the bacon-like bits test marketed over the past 18 months in Denver [Colorado], Buffalo [New York] and Sacramento [California], is about to be advertised nationally. Two years ago a token quantity of Bac*Os was seized by the Food and Drug Administration in Buffalo and a case was brought in the US Federal District Court (Western Region) in New York to force General Mills to identify their product as 'imitation bacon.'...

"Bac*Os bottles didn't say that Bac*Os were bacon, just that they were a lot *like* bacon... Its label now reads 'Crispy Bontrae bits with a flavor like bacon.' Bontrae, the label explains, is a registered trademark for a vegetable protein product. Arthur Odell, who manages General Mills' isolated protein program, thinks that that is sufficient."

1498. Hurd, Frank J.; Hurd, Rosalie. 1968. A good cook–Ten talents. Chisholm, Minnesota: Published by the authors. Printed by The College Press, Collegedale, Tennessee 37315. 354 p. Illust. Color plates. No index. 22 x 15 cm. Spiral bound. [1 ref]

• ***Summary:*** A very important (after errors in the 1st printing were fixed), pioneering, indeed classic American vegan cookbook, which uses no animal products (except in one chapter at the end titled "Recipes Using Milk and Eggs," "for those who are in the transitional period. However, we encourage all those who still cling to milk and eggs to become acquainted with the facts concerning their use, and become weaned through this process"). Some recipes also use honey.

Contains more than 750 unique recipes (plus color photos), including many innovative soy recipes, including the first recipe for shakes made with soy milk ice cream.

In the Glossary (p. 11-17) are entries for lecithin (p. 13; "A food extracted from the soybean"), soybeans (p. 15-16), and tofu (p. 16), as well as agar-agar, almonds, carob, cashew nut, coconut, dulse, flaxseed, malted nuts (made from peanuts and cashew nuts with dry malt added), nuts, oils, peanut, sea kelp or dulse, sesame seed, and sesame tahini. A color photo (p. 55) shows soy sprouts. Soy-related recipes include: Homemade soy coffee (p. 66). Soybeans milks (p. 69; No. 1 costs $0.06/quart homemade. "Soybean pulp [okara] which remains can be made into various dishes. Try Soy Not-Meat," p. 202; No. 2 uses 1 cup plain soya starter). Banana milk shake (with chilled soy milk, p. 70). Banana carob milk shake #1 or #2 (with soy milk, p. 72). Molasses milk shake (with soy milk, p. 72). Soy-fig milk (p. 72). Milkless milk shakes (with non-dairy ice cream incl. soy milk powder, p. 72-73). Soy yogurt, cultured (p. 73-74; 3 recipes–made from whole soybeans, liquid Soyagen, or soy starter). Soya bread or rolls (p. 80). Vanilla ice cream (with

soy milk powder optional, p. 125). Pineapple ice cream (with soy milk powder, p. 127). Banana soya ice cream (with rich soy milk, p. 128). Sesame soy cookies (p. 131, with 1½ cups raw sesame seeds). 7 grain granola (with 1 cup soy flour, p. 156). Easy granola (with soy flour, p. 157). Soy-millet patties or loaf (p. 182). Vegetable-nut loaf (with soy milk, p. 186). Green soy beans (p. 187; dry, green-seeded soybeans). Buckwheat, soy or whole wheat spaghetti (p. 192). Soybean curd #1 (homemade tofu using whole soybeans, curded with Epsom salt, p. 195). Soybean curd #2 (from soy flour, curded with lemon juice, p. 196). The tofu-making process is shown in six black-and-white photos. Ways to serve tofu (p. 196). "Scrambled eggs" (made with tofu, egg-free, p. 196). Tofu loaf (p. 198). Chinese nut loaf (with soymilk, p. 198). Vegetarian chow mein (with soy sprouts, p. 199). Peanut-soymeat (with soy flour, p. 200; steamed for 2-3 hours in greased cans). Soy not-meat (p. 202, with soaked ground soybeans or "the soybean pulp from the soy bean milk. This way the pulp is not wasted" [i.e. okara]). Peanut-soy round (p. 202). Soy meat (p. 203; made with 2 cups homemade gluten, 1 cup toasted ground peanuts, and 1 cup soaked

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blended soybeans, plus water, seasonings, oil and salt, steamed for 3 hours in greased cans). Soya peanut soufflé (p. 204). Soybean soufflé (p. 204). Tofu & rice croquettes (p. 206).

The chapter titled "Nuts, seeds, olives" (p. 209-20) includes: Glossary of nuts, raw nuts for your enzymes, nut notes, almond butter (king of the nuts), raw nut butters, cashew nut butter, cashew Brazil-nut butter, peanut butter, nut butter clusters, peanuts–oven blanched, dry roasting–soya nuts, malted nuts, browned sesame seeds, seed cereal topping (sunflower seeds, sesame seeds, flax seed), peanut butter-seed spread (tahini, sunflower seeds), peanut butter balls, simple sesame squares, sprouted sunflower clusters, olives, tree chestnuts, roasted chestnuts, roasted chick peas.

Note 1. This is the earliest document seen (Dec. 2013) that uses the term "dry roasting" to describe how soybeans are roasted, or that contains the term "Dry Roasting–Soya Nuts" (p. 217).

Green soy bean salad (p. 234; probably dry, green-seeded soybeans). Soybean sprouts salad (p. 234). Tofu cheese salads (p. 235). Tofu sun faces (p. 236). Pineapple tofu salad (p. 245). Pineapple tofu cottage cheese (p. 246). Lo-fat salad dressing (with soy yogurt, p. 251). Soy mayonnaise–eggless (4 types, p. 252-53). Soy butter (made with soybean flour, lightly dextrinized, p. 262). Soya starter (made with soy flour, p. 262). Soya yeast sandwich spread (p. 263). Super sandwich spread (with soybean pulp [probably okara, see p. 69], p. 264). Pimento-soy chee spread (p. 265). Sour cream–soy (p. 270). Soy whipped cream (p. 271; whirl in a blender ½ cup each soybean milk and soy oil, plus 1 tablespoon honey, ¼ teaspoon vanilla, and a pinch of salt). Tartar sauce, cheese (with soy mayonnaise and tofu, p. 273). Sprouts (p. 291-95). Fresh cucumbers with soy sour cream (p. 304). Celery and green soyas (p. 312; "2 cups green soy beans, frozen, canned, or fresh." Probably means green vegetable soybeans). Soya starter (base, made with soy flour, p. 326; keep a jar ready for quick use in making tasty spreads, milk and cream, mayonnaise, a binder when nut butter is not available. Dextrinizing the soy flour gives this Soya Starter a nutlike flavor).

Talk with Rosalie Hurd. 1991. June 3. *Ten Talents* is now going into its 44th printing. More than 250,000 copies have been sold. The latest was published by College Press in 1985. The first edition was published in May 1968. Frank, originally a chiropractor, is now a medical doctor. The Hurds now live most of the year in Fountain City, Wisconsin, where they run Alpine Springs, a live-in lifestyle program and center on 585 acres of land offering treatment and education in natural health.

Note 2. This is the earliest cookbook seen (Oct. 2013) that contains a recipe for soy sour cream. For the basic recipe: Pour 3/4 cup soy bean milk into a blender. Gradually add 3/4 cup soy oil until desired thickness is reached. Stir in 1-2 tablespoons lemon juice and ¼ teaspoon salt. Chill. "Delicious on fresh cubed cucumbers with a dash of dill." An alternative recipe calls for the use of: ½ cup soy starter (not dextrinized, see p. 69, 262), ¼ cup water, and ½ teaspoon honey.

Note 3. This is the earliest English-language document seen (Nov. 2003) that contains the word "Soymeat" (p. 200), or the term "Soy Not-Meat," or the term "Soy Meat" (p. 203) as a recipe name.

Note 4. This is the earliest dated English-language document or book seen (Sept. 2012) that contains the modern term "Soy yogurt."

Talk with Rosalie and Dr. Frank Hurd. 2005. Feb. 9. Both have moved to Oregon to warmer weather. They have a daughter there. *Ten Talents* is now in its 48th printing. They are working on a revision. He was born in March 1936 and she in April 1937.

Talk with Rosalie Hurd. 2009. Jan. 19. Frank is still working as a doctor and she as his helper. They are both in good health. The greatly enlarged 40th anniversary edition of *Ten Talents* has been published and is now available.

The term "Ten Talents" comes from the teachings of Ellen G. White: "The one who understands the art of properly preparing food, and who uses this knowledge, is worthy of higher commendation than those engaged in any other line of work. This talent should be regarded as equal in value to ten talents; for its right use has much to do with keeping the human organism in health. Because so inseparably connected with life and health, it is the most valuable of all gifts" (Ellen G. White, *Counsels on Diet and Foods*, p. 251). Address: 1. D.C. [Doctor of Chiropractic]; 2. B.S. Both: Box 86A–Route 1, Chisholm, Minnesota 55719.

1499. Wokes, F. 1968. Proteins. *Plant Foods for Human Nutrition* 1(1):23-42. May. [19 ref]
• ***Summary:*** Almost half of the plant proteins consumed by humans come from cereal grains. Address: The Vegetarian Nutritional Research Centre, Watford, Herts. [Hertfordshire], England.

1500. Wokes, Frank. 1968. Our aims [in starting publication of the journal Plant Foods for Human Nutrition]. *Plant Foods for Human Nutrition* 1(1):3-6. May. [5 ref]
Address: The Vegetarian Nutritional Research Centre, Watford, Herts [Hertfordshire], England; Editor of the new journal.

1501. West, Raymond O.; Hayes, Olive B. 1968. Diet and serum cholesterol levels: A comparison between vegetarians and nonvegetarians in a Seventh-day Adventist group. *American J. of Clinical Nutrition* 21(8):853-62. Aug. [13 ref]
• ***Summary:*** "The serum cholesterol levels and the dietary habits of a voluntary study group of 466 Seventh-day Adventists in a Washington, DC suburban area were compared to determine the influence of diet on serum

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cholesterol levels in an adult population whose only environmental differences related to dietary practices–adherence to vegetarianism. This study matched vegetarians with nonvegetarians from the same base population according to several physical and demographic variables–place of residence, age, sex, marital status, height, weight, and occupation–and examined the effects of various levels of meat, fish, and fowl consumption (degrees of nonvegetarianism) on serum cholesterol levels. With the exception of those under 25 years of age, the results showed that the nonvegetarians had higher serum cholesterol levels than the vegetarians." As the degree of nonvegetarianism increased, serum cholesterol levels also increased.

1502. *Los Angeles Times.* 1968. New ideas on food will be presented. Sept. 29. p. SG_B12.
• ***Summary:*** San Gabriel, California–A series of four classes in food preparation and nutrition is open to the public as a free service of Seventh-Day Adventist Churches in the San Gabriel Valley.

They will be held on Monday through Thursday, Sept. 30 to Oct. 3, from 7:30 to 9:30 p.m. at the San Gabriel Academy auditorium.

Dorothea Van Gundy Jones, lecturer for the International Nutrition Research Foundation (Loma Linda, Calif.), will give the presentations.

1503. Amundsen, Wesley. 1968. Experience of the Seventh-day Adventist Church in North America. *American Annals of the Deaf* 113(4):896-97. Sept.
• ***Summary:*** The author admits that in both the educational and evangelical arenas, "The Seventh-day Adventist Church in North America has been rather delinquent in past years in meeting the challenge within its own ranks for a positive approach to the education of deaf children of Seventh-day Adventist parents... Presently our Church employs only three full-time ministers in service to the deaf,–two in California and one in Oregon." Neither food nor diet are discussed. Address: Secretary of the North American Missions Committee of the North American Div. of the General Conference of Seventh-day Adventists.

1504. *British Vegetarian.* 1968. History of vegetarianism in North America. Sept/Oct. p. 396-98.
• ***Summary:*** Canada: In 1911 a small organization named the Food Reform League was formed in Toronto. Meetings were held at the home of Miss E.M. Budd. When World War I began, meetings were discontinued in favor of war work.

In July 1945 Professor Arthur Stevenson initiated discussions of the formation of a vegetarian society. Later in 1945 the Toronto Vegetarian Association was established. Membership, which cost $2.00 a year, included a subscription to *The American Vegetarian.* The three presidents from 1945 to 1952 were Mr. F. Mathews, Mr. Don Scott, and Mr. Lee Pritzker. The Association's first newsletter began publication in 1954, edited by Mr. C. Pratt. An official charter was taken out in about 1955 in the name of the Toronto Vegetarian Association. In 1949 a Vegetarian Convention was held at Lake Geneva, New York, USA, and attended by several Canadians. After this the Canadian Vegetarian Union was formed. The membership began at 140 and gradually rose to about 600. The High Park Sanitarium was opened from 1907 to 1922. One Unit was founded in Calgary and another in Ottawa.

United States: Following the formation of the Vegetarian Society in Manchester, England, in 1847, the Rev. William Metcalfe was inspired to travel to America to start a similar society. He had emigrated to Philadelphia in 1817 with 41 fellow members of the Bible Christian Church, which had been founded in England by the Rev. W. Cowherd and Mr. Joseph Brotherton, M.P.; among its conditions of membership was abstinence from flesh foods and alcohol. Rev. Metcalfe held an exploratory meeting in New York in 1850.

Among the early advocates and practitioners of vegetarianism in America were Sylvester Graham, Dr. James C. Jackson, Horace Greeley, R.T. Trall, and Dr. John H. Kellogg.

One of the oldest societies still in operation is the Washington Vegetarian Society, which was organized in 1927. "The American movement is not large, but it is well served by its devoted members.

National organizations are: (1) The American Vegetarian Union, Inc., Duncannon, Pennsylvania. President: Dr. Jesse Mercer Gehman. Periodical: *American Vegetarian-Hygienists,* (2) American Natural Hygiene Society, Los Angeles, California. (3) Vegetarian Society, Inc., Hollywood, California. President: Dr. Pietro Rotondi. (4) Vegetarian Youth Movement, Los Angeles, California. c/o Dr. William A. Harris. (5) American Vegan Society, Malaga, New Jersey. Mr. H. Jay. Dinshah.

The addresses of the following local societies are given: Boyes Hot Springs, California. Chicago, Illinois. Erie, New York. Los Angeles, California (Mr. A. Abramowitz). Dearborn, Michigan. St. Paul, Minnesota. New York City, New York. San Francisco, California (Mr. D. Murphy). Washington, DC.

1505. Chen, Philip S.; Chen, Helen D. 1968. Soybeans for health, longevity, and economy. 3rd ed. South Lancaster, Massachusetts: The Chemical Elements. xii + 242 p. Nov. Illust. Index. 21 cm. 1st ed. 1956. [24 ref]
• ***Summary:*** This book is identical to the original 1956 edition, third printing. Address: 1. Prof. of Chemistry, Atlantic Union College, South Lancaster, Massachusetts; 2. National Science Foundation Fellow, Cornell Univ.

1506. Chen, Philip Stanley; Chen, Helen D. 1968. Soybeans

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for health, longevity, and economy. 3rd ed. St. Catharines, ONT, Canada: Provoker Press. ix + 242 p. Illust. Index. 21 cm. [24 ref]
• ***Summary:*** This is a reprint of the 1956 edition published by The Chemical Elements (South Lancaster, Massachusetts)–except that Appendix B has been updated using the 1961 Soybean Blue Book.

On the copyright page is a detailed print history of this book: Copyright 1956, 1962 Philip Chen. Second printing, April 1957. Third printing, June 1959. Second edition, Jan. 1962. Third edition, Nov. 1968. Second printing, July 1970. Third printing, July 1975. Address: 1. Head of the Chemistry Dep. and Chairman of the Div. of Biology and Chemistry, Atlantic Union College, South Lancaster, Massachusetts; 2. National Science Foundation Fellow, Cornell Univ.

1507. Jones, Dorothea [Van Gundy]. 1968. Re: Death of her husband, Ed Jones. Letter to friends before Christmas, Dec. 20. 1 p. Typed.
• ***Summary:*** "Most of you know that Ed died, March 7, very suddenly. He seemed fine all day and about 15 minutes after we were in bed he relaxed and was gone with no pain or struggle. I believe he didn't know what happened. It's a blessing he didn't suffer–it is truly a wonderful way to go, but a terrific shock to those left.

"There is so much to be thankful for–seven and a half years of wonderful memories. Ed was such a happy, active companion–always traveling with me to classes. He made such a contribution to the cooking schools that it has been hard to adjust to doing them alone.

"Another thing I'm thankful for is Ed's wonderful family. They still belong to me. Thanksgiving was spent with Lois and George Bower in Redding. They are fine..." Address: 11776 Carmine Dr., Riverside, California 92505.

1508. *SoyaScan Notes.* 1968. Chronology of soybeans, soyfoods and natural foods in the United States 1968 (Overview). Dec. 31. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** 1968, March. Saci, a liquid soymilk in chocolate and caramel flavors, launched by Coca-Cola Industrias Ltda. in Brazil. Indicates growing interest in commercial soy beverages in Third World countries.

1968, April. First Workshop on Soybean held in New Delhi by the Indian Council of Agricultural Research.

1968, April. *Aerobics* by Dr. Kenneth Cooper published. The book soon becomes a major force in America's new wave of interest in health, fitness, and jogging.

1968, May. Conference on Protein Rich Food Products from Oilseeds held by the USDA in New Orleans, Louisiana. Oilseed proteins are increasingly seen as the answer to the "protein crisis."

1968, May. *Ten Talents* self-published by Frank and Rosalie Hurd of Chisolm, Minnesota. An early vegan cookbook (using no meat, eggs, or dairy products) with many innovative soy recipes.

1968. *International Action to Avert the Impending Protein Crisis,* a United Nations publication, recommends soybeans as the single most promising protein source to close the "protein gap."

1968, Aug. Erewhon starts importing foods from Japan, initially from Muso Shokuhin, then later by correspondence with Mr. Akiyoshi Kazama, who worked for an import/export company named Mitoku, which sold no food at that time. The initial orders include red miso (made by one of George Ohsawa's cronies) and natural shoyu made by Marushima. These soon become high-volume items.

1968. *Plant Foods for Human Nutrition,* a scientific journal, starts publication from the Vegetarian Nutritional Research Centre, Watford, Herts, England. Runs many articles on soy nutrition and on vegan diets.

1509. **Product Name:** School Porridge (Sweetened Soy-Fortified Corn Flour).
Manufacturer's Name: Africa Basic Foods Inc.
Manufacturer's Address: Kampala, Uganda.
Date of Introduction: 1968.
Ingredients: Maize flour 63%, soy flour 20%, jaggery raw sugar 15%, salt 1%, nonfat dried milk 1%.
Wt/Vol., Packaging, Price: 1 lb polyethylene bags, or 2 lb or 50 lb paper bags.
How Stored: Shelf stable.
Nutrition: Protein 14.1%, moisture 11.0%.
New Product–Documentation: Economist Intelligence Unit. 1969. Demand for Soya-Based High Protein Foods in Uganda. p. 50. Harrison. 1969. Analysis of the Uganda Experience Based on Africa Basic Foods Inc. p. 18-19. Interview with Dr. D.W. Harrison. 1982.

1510. **Product Name:** [GranoVita Sausages (Regular, or seasoned Frankfurter Style)].
Foreign Name: GranoVita Soja-Wuerstchen (Regular, or nach Frankfurter Art).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1968.
Ingredients: Vegetable oils and fats, water, soya protein, egg protein, onions, natural spices, wheat gluten, salt, glucose, yeast, rolled oats, bread crumbs.
Wt/Vol., Packaging, Price: 275 gm can of either wholesales for DM 6,30; 140 gm can for DM 4.
How Stored: Shelf stable.
New Product–Documentation: Full-page ad for 8 granoVita soy products in the book by Manfred Heide. 1977. *Vegetarische Ernährung: 193 Rezeptvorschläge und*

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Speisepläne für ein Vierteljahr [Vegetarian nutrition and food: 193 recipe suggestions and meal plans for a quarter of a year]. Stuttgart, West Germany: Paracelsus Verlag.

DE-VAU-GE leaflets. 1980? Rezepte aus der GranoVita Versuchskueche. And Neue Rezepte mit Soja-Wuerstchen Frankfurter Art. "Did you know that soyfoods (Soja-Kost) are free of cholesterol and low in purines?" Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p.

Letter from H.J. Gruetzmann of DE-VAU-GE. 1981. May 18. "Our company started producing foods in 1899. Our first Soja-product was produced around 1970. We started with Soja-sausages. Our current Soja-line contains Soja-cutlets, Soja-sausages, Soja-ready-dish, and Soja spreads. Our most popular products currently are the sausages and the cutlets, followed by the spreads and the ready-dish (Fertiggerichte). We are enclosing our current price list, where we marked the Soja-products. Note: At the top right of the letterhead and price list is written, in large letters, "granoVita."

Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products.

Form filled out and Labels sent by DE-VAU-GE. 1990. June 11.

1511. **Product Name:** Loma Linda Canned Meatless Slices (Based on Spun Soy Protein Fiber) [Chicken-Like Slices, Beef-Like Slices, Turkey-Like Slices, or Luncheon-Like Slices].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1968.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Loma Linda probably purchased the spun soy protein fibers from General Mills. Sold in 14-ounce cans. Note: This is the earliest commercial product seen (June 2007) that is a meatless alternative to turkey (one of six products).

1512. **Product Name:** Loma Linda Luncheon Slices (Frozen and Meatless; Based on Spun Soy Protein Fiber) [Chicken Slices, Smoked Beef-like Flavor, Corned Beef-like Flavor, Smoked Turkey Flavor].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1968.
How Stored: Frozen (in 1973).
New Product–Documentation: It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. Luncheon slices are frozen products that come in smoked beef-like flavor, corned beef-like flavor, and smoked turkey flavor. They are based on spun soy protein fiber, which Loma Linda probably purchased from General Mills.

Sold frozen in 1 or 2 lb packages. Note: This is the earliest commercial product seen (Aug. 2002) that is a meatless alternative to turkey (one of six products).

1513. **Product Name:** Loma Linda Soy Fortified Cereals [Ruskets, or Ruskets Crunchy].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1968.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: H.F. Meyer. 1960. Infant foods and feeding practices. A photo (p. 82) shows these two canned products. A photo of a baby's face appears on the front panel of each. See also p. 88 and 90. Page 121 gives a detailed analysis of the product. The powder, after being reconstituted, contains: Fat 3.2%, protein 2.85%, carbohydrates 5.4%. Calories per ounce: 18. Added vitamins and minerals: ferrous sulphate, calcium carbonate, dibasic calcium phosphate. Affected by terminal sterilization: No. How formulated or reconstituted: 1 vol. milk to 7 vols. water. Chemical definition and essential clinical uses: "Contains soya bean solids, dextrose, maltose, dextrins, sucrose, soya oil. A spray-dried soya food to serve the nutritional needs of the bottle-fed infant. Completely soluble and formulated to simulate human milk. Used for infants allergic to dairy milk."

1514. **Product Name:** Loma Linda VegeCuts.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1968.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Seventh-day Adventists. Food Service Improvement Committee. 1968. "Dining delightfully: Tested recipes from Adventist hospital chefs." Loma Linda VegeCuts are mentioned.

Loma Linda Food Co. 1969. "Wholesale Price List." Vegecuts are now sold in 14 oz, 20 oz, 30 oz, and 48 oz cans.

1515. **Product Name:** Luncheon Slices, or Frozen Roll [Meatless Corned Beef, Meatless Smoked Beef, or Meatless Smoked Turkey].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1968.
Ingredients: Meatless Corned Beef: Textured vegetable protein (soy protein isolate, wheat gluten and flour), egg

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whites, soybean and/or corn oil, partially hydrogenated soybean and coconut oils, flavorings (hydrolyzed vegetable protein, yeast extract, garlic and onion powder, natural smoke flavor, artificial flavors, spice), sugar, salt, artificial colors, disodium guanylate, disodium inosinate, niacinamide, etc.
How Stored: Frozen.
New Product–Documentation: *Soybean Digest Blue Book.* 1968. p. 110. "Luncheon Slices." Manufacturer's catalog. 1984, undated. Frozen Products. Label reads: "Vegetable Protein Slices. Rich in Vegetable Protein. Artificial Flavor."

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. The ingredients in the Meatless Corned Beef (rolls, or luncheon slices) are those given above. Note: This is the earliest commercial product seen (Aug. 2002) that is a meatless alternative to turkey (one of six products).

1516. **Product Name:** Holiday Roast (Meatless Turkey-like Product Based on Spun Soy Protein Fibers).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1968.
How Stored: Frozen.
New Product–Documentation: *Soybean Digest Blue Book.* 1968. p. 110. Perhaps later renamed Dinner Roast (1980).

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. Holiday Roast is a frozen turkey-like product based on spun soy protein fiber.

Worthington Foods. 1989. "The Tradition of Healthy Foods" (50th anniversary booklet). p. 21-22. Worthington's first products made with spun soy protein fibers were White Chik, Beeflike, Prosage, Stripples, and Holiday Roast (with a plastic wishbone). All were hits and sales took off. These products were sold frozen. In "October 1963 a series of television, radio and newspaper advertisements featuring the new frozen foods was introduced." Note: This is the earliest commercial product seen (Aug. 2002) that is a meatless alternative to turkey (one of six products).

1517. **Product Name:** Turkey Style.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1968.
New Product–Documentation: *Soybean Digest Blue Book.* 1968. p. 110. Note: This is the earliest commercial product seen (Aug. 2002) that is a meatless alternative to turkey (one of six products).

1518. **Product Name:** Smoked Beef (Meatless).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1968.
Ingredients: Soybean protein, water, wheat protein [wheat gluten], corn oil, vegetable shortening, egg albumin, wheat flour, yeast extract, hydrolyzed vegetable protein, flavorings, salt, corn syrup solids, MSG, caramel, U.S. certified color.
How Stored: Frozen.
New Product–Documentation: *Soybean Digest Blue Book.* 1968. p. 110. "Luncheon Slices."

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 164. Lists the ingredients in "Smoked Beef (Worthington)." This is an institutional product.

Manufacturer's catalog. 1984, undated. Frozen Products. Label reads: "Vegetable Protein Slices. Rich in Vegetable Protein. Artificial Flavor."

1519. **Product Name:** Smoked Turkey (Meatless).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1968.
Ingredients: Soybean protein, water, wheat protein [wheat gluten], water, corn oil, egg albumin, soy protein, hydrolyzed vegetable protein, salt, MSG, sugar, flavoring, vegetable gum, onion powder, U.S. certified color.
How Stored: Frozen.
New Product–Documentation: *Soybean Digest Blue Book.* 1968. p. 110. "Luncheon Slices."

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 164. Lists the ingredients in "Smoked Beef (Worthington)." This is an institutional product.

Manufacturer's catalog. 1984, undated. Frozen Products. Label reads: "Vegetable Protein Slices. Rich in Vegetable Protein. Artificial Flavor." Note: This is the earliest commercial product seen (Aug. 2002) that is a meatless alternative to turkey (one of six products).

1520. Hansen, Louis A. 1968. From so small a dream. Nashville, Tennessee: Southern Publishing Assoc. 288 p. Index. 20 cm.
• ***Summary:*** About the Seventh-day Adventist Southern Union Conference from 1897. Contains extensive, inspiring information about Madison College in Tennessee (p. 42, 114-20, 147, 150, 164-77, 179-90, 254), but little about Madison Foods. As early as 1908 Mrs. Ellen G. White stated in "An Appeal for the Madison School" that if the Madison plan were properly extended and faithfully carried out, "We as a people would be a spectacle to the world, to angels, and to men." Address: Tennessee.

1521. Hon, Hazel. comp. 1968. Three week vegetarian menu.

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Sydney, Australia: Published by the author. 88 p. 24 cm.
• ***Summary:*** This Seventh-day Adventist vegetarian cookbook uses lots of canned Adventist food products, gluten, and whole soybeans. The Four Basic Food Groups (p. 7) are fruits and vegetables, cereal and bread, protein (including legumes, cottage cheese, eggs, soy cheese, nuts, peanut butter, and various manufactured nuts, soybean and gluten products), and milk groups ("use milk or a suitable alternative such as soybean milk").

A table titled "Seasonings" (p. 8) divides them into (1) Not irritating. (2) Slightly irritating. (3) Strongly irritating: Cloves, ginger, paprika (Hungarian). (4) Irritating, stimulating, harmful: Cayenne pepper, chili pepper, horse-radish, mustard, pepper (black or white). (5) Seasoning herbs: Oregano, tarragon, chervil, sage, basil or sweet basil, bouquet garni, marjoram, rosemary.

A table (p. 9) lists "Goods obtainable at all Sanitarium health food shops" including gluten flour, soya flour, Soyagen (liquid or powder). Sanitarium canned foods: Nutmeat, Nutolene, Soya Beans, Vegetarian Sausages, Lima Beans. Worthington Foods: Soya Meat in tins. Chicken Style sliced. Chicken Style diced. Beef Style sliced. Beef Style diced. Loma Linda: Vegelona, and Linkettes.

Three weeks of menus and recipes are given. Soy-related recipes include: Soya nut loaf (p. 30). Soybean omelette (p. 65). Soya vegetable loaf (p. 70). Soya mayonnaise (p. 71). Soya oven croquettes (p. 82).

Note: This is the earliest document seen (Oct. 2004) concerning the work of Sanitarium Foods in Australia with soy. Address: 54 Castle Howard Road, Cheltenham, N.S.W., Australia.

1522. Jones, Dorothea Van Gundy. 1968. The soybean cookbook: Adventures in zestful eating. New York, NY: Arc Books, Inc. ix + 240 p. Foreword by Ruth Stout. Index. 21 cm.
• ***Summary:*** This lacto-ovo-vegetarian cookbook is identical to the original 1963 paperback edition by the same title except that this is a hardcover edition and the publisher is listed as Arc Books rather than Arco Publishing. The publisher's address is the same. Address: Arlington, California.

1523. Seventh-day Adventists. Food Service Improvement Committee. 1968. Dining delightfully: Tested recipes from Adventist hospital chefs. Washington, DC: Review and Herald Publishing Assoc. 159 p. Illust. (some color). 25 cm.
• ***Summary:*** This Adventist vegetarian cookbook is sponsored by the Medical Department of the General Conference of Seventh-day Adventists, and the Seventh-day Adventist Hospital Association. The entrees in this book use lots of meatlike products (many of which contain soya) manufactured by Seventh-day Adventist food companies. These products include: Worthington White Chik (frozen). Nuteena. VegeBurger. Wham. Bac-O-Chips. Smoked Chipped Prime. Worthington Prime (chipped, smoked [frozen]). Battle Creek Vegetable Skallops. Loma Linda VegeCuts.

1524. Worthington Foods, Inc. 1968? Tomorrow's Foods Today. Worthington, Ohio. 19 p. Undated. 28 cm. [3 ref]
• ***Summary:*** See next page. Contents: Message from management. Tomorrow's Foods Today (the company slogan). Research and development department, W.E. Hartman, director. Production department, Sam Brown, manager. Sales department, W. Kenneth Case, manager. The Worthington line. Engineering department, B.J. Knecht, chief engineer, B.L. Knecht, assistant engineer. Data processing department, John Dalton, manager. Credit and traffic, Al Foster, manager. Advertising department, Michael A. Jones, manager, James Converse, art director. Purchasing and office management, Luther Lyle, manager. Personnel department, Kenneth Innocent, manager. Accounting department, Richard Waters, manager. The future. The wonderful Choplet. Board of directors: James L. Hagle (chairman), Warren E. Hartman, Allan R. Buller, George T. Harding, III, M.D., Warren G. Harding, M.D., George E. McKay, Harrison Evans, M.D.

A color photo shows each of the products in the Worthington line. All are canned, except those followed by an asterisk: Cutlets, Fry Sticks, Vegetable Skallops, Sandwich Spread, Chili, Vegetarian Luncheon Slices*, Kaffir Tea, Soyameat, Vegetarian Dinner: Salisbury Steak Style*, Soyameat: Diced Chicken Style, Choplets, Vegetarian Pie: Chicken Style*, Vegetarian Dinner: Chicken Style*, Holiday Roast*, Prosage: Breakfast Treat*, Vegetarian Luncheon Slices: Smoked Beef Style*, Vegetable Steaks, Numete, Vegetarian Luncheon Slices: Use Like Corned Beef*, Soyameat: Diced Beef Style, Breading Meal: Fry and Loaf Mix, Vegetarian Dinner: Ham Style*, Soyameat: Beef Style Slices with Gravy, Soyameat: Sliced Chicken Style, Meat Loaf Mix*, Veja-Links, Soyamel: All Purpose, Saucettes, Infa-Soy, Soyamel: Banana Beverage, Fortified Soyamel: A Powdered Soy Milk. The section titled "The future" is prophetic. "Since 1962 Worthington Foods has been growing in sales by nearly 20 percent a year. This is significant but modest in comparison to what is coming. For in out opinion the growth of the vegetable protein industry very shortly will be astronomical. The reasons are fairly simple.

"First, these new foods not only taste good. They are nutritionally sound.

"Second, vegetable protein foods offer significant economies over traditional meats. When grazed, an acre of land offers approximately 43 pounds of protein. Plant that same acre to soybeans and the yield is about 450 pounds of protein. The economic advantages of vegetable proteins are widening rapidly today. They will continue to widen.

"Third, vegetable protein foods are more convenient, and convenience foods will soon dominate the food

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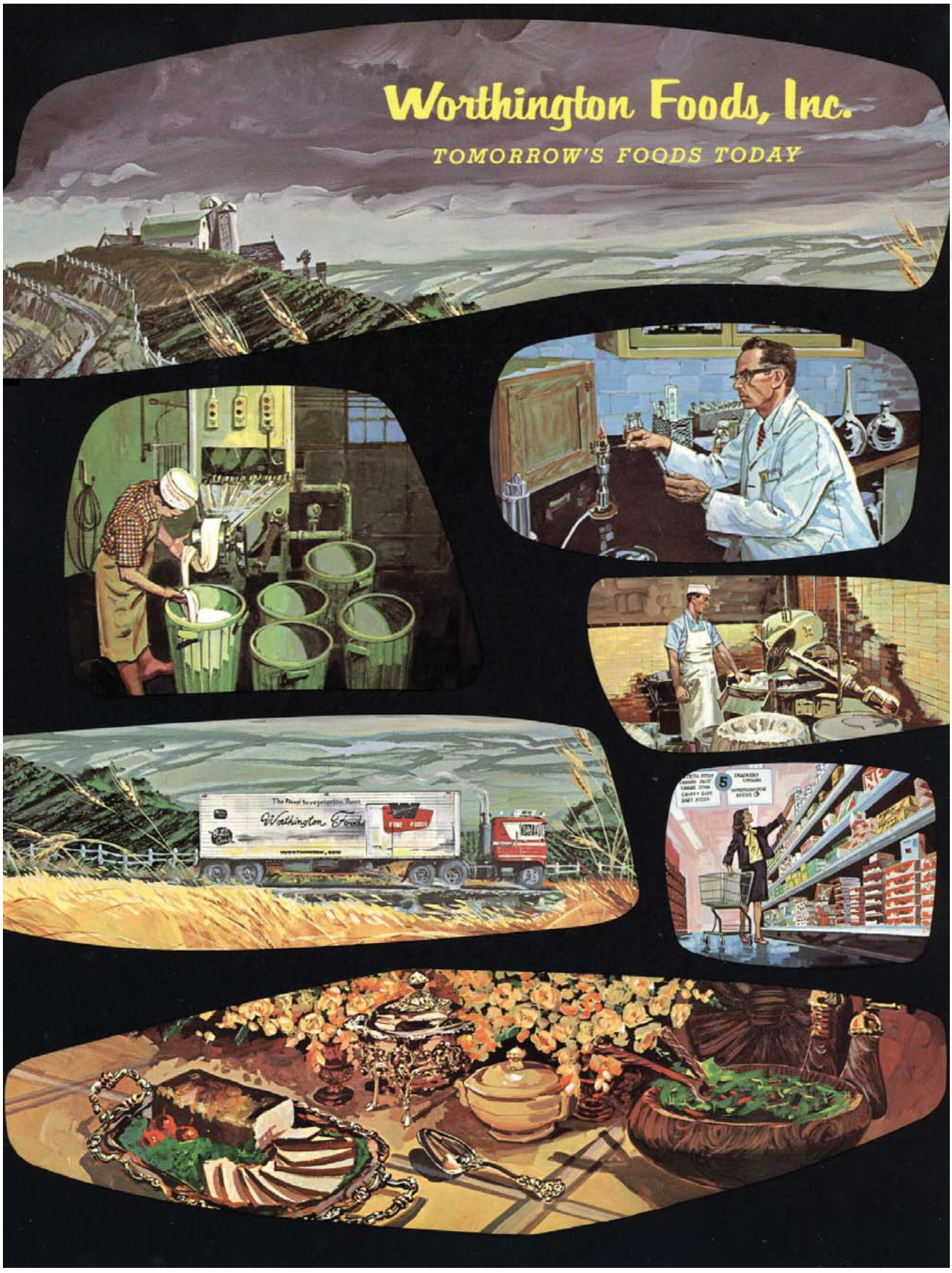

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business. No long hours of marinating, basting, of baking are necessary with these new foods. No skin to peel or bones or fat to cut out. With vegetable protein foods, taste and tenderness are controlled. The housewife or chef need only heat and serve.

"A forth reason why the growth of this industry is going to be enormous shortly is because of the protein shortage in the world. The U.S. Department of Agriculture recently pointed out that even in the United States, 'Future protein needs must be met by chemically nurtured and protected plant materials. They certainly cannot be met by animal protein.'"

Note 1. This brochure contains an original illustration of each of the men mentioned above. Note 2. All three dated footnotes at the end of this brochure are from the year 1967, and the latest is Dec. 1967. Address: Worthington, Ohio.

1525. Cade, Leland. 1969. 'Artificial meats': Something to contend with in the years ahead–Outlook 1969. *Washington Farmer* (*Washington State*). Jan. 2. p. 8-10.
• ***Summary:*** Contains a long list of "artificial meats" made by Worthington Foods. A photo shows many of these canned products.

1526. *Food Processing* (*Chicago*). 1969. Soy protein debuts as main course. Winter. p. F4-F7. Foods of Tomorrow section.
• ***Summary:*** About textured soy protein products that can take the place of meat, especially Bontrae (from General Mills, Inc., Minneapolis, Minnesota), TVP from ADM (Minneapolis, Minnesota), and Stripples from Worthington Foods (Worthington, Ohio). The costs vary widely. "Unflavored spun soy fibers in an acid-salt media [medium] cost about 50 cents a pound." Prices of the finished products to consumers are about 2/3 to 3/4 of that of the meat they can replace. "Expanded-soy textured protein [extruded textured soy flour] is less expensive. Cost in chunk or dry granular form ranges from 12 to 40 cents a pound. Since it rehydrates with 2 parts water, the cost on an as-served basis ranges from 4 to 13 cents a pound."

Bontrae comes in the form of frozen, free-flowing, pre-cooked crumbles or dice packed in 5-lb cartons. "General Mills is making a sizable increase in the capacity of its pilot plant for the production of Bontrae..." Bontrae is presently being marketed mainly to Minnesota State institutions, hotel, restaurant, and institutional accounts in Albany, New York, and college food service accounts in the Baltimore (Maryland), and Washington, DC, area.

ADM "calls its expanded-soy textured vegetable protein TVP" (registered trademark). The company "had the first production-size facility for textured soy protein and is now in the midst of a major expansion." In the U.S., TVP has been sold mainly to food processors for use in canned, dehydrated, and frozen foods. But in Europe it is sold mostly to consumers, in 200 gm (7 oz) retail packages.

Swift & Co. (Chicago) entered the market 2 years ago with Texgran, expanded soy protein. In less than a year, sales exceeded capacity. A new plant, being constructed in Champaign, Illinois, should be finished soon.

H.B. Taylor Co. (Chicago) sells Textrasoy, an expanded-soy textured protein, which is the lowest cost textured protein available. Until about a year ago it was sold to the pet food industry.

"Six years ago [1963], Worthington Foods introduced a line of simulated meats based on spun-soy textured protein supplied by Ralston Purina." In 1966, Worthington built its own plant for making the "spun-soy fibers." A new line has just been developed for the institutional market. Worthington's latest product is Stripples, which can replace bacon. It undergoes no shrinkage in preparation for serving, compared with a loss of about 25% of its weight when bacon is broiled or fried. Although it costs twice as much as bacon, "the as-served cost is only half that of bacon." Ralston Purina still makes spun-soy textured protein in the form of unflavored fibers in an acid-salt media, or in flavored dehydrated form.

Color photos show: (1) A table set with 4 ready-to-eat dishes, each containing "Bontrae spun-soy textured protein," which "is being successfully market tested in restaurants and institutions." On one side is a menu with the bold title "C'est Bontrae." (2) A smiling lady placing silver platters of food on a sideboard. The caption: "TVP expanded-soy textured protein is penetrating the home market in Europe." (3) Three traditional bacon dishes on a table, each containing Stripples. The "latest soy protein convenience food," its hickory-smoked strips can be used in place of bacon. Both the light and dark stripes are protein.

1527. Layrisse, M.; Cook, J.D.; Martinez, C.; Roche, M.; Kuhn, I.N.; Walker, R.B.; Finch, C.A. 1969. Food iron absorption: A comparison of vegetable and animal foods. *Blood* 33(3):430-43. March. [17 ref. Eng; spa]
• ***Summary:*** "Iron absorption measurements have been made in 131 individuals relating the absorption of nine different foods tagged biosynthetically with radioiron. Relatively low absorption, ranging from 1.7-7.9, was found with wheat, corn, black beans, lettuce and spinach. Higher values of from 15.6-20.3 were observed with soybeans, fish, veal and hemoglobin." Address: Instituto Venezolano de Investigaciones Cientificas (IVIC), Caracas, Venezuela; Dep. of Medicine, Loma Linda Univ., Loma Linda, California; Depts. of Medicine and Botany, Univ. of Washington, Seattle, Washington.

1528. Breth, Fred E. 1969. Ersatz-foods: The danger ahead. *British Vegetarian.* March/April. p. 141-45.
• ***Summary:*** Writing in a critical tone, the author discusses the various products resembling meat and dairy products

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now available to American shoppers. "Turkey meat that has never held a feather and milk that has never been near a cow... These foods are making progress in markets around the world. Like the prospect or not, it is obvious we shall have to live with laboratory-bred proteins in the not-too-distant future." For more than a decade, food companies have been developing imitation animal proteins, based largely on soya bean proteins. Soya bean derivatives are being used to "stretch" low-cost meats.

"The American dairy industry has yet to find an answer to soya-protein based coffee whiteners, whipped cake toppings, cream-type and frozen desserts. The consuming public has fully accepted them some time ago–and likes them. Are synthetics a real threat to animal products? Expert opinion on this question is deeply divided." Mr. J.L. Hagle, president of Worthington Foods Inc. ("at present the major producer of 'synthetic foods'") believes that "Granted enough time, the relative efficiency of man-made foods will work in their favour."

"Professor C.O. Chichester, University of California, put it even more bluntly: '... the isolation of plant proteins and their processing into textured products may very well result in a major change in the eating habits of the world.'"

"'Meatless' meats, also called 'synthetic meats,' 'analogue meats' and 'textured meats' are made from isolated soya-protein (90 per cent. protein), which is a tasteless, odorless powder."

"Worthington Foods Inc. is already marketing about 30 different 'meat' items, including fried chicken, dried beef, meat loaf casserole, croquettes, chicken show mein, 'soymeat' sandwiches, sandwich spread, bacon bits and so on."

Experts predict plenty of competition in the field of "high-protein drinks" (H.P.D.s). Large companies like Monsanto (a chemical company), Pillsbury (a flour mill), and Swift (a meat packer) have already entered this market. They are all aware of the success story of "Vita-Soy" [Vitasoy], "a straight, three per cent. protein soya-bean milk drink," which sells 60 million bottles a year and has captured 25% of the Hong Kong soft drink market; it sells for as little as 5 pence per bottle. And they are aware of a similar powdered soy protein drink [Saridele] which contains 18% protein and is being marketed successfully in Djakarta, Indonesia and was introduced in 1957; 300 tons/year are now being produced.

The author concludes that these new foods are a necessity from the viewpoint of global nutrition.

Note: This is the earliest English-language document seen (Nov. 2003) that contains the term "meatless meats" or "meatless meat" (with any combination of quotation marks). Three other publications also used this term later in 1969.

1529. Nagle, James J. 1969. Iowa plant to produce soy protein. *New York Times.* May 18. p. F15.
• ***Summary:*** General Mills announced that it has begun construction of a multimillion dollar plant in Cedar Rapids, Iowa, for the production of soy protein foods marketed under the brandname Bontrae. The plant is necessary because demand for the company's Bontrae products has outstripped the present capacity of the pilot plant that makes them.

General Mills has invested millions of research dollars and "more than 300 man years of effort" in Bontrae foods, which are made from defatted soybean meal that is transformed into spun soy protein fiber. Bac-O, the first product, went into test markets several years ago and is now distributed nationally through retail food stores.

Soy protein products made by Swift & Co., ADM, and Worthington Foods are also discussed.

1530. Tabuchi, Ichiro. 1969. Tônyû inryo ni kansuru chôsa to kongo [A survey on soymilk and its future]. *Daizu Kaihatsu, Shokuhin Kaihatsu* (*Soybean Development, Food Development*). May 27. p. 10-15. [Jap]
• ***Summary:*** Contents: Why we started producing soymilk. First is the economic reason; getting soymilk directly from soybeans is less expensive than feeding cows and getting milk from them. Second is the health reason. Our school has 3 goals in our education; the help develop a sound mind in a sound body with high moral values. We also emphasize independence and self-sufficiency, in part be encouraging students to be active in one of the businesses that are part of the school. And we encourage students to produce, as much as possible, what we eat at school.

We used to run a self-sufficient dairy farm and produced milk, which we used at the school and sent any extra to the Tokyo Eisei Byôin (Tokyo Adventist Hospital), etc. But during World War II for about 2 years, Christianity in Japan received pressure from the Japanese government. After the war we lost the milk cows and couldn't run the dairy farm. We switched these plants to make other foods. At this time we were using the nonfat dry milk from the USA–which was not tasty, or a little milk which we got somewhere. But that was not enough for the growing children at school. We needed the least expensive and most nutritious milk we could find.

Right at this time, Dr. Harry W. Miller visited us. He was an honorary member of the Japan and American Soybean Association, and a developer and researcher of soymilk; he urged us to make soymilk.

But actually we were not so sure about making soymilk, so we hesitated. It was a long time later that we decided to do so.

The main reason for our hesitation was that even if we made soymilk, we were not sure that the children would like it and drink it. But as we think about it now, it was an unnecessary worry.

Anyway, Dr. Miller stayed for two months at our school and taught us how to make soymilk. He also gave three lectures on soymilk. mostly from a nutritional point

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of view. He did this because some thought that soymilk was nutritionally inferior to cow's milk and therefore it would not be a good idea to feed soymilk to growing children. Therefore he had to correct this point of view.

So in 1959, from the earnest recommendation (*nesshin na susume*) of Dr. Miller and the wise decision of our school principal, we discontinued the use of dairy milk and switched to soymilk only.

There was the opinion that we should keep both and let individuals decide which they wanted to drink.

It has been just ten years since we made the decision to switch to 100% soymilk. As I look back, I realize that we were now free of the work of feeding, caring for, and milking dairy cows; that was a big plus.

At present we make 1,000 bottles of soymilk a day, and this work is done by 1 person in half a day; it is very efficient.

Also discusses: Physical condition improves with ongoing soymilk consumption. Boys (male students) tend to like soymilk more than girls. Try not to lose the characteristics of soymilk.

Note: This is the earliest publication seen written by Mr. Tabuchi about soymilk and Soyalac. Address: Nihon San-iku Gakuin.

1531. Emerson, R.J. 1969. AID incentives to U.S. commercial operations in developing countries. *USDA Agricultural Research Service* ARS 72-71. p. 137-39. May.
• ***Summary:*** Discusses Saci to be made by the Coca Cola Company in Brazil, Vitasoy concentrate to be made by Monsanto in Southeast Asia and Latin America, and Incaparina made by Quaker Oats in Latin America. Gives details on AID incentives to private investment by U.S. companies in developing nations. Recently AID has established, within the Office of Private Resources, a Private Investment Center and a Private Resources Development Service. Address: Office of Private Resources, Agency for International Development, U.S. Dep. of State, Washington, DC.

1532. *Food Engineering.* 1969. Vegetable 'meats' look good for the '70s. 41(5):85-87. May.
• ***Summary:*** Pioneer producer Worthington Foods, Inc. of Worthington, Ohio, now makes more than 60 "meatless-meat products." Sales are growing 20% a year, quality is steadily improving, and consumer awareness is growing. A larger proportion of the simulated meats has been sold to people abstaining from meat for religious, health, or philosophical reasons, but purchases have also been made by the meat-consuming public.

Worthington is taking a sophisticated new marketing approach with its bacon-like slices named Stripples, which are made from randomly layered, spun soy protein fibers. The process of making Stripples is described. The company spins soy protein isolate purchased from Ralston Purina, Central Soya, and others. Address: Worthington Foods, Inc., Worthington, Ohio.

1533. Gentry, Robert E.; Connolly, Eleanor M. 1969. Fabricated foods. *Stanford Research Institute, Report* No. 374. 16 p. May. (Menlo Park, California, and Zurich, Switzerland).
• ***Summary:*** This is subtitled "A research report by the Long Range Planning Service." Contents: Executive summary. Scope and definitions. Present status and outlook: Changes in product mix, changing technology. Impact on food processing industry: Markets, marketing strategies, processing, research and development. Impact on food service industry. Impact on food wholesalers and retailers. Impact on flavor technology. Impact on packaging materials. Impact on agriculture: Meat and poultry, dairy products, oilseeds, grains. Impact on petroleum, natural gas, and coal. Boxes: New protein sources. Approval by the Food and Drug Administration (FDA). Representative groups of companies developing new sources and forms of food. Examples of fabricated foods–1980.

This report predicts that sales of fabricated foods in the USA will increase from about $1,500 million in 1969 to approximately $7,000 in 1980, but will still account for only 5% of total sales of the food processing industry. The primary impact during the 1970s will be on convenience, snack, and other specialty foods.

"Sales of meat, seafood, and poultry analogs amounted to only about $2.5 million in 1966. Worthington Foods and Loma Linda Foods were the major suppliers to a primarily religious and vegetarian market. In the past few years, several major food companies have entered the market and sales have risen to an estimated level of $10 million. As flavor and texture improve, 1980 sales will soar to $1,500 million to $2,000 million." The foodservice industry will be a prime outlet for the new products.

The most important food analog in America today is margarine. Among dairy foods, margarine accounts of about 66% by volume of the butter market, nondairy whipped toppings have about 60% of the whipped cream market, and coffee whiteners have about 35% of the cream market. In terms of sales: In 1968 sales of margarine are $475 million out of $1,150 million (41%) for the total butter and margarine market. By 1980 this is predicted to increase to $750 million out of a total $1,250 million (analogs will have 60% of the total market). Sales of coffee whitener are $30-35 million out of $85-100 million (35%) for the total coffee cream and coffee whitener market. By 1980 this is predicted to increase to $100 million out of a total $130-150 million (71%). Sales of nondairy whipped topping are $25 million out of $40-50 million (55.5%) for the total whipped cream and nondairy whipped topping market. By 1980 this is predicted to increase to $50-60 million out of a total $80-

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100 million (61%). Sales of filled and imitation milks are $3-4 million out of $3100-3200 million (0.11%) for the total milk and imitation milk market. By 1980 this is predicted to increase to $600 million out of a total $3800-4000 million (15%, the biggest percentage increase). Sales of mellorine and other "frozen desserts" are $45 million out of $1200-1300 million (3.6%) for the total frozen dessert market. By 1980 this is predicted to increase to $80-90 million out of a total $1500-1700 million (5.3%).

A table (p. 5) titled "Soy Protein Products" discusses soy flour and grits, soy protein concentrate, and soy protein isolate, describing briefly the protein content, processing, price per pound, 1967 U.S. consumption, and applications. In 1967 soy flour and grits sold for $0.075/pound and 105-110 million pounds were consumed. Soy protein concentrate sold for $0.18/pound and 17-30 million pounds were consumed. Soy protein isolate sold for $0.37/pound and 22-35 million pounds were consumed.

Page 10 lists representative companies developing new sources and forms of food. For each, the company name, city, state, and product name or names are given. Companies selling soy protein products include Archer-Daniels-Midland (Minneapolis, Minnesota), Bryan Bros. Packing Co. (Subsidiary of Consolidated Foods Corp, Chicago, Illinois), Central Soya Co., General Mills Inc. (Minneapolis), Griffith Laboratories, Inc. (Chicago), Loma Linda Foods (Riverside, California), Ralston Purina Co., Swift & Co. (Chicago), H.B. Taylor Co. (Chicago), USDA ("Developing edible forms of soybean protein"), and Worthington Foods, Inc. (Worthington, Ohio).

Note: This is the earliest document seen (Aug. 2002) containing statistics on the meat alternatives industry or market–by geographical region. Address: 1. Senior economist; 2. Industrial economist, Stanford Research Inst., Menlo Park, California 94025. Phone: 415-326-6200.

1534. *Tomorrow's Foods for Today's Homemaker.* 1969-1977. Serial/periodical. Worthington, Ohio: Worthington Foods, Inc. Vol. 1. May/June 1969. Frequency: Bi-monthly. *
• ***Summary:*** Continues: *Tomorrow's Foods Today.* Continued by: *Tomorrow's Foods* (which existed in summer 1986), then by *The Healthy Appetite*, which started in Feb. 1992. Talk with Worthington Foods. 1992. April 8. The company has kept only scattered issues of this bi-monthly publication. Address: Worthington, Ohio.

1535. Lemon, Frank R.; Kuzma, Jan W. 1969. A biologic cost of smoking: Decreased life expectancy. *Archives of Environmental Health* 18(6):950-55. June. [25 ref]
• ***Summary:*** The mortality and survival of 34,217 Seventh-day Adventists (SDAs) from 1960 to 1962 was subjected to a life table analysis and compare to similar data for the California population at that time. The SDAs had a much lower mortality rate and longer survival, probably because they do not use tobacco.

"Raymond Pearl (1935) was perhaps the first to document both the high death rates and decreased longevity of tobacco smokers. It is surprising now that his work stimulated so little immediate response to what has more recently been recognized as a major public health problem..." Address: 1. Univ. of Kentucky School of Medicine, Lexington, Kentucky; 2. Loma Linda Univ. School of Public Health, Loma Linda, California.

1536. Worthington Foods, Inc. 1969. Create! Improve! Processed plant protein (Portfolio). Worthington, Ohio. Eight inserts. 28 cm.
• ***Summary:*** These 8 glossy color leaflets have a full-page photo on one side and a description of one product on the other. The cover letter (on Worthington letterhead) from Radcliffe F. Robinson, dated 22 Aug. 1969, explains that these are new vegetable protein products that Worthington now supplies to the food industry. The products are: Ground beef type granules. Chicken-alike cubes. Red meat extender. Fibrotein–spun protein fibers. Dehydrated ham-alike nuggets. Bacon-style chips. Chicken meat extender. Textured simulated meats. Address: 900 Proprietors Rd., Worthington, Ohio 43085.

1537. Landrum, Carl. 1969. 'Egg-O-See' Breakfast Food Co.: From Quincy's past. *Quincy Herald-Whig* (*Illinois*). Sept. 28. p. 3C.
• ***Summary:*** This company was established in about 1900 in Battle Creek, Michigan, by John E. Liniham. For an improved and expanded history see *Landrum's Quincy.* Vol. 1, by Carl and Shirley Landrum (1996, p. 142-44).

The company was absorbed by the Kellogg Breakfast Food Company of Battle Creek and the local mill was abandoned in about 1930. The building was next used to process soybeans! In about 1935 National Mills, Inc. used the old Egg-O-See plant for the extraction of soybean oil until the summer of 1939, when the business was sold to the Quincy Soybean Products Company" [owned by Irving Rosen]. All of the old Egg-O-See buildings of the original business were razed in about 1958.

A photo shows the "Egg-O-See" plant of the Battle Creek Breakfast Food Co. at 111-129 South Front in about 1910. One of the first firms in the USA to manufacture packaged breakfast cereals, it was finally taken over by the Kellogg Breakfast Food Co.

1538. Economist Intelligence Unit. 1969. Demand for soya-based high protein food in Uganda. EIU Ltd., Spencer House, 27 St. James's Place, London, S.W.1, England. v. + 192 p. Sept. 28 cm.
• ***Summary:*** This study was commissioned in April 1969 by UNICEF following a request by the Ministry of Planning and Development, Government of Uganda. The purposes of the

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study are: (1) to determine the market potential in Uganda for protein enriched foodstuffs, and (2) to determine the best methods of encouraging low income groups to purchase high protein foods. The study deals extensively with the company Africa Basic Foods Inc. Production of soy products for Jan-June 1969 were: Soya Flour (full-fat) 28,920 kg, School Porridge 14,310, Soya Porridge 2,970, Soya Maize 2,430, Soya Nuts 1,820 kg.

Contents: Preface. A. Background: Introduction, cash income by district, socio-economic and medical background, distribution system. B. Market for soya-based products: General analysis of the markets for soya, demand from educational institutions, demand from hospitals, demand from canteens and other institutions, demand for bakery products, demand for an infant food, other products. C. Promotion: Institutional promotion, promotion through health education, commercial promotion, packaging, distribution of soya-based products. D. Conclusions and recommendations.

The Preface expresses thanks to many organisations and individuals who assisted the E.I.U. team in its study: "We particularly wish to thank the Ministries of Education and Health and the individual hospitals and schools interviewed. We greatly appreciate the assistance rendered by Miss Pollard of the School Meals Section, Ministry of Education, Dr. Church and Mrs. Stokes of Mwanumugimu Clinic, Mulago Hospital, Mr. Belshaw of Makerere University College, and Mrs. Macrae, who kindly allowed us to quote extensively from her MSc Thesis. We also wish to thank Dr. Harrison of Africa Basic Foods for the very full co-operation he gave the team."

Note 1. This is the earliest publication seen (Dec. 2013) that mentions Africa Basic Foods of Uganda, or its founder Dr. D.W. Harrison.

Note: This is the earliest document seen (Dec. 2001) that contains industry or market statistics for soynuts by individual companies. Address: London, England.

1539. Prestbo, John A. 1969. Meatless 'meats': Several firms develop soybean-based copies of beef, pork, chicken. Some now on market mixed with real thing; low cost, high-protein food is aim. Questions about taste, labels. food aim. *Wall Street Journal.* Oct. 2. p. 1, col. 1 and p. 21, col. 4.
• ***Summary:*** Discusses soy-based "pork, beef, and nuts" made by 6 U.S. companies including ADM, General Mills, Swift & Co., Worthington Foods, and Ralston Purina Co. Americans are eating more of these meat analogs than they may realize. "Soup mixes, canned stews and chili, frozen ravioli and prepared, frozen hamburger patties are among a growing number of grocery store staples that now contain relatively small amounts of flavored, textured soybean 'meats' along with real meat. In many instances, the only mention of the analogs on the labels of these convenience foods is in the fine-print list of ingredients. Analogs also are being tested in restaurants, factory cafeterias and institutions."

"Since last year, the New York State Department of Mental Hygiene has been adding General Mills Inc.'s meatless crumbled 'beef' and diced 'ham' and 'chicken' to meals for its 90,275 patients in 49 institutions."

Sales of soy-based analogs this year are estimated at $10 million and growing fast, up from about $3 million 5 years ago. "One study conducted by a West Coast research firm forecasts sales of $1.5-$2 thousand million for the products by 1980, which would equal 5-6% of the meat and poultry market now projected for that year."

"One of the first products to use analogs, Skippy Peanut Butter with Smoky Crisps (simulated 'bacon' bits), was dropped last year after little more than a year in test markets."

"Last year a cattlemen's convention innocently devoured a banquet entree of 'meat loaf,' only to be jolted later by a speaker who told them they had eaten soybeans, not beef."

"Right now, most meat analogs retail for as much or more than the real meat they imitate. But eventually analogs' biggest attraction is expected to be low cost–roughly half that of trimmed, boned and cooked real meat."

Extruded soy "meats" wholesale for an average of $0.35/lb., while those made from spun soy protein fibers range from $0.45 to $0.80/lb. General Mills is building its first meat analog plant at Cedar Rapids, Iowa. Worthington Foods makes a bacon analog named Stripples, which sells for $0.79 per half pound package. "Worthington is also developing meatless breakfast sausages with similar characteristics which it plans to call Sizzles.

"Other food makers are trying different approaches to using analogs. Nalley's Fine Foods division of W.R. Grace & Co. is test-marketing Meat Mate, a package containing dehydrated, textured soy particles. When mixed with a pound or more of ground meat and some water, the particles expand, extending the meat weight by up to 50%. Different types of Meat Mate contain various spices." Other products include Wham, Bac-Os, and Bac'n.

1540. Hartman, Jane. 1969. Versatile meat analogs will satisfy individual needs. *Modern Hospital.* Oct. p. 138.
• ***Summary:*** "General Mills, the Ralston-Purina Company, Worthington Foods and other food processors are all actively researching and test marketing meat analogs." A diagram (courtesy of General Mills) shows how textured soy protein meat analogs, made from spun soy fibers, are manufactured. Address: Food Service Consultant, Baltimore, Maryland.

1541. **Product Name:** Stripples (Meatless Bacon-like Strips Based on Spun Soy Protein Fibers).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.

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Date of Introduction: 1969 October.
Ingredients: Incl. spun soy protein fibers.
How Stored: Frozen.
New Product–Documentation: Notes by Dr. Walter Wolf of Peoria, Illinois. 1969. April 16. Worthington is now test marketing Stripples, a frozen product. Upon heating, there is no shrinkage or fat loss. Wall Street Journal. 1969. Oct. 2. p. 1. "Meatless 'meats.'" Stripples retail for $0.79 per half pound package. Spot in Food Product Development. 1969. Jan. p. 13. A photo shows a package of Stripples. 8 oz sells for $0.69. Spot in *Soybean Digest.* 1970. April. p. 9. Being test marketed in Fort Wayne, Indiana. Stripples do not shrink.

H. Hellman. 1972. Popular Science. Oct. p. 78-80, 164. This product is made from spun soy protein fibers.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a frozen pork-like product based on spun soy protein fiber.

Horan. 1974. Meat analogs. p. 380. Ad (½ page) in *Better Nutrition.* 1974. Dec. p. 45. "Now they're back. Meatless Stripples." A photo shows the package.

Manufacturer's catalog. 1984, undated. Frozen Products. Label reads: "Artificial Bacon Flavor. Textured Vegetable Protein Strips." Frozen.

Worthington Foods. 1989. "The Tradition of Healthy Foods" (50th anniversary booklet). p. 21-22. Worthington's first products made with spun soy protein fibers were White Chik, Beeflike, Prosage, Stripples, and Holiday Roast (with a plastic wishbone). All were hits and sales took off. These products were sold frozen. In "October 1963 a series of television, radio and newspaper advertisements featuring the new frozen foods was introduced."

1542. Abel, Mary A. 1969. Soy proteins work for homemakers. *Soybean Digest.* Nov. p. 29-32.
• ***Summary:*** Cakes containing soy flour have an unusual tenderness and fine texture with a fragrant aroma, good flavor and a unique moistness when served. Photos show various foods containing soy proteins made by A.E. Staley Mfg. Co., General Mills, Worthington Foods (hors d'oeuvres), and Archer Daniels Midland Co. (TVP beef-flavored sukiyaki). Three photos show General Mills Bontrae food products, including Bontrae crumbles with a flavor like beef, Bontrae rice with a flavor like chicken, and dice with a flavor like ham.

"Soy protein is also making possible the development of new foods. One new line of products, developed by Thomas J. Lipton Inc., recently won the Institute of Technology's 1969 Industrial Achievement Award, the most coveted food industry award. The winning products are the main dish dinners, nationally distributed and well known to many homemakers. The dehydrated, shelf-stable dinners require only a few minutes preparation to become gourmet main dishes for either family or guests." Address: Central Soya.

1543. Harrison, D.W. 1969. Analysis of the Uganda experience based on Africa Basic Foods Inc. Paper presented at United Nations Industrial Development Organization Expert Group Meeting on Soya Bean Processing and Use. 43 p. plus 6-page summary. Document: ID/WG.45/4. Held 17-21 Nov. 1969 at Peoria, Illinois.
• ***Summary:*** Africa Basic Foods (ABF) Ltd. was established in Uganda to develop soybeans as a food cash crop with small farmers, to produce and market low-cost soyfoods, and to educate the people about their value for good health. In 1965 ABF asked the Ministry of Agriculture at the Department of Agriculture at Makerere University to do research on soybean production. The company built a food factory 4 miles from Kampala, and by May 1966 was producing various soy-based foods, and marketed them throughout Uganda, especially to hospitals, schools, the government, and various institutions.

"The soya bean was introduced in Uganda from America and South Africa in 1938. Within a few years various varieties were tested and the crop distributed to the farmers. The crop increased in production as the demand from overseas grew during the wartime shortage of proteins in England.

"The highest acreage achieved during the Second World War was about 35,000 to 40,000 acres. After that time (about 1948) the acreage gradually dropped, due to lack of demand, to only a few thousand acres under cultivation by 1965.

"Since 1965, ABF Ltd. has been actively promoting the growth of soya beans. First, the Ministry of Agriculture initiated variety trials. Then in 1966 the University of Makerere Department of Agriculture started variety trials with over 50 varieties available. The crop production has grown very rapidly as the farmers heard of a local demand, and the price of 25 cents per pound (US¢ 3½). In 1968 about 12,000 to 15,000 tons were produced. A large share of this was used locally by the oil milling industry...

"Aside from the oil millers, there is an animal feed plant now operating in Uganda since about 1967, as well as our human food plant. The consumption from these two plants is small, about 352 tons and 120 tons respectively...

"Over 50% of the local production is perhaps exported."

By 1969 ABF was making the following (for each is given processing details, and the name and brand of equipment used): Roasted soybeans ground to a flour, soy milk sterilized in bottles (adapted from Dr. Harry Miller's method), soy cheese (tofu mixed with a little nonfat dry milk, curry, sage, and salt, packed into 1-inch diameter casings, pasteurized at 190ºF for 20 minutes, then cooled and refrigerated, p. 16-17), soy butter (like peanut butter, from soy flour, oil, sugar, and salt), soy bread mix (wheat flour fortified with 20% soy flour, plus sugar, nonfat dry milk, salt, and yeast), soy fortified maize flour (25% soy), school porridge, and soy porridge (soy fortified corn porridge).

Note: This is the earliest *published* English-language

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document seen (Oct. 2013) that uses the term "soy cheese" to refer to a Western-style soy cheese.

In Dec. 1964 Dr. Harrison was hired by the government of Uganda, Buganda region, to serve as Director of Nutrition and Health Education, with emphasis on local, commercial production of high-protein foods (p. 28). Then ABF was registered in Uganda as a nonprofit corporation. Dr. Harrison and two of his government departmental employees "operate the entire scheme." Their salaries come entirely from the Uganda Government, so the government is to some extent helping to finance the project. The company has hired 3 other persons full time and one part time. They receive salaries from sales income. Address: President, Africa Basic Foods Inc., Kampala, Uganda.

1544. Loma Linda Foods. 1969. Leading developers of quality food products, many from soy bean and vegetable protein sources (Ad). *Soybean Digest.* Nov. p. 3.
• ***Summary:*** "Eastern Division: Mt. Vernon, Ohio." A large photo shows the outside of the towering headquarters building at night, with lights on inside. Address: Riverside, California 92503.

1545. Simpson, Alma. 1969. Here's a soy menu for the farm or family group. *Soybean Digest.* Nov. p. 38-39.
• ***Summary:*** The 10-course soy dinner menu uses the following products made by Worthington Foods or Fearn Soya Foods: Hi-Protein, Fried chicken style soy meat, Salisbury soy meat steak, Veja-Links soy meat, Soy powder (flour), Diced chicken soy meat, Soyamel (powdered soymilk). The author is the wife of Chas. V. Simpson, former American Soybean Assoc. director from Minnesota and a past president. Address: Tetonka Farms, Waterville, Minnesota; Wife of former American Soybean Assoc. director.

1546. *Soybean Digest.* 1969. The soy foods companies. Nov. p. 40, 42-44.
• ***Summary:*** A summary of the U.S. companies making soy protein foods and their products. Included are Central Soya, Archer Daniels Midland Co., Swift Chemical Co., General Mills, Ralston Purina, A.E. Staley, Loma Linda Foods, Worthington Foods, Fearn Soya Foods, and El Molino Mills.

1547. *Soybean Digest.* 1969. The soy foods companies: Worthington Foods (Document part). Nov. p. 44.
• ***Summary:*** "Worthington Foods at Worthington, Ohio, is a foremost producer of some 55 vegetable protein foods,

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including vegetarian entrees, meatless meats, and milks. Many simulate meat, fish, fowl, or nuts. They have been on the scene only since 1962.

"Worthington's vegetable protein foods are marketed frozen, dehydrated, or canned, or as an ingredient in other foods. Since 1966, Worthington Foods has manufactured its own spun protein, which it formerly purchased from Ralston Purina Co., for its meatless meats."

1548. Worthington Foods, Inc. 1969. Dealer wholesale price list–order blank. Worthington, Ohio 43085. 1 p. Dec. 15.
• ***Summary:*** New products in the Worthington Foods line include: Salisbury Steak, Worthington "209," Stripple Zips, and Tamales.

The Madison Foods line of products now includes: Cheze-O-Soy, Madison Burger, Not Meat (Tomato). Yum. Infasoy. Address: Worthington, Ohio. Phone: 614-885-9511.

1549. *Wall Street Journal.* 1969. Miles Labs set to buy fabricated-food maker: Worthington to be purchased for $16.4 million of common. Makes about 65 protein items. Dec. 22. p. 10.
• ***Summary:*** "Elkhart, Indiana–Miles Laboratories Inc. has agreed in principle to acquire all the outstanding stock of Worthington Foods."

Worthington Foods is a pioneer is the technology of making textured vegetable proteins, especially those from edible spun soy protein fibers, and soy beverages. It currently accounts for about 50% of the fabricated food market with trademarks such as Stripples, Prosage and Soyameat. Worthington's 1969 sales will be an estimated $5 million.

1550. **Product Name:** Worthington Tamales.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1969 December.
Ingredients: In 1971: Textured soy proteins (incl. Fibroprotein spun soy protein fibers), tomato paste, corn meal, corn oil, dehydrated onion, rolled oats, hydrolyzed vegetable protein, salt, sugar, corn starch, sweet peppers, MSG, garlic spices, caramel color, water to process.
Wt/Vol., Packaging, Price: 20 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Worthington Foods Dealer wholesale price list–order blank. 1969. Dec. 15. Lists "Tamales." Note: This is the earliest meatless tamale seen. *Webster's Dictionary* defines tamale (derived from Nahuatl *tamali*), a word first used in English in about 1854, as "ground meat, seasoned usually with chili, rolled in cornmeal dough, wrapped in corn husks, and steamed."

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Worthington Tamales (Worthington)."

Ad in Whole Foods. 1983. Sept. p. 45. in 20 oz. cans. This product and Vegetable Skallops are being promoted as "Salt Shakers." Both are available in versions with and without salt and MSG. For the hypertensive and sodium-conscious. A black-and-white photo shows the can and label. The text reads: "Contains no meat. A vegetable protein product. No added salt or MSG."

Worthington Yesterday and Today. 1984. p. 11. Nutrition Action Healthletter. 1987. Oct. p. 13. Critical treatment of this product which contains 790 mg of sodium vs. only 65 mg for lean beef. Much of the sodium comes from MSG. The "no salt added" label is highly misleading though technically legal. It also contains caramel coloring. Thus it is not necessarily more healthful than beef.

1551. **Product Name:** Stripple Zips (Dehydrated; Smoky Bacon-like Flavor).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 614-885-9511.
Date of Introduction: 1969 December.
Ingredients: In 1971: Wheat, soy and yeast protein, corn oil, egg albumin, brown sugar, salt, U.S. certified color, seasonings, MSG, carrageenan, flavorings, nucleotides.
Wt/Vol., Packaging, Price: 6 x 11.5 oz.
New Product–Documentation: Worthington Foods Dealer wholesale price list–order blank. 1969. Dec. 15.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 164. Lists the ingredients in "Stripple Zips (Worthington)." This is an institutional product.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a dehydrated product with a smoky, bacon-like flavor.

1552. **Product Name:** Worthington "209."
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio 43085. Phone: 614-885-9511.
Date of Introduction: 1969 December.
Ingredients: In 1971: Water, textured soybean protein (Fibrotein spun soy protein fibers), vegetable oil, wheat protein [wheat gluten], egg albumin, soybean protein, salt, brown sugar, starch, wheat flour, vegetable extractive flavorings, MSG, seasonings.
Wt/Vol., Packaging, Price: 12 x 14 oz.
New Product–Documentation: Worthington Foods Dealer wholesale price list–order blank. 1969. Dec. 15. Lists 'Worthington "209"'. Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 164. Lists the ingredients in "209 (Worthington)." This is an institutional product.

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1553. **Product Name:** Soy Milk.
Manufacturer's Name: Africa Basic Foods Inc.
Manufacturer's Address: Kampala, Uganda.
Date of Introduction: 1969.
Ingredients: For 20 gallons: Soybeans 20 lb., sugar 5 lb., salt 18 gm.
Wt/Vol., Packaging, Price: In sterilized bottles with crown caps.
How Stored: Shelf stable.
Nutrition: Protein 3.5%, fat 2.0%.
New Product–Documentation: Harrison. 1969. Analysis of the Uganda Experience Based on Africa Basic Foods Inc. p. 15-16. Interview with Dr. D.W. Harrison. 1982. Letter from Sam Yoshimura. 1982.

1554. **Product Name:** Tofu Sausages.
Manufacturer's Name: Africa Basic Foods Inc.
Manufacturer's Address: Kampala, Uganda.
Date of Introduction: 1969.
Ingredients: Tofu 96%, nonfat dried milk 2%, salt 1.0%, MSG 0.5%, curry powder 0.3%, sage 0.2%.
Wt/Vol., Packaging, Price: Packed into 1 inch diameter casings.
How Stored: Refrigerated.
Nutrition: Protein 15%, moisture 65%.
New Product–Documentation: Harrison. 1969. Analysis of the Uganda Experience Based on Africa Basic Foods Inc. p. 16-17. Interview with Dr. D.W. Harrison. 1982. Letter from Sam Yoshimura. 1982. The product was pasteurized at 190ºF (88ºC) for 20 minutes in the casings, cooled, and refrigerated.

1555. **Product Name:** Soya Nuts.
Manufacturer's Name: Africa Basic Foods Inc.
Manufacturer's Address: Kampala, Uganda.
Date of Introduction: 1969.
Ingredients: Soybeans and salt or sugar.
Wt/Vol., Packaging, Price: 10 oz.
How Stored: Shelf stable.
New Product–Documentation: Economist Intelligence Unit. 1969. Demand for Soya-Based High Protein Foods in Uganda. p. 50. Interview with Dr. D.W. Harrison. 1982. Letter from Sam Yoshimura. 1982.

1556. **Product Name:** Soya Butter (Soynut Butter; Resembles Peanut Butter).
Manufacturer's Name: Africa Basic Foods Inc.
Manufacturer's Address: Kampala, Uganda.
Date of Introduction: 1969.
Ingredients: Roasted soy flour 60%, vegetable oil 26%, vegetable shortening 10%, cane syrup 2.2%, salt 1.2%, antioxidant.
Wt/Vol., Packaging, Price: 12 oz jars or 8 lb tin cans.
How Stored: Shelf stable.
Nutrition: Protein 25%, moisture 12%.
New Product–Documentation: Economist Intelligence Unit. 1969. Demand for Soya-Based High Protein Foods in Uganda. p. 50. Harrison. 1969. Analysis of the Uganda Experience Based on Africa Basic Foods Inc. p. 17. Interview with Dr. D.W. Harrison. 1982. Letter from Sam Yoshimura. 1982.

1557. **Product Name:** Soy Bread Mix (Dry).
Manufacturer's Name: Africa Basic Foods Inc.
Manufacturer's Address: Kampala, Uganda.
Date of Introduction: 1969.
Ingredients: Wheat flour 70%, soy flour 20%, sugar 5%, nonfat dry milk 2.7%, salt 1.3%, yeast (separate package) 1%.
Wt/Vol., Packaging, Price: 10 lb or 50 lb paper bags.
How Stored: Shelf stable.
New Product–Documentation: Harrison. 1969. Analysis of the Uganda Experience Based on Africa Basic Foods Inc. p. 17-18. Interview with Dr. D.W. Harrison. 1982. Letter from Sam Yoshimura. 1982. Contained whole wheat flour fortified with 20% soy flour plus sugar, nonfat dry milk, salt, and yeast.

1558. **Product Name:** High Protein Buns (Soy-Fortified).
Manufacturer's Name: Africa Basic Foods Inc.
Manufacturer's Address: Kampala, Uganda.
Date of Introduction: 1969.
New Product–Documentation: Economist Intelligence Unit. 1969. Demand for Soya-Based High Protein Foods in Uganda. p. 50. Interview with Dr. D.W. Harrison. 1982. Made of corn and wheat flours enriched with soy flour. Equal to egg in nutritional value, it sold for half the price.

1559. **Product Name:** High Protein Bread (Soy-Fortified).
Manufacturer's Name: Africa Basic Foods Inc.
Manufacturer's Address: Kampala, Uganda.
Date of Introduction: 1969.
New Product–Documentation: Economist Intelligence Unit. 1969. Demand for Soya-Based High Protein Foods in Uganda. p. 50. Sold in 1 lb loaves.

1560. **Product Name:** [Soymilk (Brand Named Soyalac by 1983)].
Manufacturer's Name: Alimentos Colpac. Affiliate of Liga Mexico Pan-Americana Medio Educacional A.C.
Manufacturer's Address: KM 13 Carratera Huatabampo, Apartado 502, Navojoa, Sonora, Mexico.
Date of Introduction: 1969.
New Product–Documentation: Soybean Blue Book. 1976. The company makes a "soy beverage." It is not clear whether this is a soy coffee or a soymilk. They are an affiliate of Liga Mexico Pan-Americana Medio Educacional A.C., KM 13 Carratera Huatabampo, Apartado 502, Navojoa. *Soybean*

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Digest Bluebook. 1979. p. 98.

Soyfoods Center. 1980. Sept. Tofu shops and soy dairies in the West (2 pages, typeset). "COLPAC, Apartado 16, Montemoralos, Sonora, Mexico. Seventh-day Adventist soy dairy."

Letter from Robert Folkenberg. 1983. Feb. 15. This company, organized in 1969, presently makes about 3,000 liters/week of soymilk.

J. Ponce Aguirre. 1982. History of Soyfoods in Mexico. "In 1968 in Navojoa, Sonora, Alimentos Colpac began operations, run by Seventh-day Adventists. Paul Allred started production of textured soy flour and whole soy flour to make a base for soymilk." Soya Bluebook. 1983. p. 63. "Soyalac Soy Beverage." Shurtleff & Aoyagi. 1984. Soymilk Industry & Market. p. 128. "The first soymilk plant in Mexico was started in 1968 or 1969 by Seventh-day Adventists in Sonora, Navojoa. Its founder was Paul Allred, who also pioneered a similar plant in Egypt. This soymilk was made from whole soy flour."

1561. **Product Name:** [Soyalac {Soymilk}].
Foreign Name: Soiyarakku Neo.
Manufacturer's Name: College Health Foods. Later renamed San-iku Foods.
Manufacturer's Address: 1-1 Nagaurataku, Sodegaura-machi, Kimizu-gun, Chiba-ken 299-02, Japan.
Date of Introduction: 1969.
Wt/Vol., Packaging, Price: 180 ml glass bottle. Caned by 1980.
New Product–Documentation: Letter from Charles D. Howes. 1978. Oct. List of Seventh-day Adventist soymilk plants. In Japan: San-iku Foods, Kanno 4162, Sodegaura-machi, Kimitsu-gun, Chiba-ken 299-02. M. Urumba, Manager. Hidekazu Watanabe, production manager for Soyalac.

Shurtleff & Aoyagi. 1979. Tofu & Soymilk Production. p. 227-28. Gives a detailed description of the method used to make Soyalac.

William Shurtleff. 1981. Soyfoods. p. 35. "Dr. Harry Miller: Taking soymilk around the world." "Starting in about 1955 Dr. Miller started to recommend that the Adventist-run Japan San-iku School serve soymilk instead of cow's milk to the students; however the staff hesitated because of its nutritional value and flavor. In 1957 two Japanese Adventists, Mr. Hidekazu Watanabe and Mr. Hanzo Ueda (who ran a tofu shop at the time), started making Japan's first soymilk on a small scale in Hachioji, Tokyo, bottling it in 180-ml bottles, and selling it locally. Mr. Watanabe later described the great value to them of Dr. Miller's ongoing technical, nutritional, and spiritual guidance. After some time, directors of the San-iku School visited the small soymilk plant, liked the soymilk flavor, and understood its nutritional value. In 1959 they bought similar equipment, set up a small plant in the school, and started to produce soymilk, which was bottled in 180-ml bottles and served to the students at every meal. In 1969 the San-iku School set up an independent food production company called College Health Foods (which later became today's San-iku Foods) and through it, with the help of Loma Linda Foods in America, began to produce Soyalac soymilk infant formula." By 1980 this product was canned in plain and carob flavors.

Letter (in Japanese) from Hidekazu Watanabe. 1981. July 19. Discusses the early history of this product. "The Ueda Tofu Shop in Hachioji helped with the product development; I was there at the time. In those days our name was San-iku Gakuin Shokuhin-bu (the food department of the San-iku School). The purpose was to provide a place of labor for the students and opportunities to learn food processing. It was not a business. Dr. Perry Webber was the principal of our school at the time." K. Tsuchiya. 1982. Dec. *Tonyu* [*Soymilk.* 2nd ed.]. p. 74. States that Soiyarakku Neo was introduced in 1969. It is now sold by Saniku Fuuzu in a 425 gm can and distributed nationwide.

Shurtleff & Aoyagi. 1984. Soymilk Industry & Market. p. 63-64. "In 1958 Dr. Miller set up a small soymilk plant in the kitchen of the Adventist-run Tokyo Sanitarium. It was used to make soymilk, soy whipping cream, soymilk ice cream, and soy spread, which were served to the staff and patients. In 1959 a small soymilk plant was established in the Seventh-day Adventist San-iku School. From this year, Japan's oldest existing soymilk company, San-iku Foods, traces its origin. By 1982 San-iku Foods was Japan's fourth largest soymilk manufacturer.

Letter from San-iku Foods. 1990. June. This product was introduced in 1969.

Letter from Ichiro Tabuchi. 1990. July 4. In 1970 San-iku Foods became independent from the San-iku Gakuin Food Department and started to make and sell infant formula.

1562. **Product Name:** Loma Linda Vegelet 'n Gravy (Meatlike Product).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, California.
Date of Introduction: 1969.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Loma Linda Food Co. 1969. "Wholesale Price List." Vegelet 'n Gravy is now sold in 14 oz and 20 oz cans.

1563. **Product Name:** Sanitarium Health Foods Vegetarian Rediburger (Canned Vegetarian Loaf).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1969.

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Ingredients: Wheat protein, vegetable oil, wheat germ, soy protein, hydrolysed vegetable protein, dried yeast, salt, yeast extract, brown rice, onion, caramel, colouring, Savex.
Wt/Vol., Packaging, Price: 430 gm can.
How Stored: Shelf stable.
New Product–Documentation: Letter from Sanitarium Health Food Co. 1981. Label. 10 by 4 inches. Full color. Photo shows a burger on lettuce and a bun topped with catsup and onion rings. "Vegetable Protein" Recipes for Company Roast and Golden Hot-Pot.

Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1969.

1564. *Tomorrow's Foods Today.* 1969. Serial/periodical. Worthington, Ohio: Worthington Foods, Inc. Quarterly. *
• ***Summary:*** Continues: *Chopletter.* Address: Worthington, Ohio.

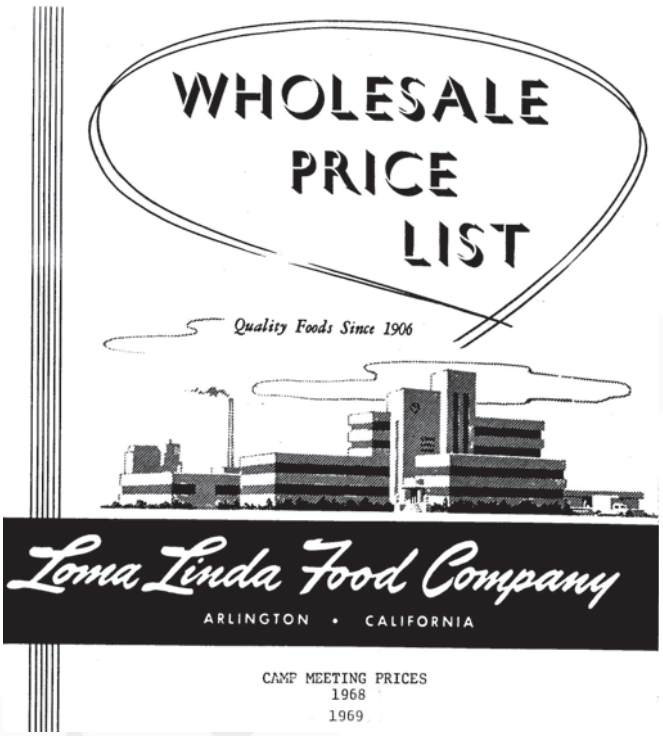
1565. Bush, Marlene Ellstrom. 1969. Adequacy of lacto-ovo-vegetarian diets in Seventh-day Adventist boarding academies. Master's thesis, University of Alabama. *
• ***Summary:*** This study of 27 Seventh-day Adventist boarding schools that serve vegetarian diets concludes that well-planned vegetarian diets can be adequate in all nutrients. Address: Alabama.

1566. Larson, Jeanne R.; McLin, Ruth A. 1969. 52 Sabbath menus. Nashville, Tennessee: Southern Publishing Assoc. 255 p. Index. 22 cm.
• ***Summary:*** This Seventh-day Adventist vegetarian cookbook contains several soy-related recipes: Tofu loaf (p. 52). Sukiyaki (with tofu, p. 186). Vegebits deluxe (with 1 no. 303 can Vegebits, p. 228). Soybean loaf (with cooked mashed soybeans, p. 228). Noodle entree (with 1 large can Choplets, p. 229). Creamed Skallops casserole (with 1 large can Skallops, p. 229).

The chapter titled "Emergency Meals" has a section on "Protein and Main Dish Foods" including "Canned vegetable proteins (Vegelona, Vegetable Steaks, Soyameat, Nuteena, etc.)."

1567. Loma Linda Food Co. 1969. Wholesale price list. Arlington, California. 4 p. Undated.
• ***Summary:*** The cover states: "Quality foods since 1906. Camp Meeting Prices 1968, 1969." Soy-related products include: Soy Flour. VegeChee [Tofu]. Soy Beans Boston Style. Soybeans T.S. Smokene (Shaker bottle). Soy Sauce (3 sizes, glass bottles). Other products [probably made mostly from wheat gluten and/or peanuts include]: Nuteena. Proteena. Vegelona. Vegelet 'n Gravy. Dinner Cuts. Dinner Rounds. Vegecuts. Vegeburger (regular or no salt added). Tender Bits. Linketts [Linkettes]. Big Franks. Little Links. Loma Linda Sandwich Spread.

Note: No mention is made of spun soy protein fibers.



Address: Arlington, California.

1568. Moore, Raymond S. 1969. China Doctor: The life story of Harry Willis Miller. 2nd ed. Mountain View, California: Pacific Press. 215 p.
• ***Summary:*** The original edition of this book was published in 1961. This 1969 edition, although it has been completely re-set, contains only minor revisions: (1) A new color paperback cover shows a large illustration of Dr. Miller's face. (2) This second edition contains a 3-page Postscript (p. 150-52), which describes his work in Hong Kong (1960-65, 1969), Philippines (1966), expansion of his work with soymilk in Hong Kong ("The Hong Kong soft drink industry dispenses more milks derived from his soybean milk than all others combined"), other work with soy ("His grain-and-soybean-based foods are being adopted as alternates to meat in lands which cannot support animals as a principal diet source. They range from soy cheese, milk, ice cream, and butter-like spreads to simulated steaks, wieners, and sausages. These vegetable foods now are making headway even in the United States and other Western countries. In an era of population dilemmas, Harry Miller reminds the experts that meat, as compared with vegetable protein, takes several times the acreage to produce the same amount of food."), George McGovern and Food for Peace (1961) which resulted in sharply increased exports of soybeans from the USA. (3) The number of pages in the book has been reduced to 152, from the original 215. (4) The valuable index in the first edition has (unfortunately) been omitted. (5) The number of photos has been reduced to 11, from 16 in the first

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edition, and many photos from the first edition were omitted. New photos (located on unnumbered pages 142-47) show: (1) Harry and Maude Miller at the time of their wedding in 1902. (2) Dr. Miller with a woman victim of goiter in China. (3) Hong Kong Hospital for Chinese refugees at Tsuen Wan, completed in June, 1965. (4) Dr. Miller with little Mohammed Ali, a Bedouin child in Libya. (5) Harry and his wife Mary in 1957 waiting at the airport in Benghazi, Libya. (6) Mr. Chan Shun donates 1 million Hong Kong dollars for the construction of a Seventh-day Adventist hospital in Hong Kong. Dr. Miller looks on. (7) In 1968 at Albuquerque, New Mexico, Dr. and Mrs. Miller are given a red-carpet welcome by Governor David F. Cargo.

1569. Short biography: Harry Willis Miller, M.D., F.A.C.S. [Fellow of the American College of Surgeons]. 1969. n.p. 3 p. Undated. Unpublished typescript. [1 ref]

• ***Summary:*** This typewritten manuscript describes a great man and medical doctor in his 90th year. Soy is not mentioned.

1570. Thurmon, Jimmie Joan. comp. 1969. Adventures in vegetarian cooking: Over 200 meatless main dish recipes. Nashville, Tennessee: Southern Publishing Assoc. 128 p. 23 cm.

• ***Summary:*** The author of this Seventh-day Adventist vegetarian cookbook is a woman. Interesting recipes include: Nut Cheese (no. 1 & 2, with peanuts or peanut butter and gluten flour, p. 11). Tomato Nuttose (with nut butter, p. 11). Homemade Nuttose (with nut butter, p. 12). Homemade Protose (with peanut butter and mashed beans (p. 12). Homemade Nutmeat (dark) (with gluten flour, peanut butter, and Vegex, p. 12-13). Homemade Nutmeat (light) (with raw nut/peanut butter and flour, wheat meal, or soybean meal, p. 13). Nuttolene (with peanut butter and eggs, p. 13). Homemade gluten (with Vegex or soy sauce, p. 14). Granola. Preparing and cooking dry soybeans (p. 15). This page describes how to make "soybean pulp," an ingredient is subsequent recipes. "Press cooked soybeans through a coarse sieve or grind in a food grinder. Use in making soups, croquettes, loaf, or soufflé. Cold, the pulp makes a nutritious and flavorful filling for sandwiches when mixed with chopped onion and enough salad dressing or milk to make it easy to spread. May be used like pumpkin or squash with milk, eggs, and spices as a filling for pie. May be used in place of burger in chili."

Soybean loaf (p. 19). Soybean cheese loaf (with 1 can (14 oz.) soy cheese [tofu] and Savita, p. 21). Gluten roast no. 1 (with gluten burger, p. 21). Soybean loaf, p. 27). Soybean-rice loaf (p. 28). Gluten roast no. 1 & 2 (p. 29). Baked soybean croquettes (with soybean pulp, p. 36-37). Soyameat patties (p. 37). Cheese-nut burgers (with VegeChee [tofu, made by Loma Linda Foods], p. 37). Soyameat tetrazzini (p. 52). Soybean casserole (with Wham, p. 52-53). Soybean souffle (with soybean pulp, p. 53). Tofu with mushroom sauce (p. 90; Tofu is "A fresh soybean milk curd obtainable at Oriental markets, or canned under the trade name VegeChee" [by Loma Linda Foods]). Puree of soybean soup (with soybean pulp, p. 110).

Pages 121-22 list "Vegetable protein brand names." All products are made by Seventh-day Adventist food manufacturers. Brand name codes: B = Battle Creek. C = Collegedale. L = Loma Linda. M = Madison. S = Sunnydale. W = Worthington. 1. Nut meats (canned): Not-Meat (M). Numete (W). Nuteena, Proteena, and Vegelona (L). Protose (B).

2. Gluten burgers: Choplet Burger (W). Collegedale Burger (C). Madison Burger, and Zoyburger (M). Prime Vegetable Burger (B). Redi-Burger, and VegeBurger (L). 2. Gluten steaks: Big Pat, and Fry Sticks (W). Chic-Ketts (S). Collegedale Chops (C). Dinner Cuts, Dinner Rounds, Vege Cuts, and Vegetables 'n Gravy (L). Vegetable Skallops, and Vegetable Steaks (B).

Note 1. This is the English-language document seen (Jan. 2007) that contains the term "Gluten burgers" (or "Gluten burger").

4. Wieners and sausages: Big Franks, and Linketts (L). Saucettes (B). Veja-Links (W). 5. Frozen foods: Chipped Prime, Prosage, Vegetarian Luncheon Slices (Chicken and Beef Style), Wham (W). Note 2. Worthington was the first Adventist company to make frozen meatlike products.

6. Soy meats: Soyameat (Diced Chicken Style, or Diced Beef Style) (W). VegeChee [Tofu] (L).

Frequently used seasonings in vegetarian entrées. (p.

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122). Accent. Bac-O-Chips (General Mills). Bakon Yeast. Gravy Quik (L). G. Washington Broth. McKay's Chicken Style Seasoning. Savita. Savorex, and Smokene (L). Sovex. Tartex. Tastex. Vegex.

Update. 1995. Oct. 25. Jimmie Joan Thurmon, a Seventh-day Adventist, is retired and lives with her husband at 128 Mountain Ridge Dr., S.E., Cartersville, Georgia 30120-6951. Phone: 770-974-9218. She learned how to make wheat gluten from Seventh-day Adventist women, who had been making it for years. In addition Loma Linda Foods in California and Sanitarium Food Co. in Australia had many products containing wheat gluten on the market by the 1960s. Address: Nashville, Tennessee.

1571. *Soybean Digest.* 1970. Author Philip S. Chen has plans to retire. March. p. 54.
• ***Summary:*** "Dr. Philip S. Chen, well-known author and chairman of the division of sciences and mathematics at Atlantic Union College, South Lancaster, Massachusetts, has announced that he will retire at the end of this year.

"Dr. Chen's interest in soybeans stems from over 30 years ago when he was a teacher at Madison College (Tennessee) and in charge of the food research laboratory of Madison Foods, now a branch of Worthington Foods.

"Dr. Chen's books include 'Soybeans for Health, Longevity and Economy,' and 'Heart Disease–Cause, Prevention, and Recovery,' which are carried on the book list of the Soybean Digest. He has just finished writing a book on vegetarianism.

"Dr. Chen has been a member of the American Soybean Assn. for over 30 years."

A small portrait photo shows Dr. Philip S. Chen.

1572. Lee, Elinor. 1970. Soy can save the pennies. *Washington Post, Times Herald.* April 9. p. C9.
• ***Summary:*** Since meat and other protein foods are the most expensive part of the food budget, most homemakers are interested in economical sources of protein.

Soy flour [defatted or low fat] is the most economical source of protein, according to a letter received from Mrs. Seymour Fiekowsky. She says that "soy flour and granules as well as canned soy foods are on sale at health food stores." She suggests that you look in the yellow pages of the phone book under "Foods, Health," or contact the nearest Seventh Day Adventist church.

1573. *Soybean Digest.* 1970. Worthington Foods test markets a soy sausage. April. p. 9.
• ***Summary:*** "A soy-protein 'sausage' is being test marketed by Worthington Foods, in Columbus, Ohio, and South Bend, Indiana. Called Prosage, ads in newspapers tell the consumer that there are 50% less calories and 75% less fat in Prosage made of all-vegetable protein with hickory-smoked flavoring added.

"Stripples, a vegetable protein baconlike product, has been test marketed in Fort Wayne, Indiana, and may soon have national distribution. Stripples do not shrink, and are made by Worthington Foods, also."

1574. **Product Name:** Add-a-Bits.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1970 April.
New Product–Documentation: H. Hellman. 1972. Popular Science. Oct. p. 78-80, 164. This product, made of spun soy protein fibers, consists of small rectangular dehydrated bits of fried meatless bacon, used for garnishing salads or as a snack. They are basically small pieces of Stripples. Horan. 1974. Meat analogs. p. 380.

1575. Fiske, Edward B. 1970. Adventists: Old faith, new pressures. *New York Times.* June 15. p. 41.
• ***Summary:*** More than 25,000 of the world's 2 million Seventh-day Adventists, representing 193 countries, gathered in Atlantic City, New Jersey. They are one of the few major Christian churches still making large gains in membership. Adventists believe that Christianity is more than simply going to church in Saturday; it includes serving all the needs of their believers, not just their spiritual ones. Thus, the church operates a medical school, and more than 200 hospitals, clinics, and nursing schools worldwide. Adventists are also deeply committed to education (with schools and colleges) and relief work.

One consequence of this view is vegetarianism, which is practiced by about half of all Seventh Day Adventists. The church teaches that a nonmeat diet is more healthy than one which contains meat, and it produces its own "vegetable protein foods" under the Loma Linda Foods brand.

"Soybean burgers:" Snack bars at the convention hall sell nonmeat items such as Loma Linda Burgers for $0.60 each; they come in "beef style" and "chicken style," and are made mostly of soybeans and whole wheat. Clinton A. Wall, a dietitian, set up a temporary restaurant that serves 4,000 meals a day in the basement. Young people often ask him for advice on how to plan a balanced vegetarian diet. He adds that Adventists are not against use of insecticides.

For Adventists, diet is only one aspect of a religion that touches the whole of their daily life. Elder Pierson said it well: "We believe that Christianity is more than simply going to church on Saturday."

A photo shows the packed convention hall.

Note: This is the English-language document seen (Jan. 2007) that contains the term "Soybean burgers" (or "Soybean burger").

1576. *Ralston Purina Magazine* (*St. Louis, Missouri*). 1970. Thanks to Mr. Ford. May/June. p. 26-29.

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• ***Summary:*** Henry Ford had an eye for promising young men. And two of Ralston Purina's key research men, Frank Calvert (R&D director for new venture management) and Bob Boyer (senior scientist, central research) received a truly unique education." In 1930 the new Chemical Laboratory opened in Greenfield Village; Calvert and Boyer were among the 15 boys from the Ford Trade School, Henry Ford's technical school in Massachusetts, who were chosen to work there. Boyer, age 21, who had attended the Ford Trade School [at the Rouge Plant in Dearborn, Michigan] from 1927 to 1930, was put in charge of the project. After deciding to focus on soybeans in 1931, they developed a process for extracting soybean oil. Every morning at 8:00 sharp, Henry Ford used to appear at Boyer's office to see how his pet project was going.

"In 1938 Frank Calvert joined The Drackett Company in Cincinnati [Ohio], and he was followed in a few years by Boyer. 'At Ford we were trying to make synthetic wool out of [soy] protein but the war cut these efforts short,' says Boyer.

The work on 'soybean fabric' continued at The Drackett Company during the early 1940s. 'We tested the wool fabric for salt content and other factors and one day–I'll never forget it–it occurred to me that if we could make something for the outside of man, why not for the inside.' That's how it came about that in 1949 Bob Boyer filed the patent for edible soy protein fiber.

"He obtained the use of a textile pilot plant and hand made samples of 'synthetic meats.' Later that year, armed with a soy protein 'ham loaf' he contacted Worthington Foods, a firm making meat substitutes for people who shun meat for religious, health or other reasons "If they hadn't shown interest I probably would have dropped it because I had no income at the time.'

"Swift was the first company to take out a license on the patent and Worthington followed not far behind. Soon several companies were licensed to use the patent and Boyer was kept busy with consulting work...

"In 1957 The Drackett soybean operation was sold to Archer Daniels Midland, and Calvert became technical of their protein operations. The paths of Boyer and Calvert crossed again in 1962 when they both joined soybean research activities at Ralston Purina. Boyer had worked as a consultant to Purina when the company began investigating industrial and edible uses of soybean. When he joined the company he assigned his patent ownership to Purina."

"'Back in the 1930s many people thought our work was crazy,' recalls Boyer. 'But Mr. Ford was shrewd enough to know' better. 'The best thing he did was to help popularize the soybean.'"

Photos show: Calvert and Boyer, together and separately. The automotive products made at Ford's lab being displayed in New York in 1931; Calvert and Boyer are present. Boyer and Ford conversing. Ford and Boyer standing behind the famous white "plastic" car.

1577. Wokes, Frank. 1970. India revisited: 1920-1970. *British Vegetarian.* May/June. p. 221-25.
• ***Summary:*** The author arrived in Bombay on 31 Jan. 1970 to participate in an international seminar on nutrition at the invitation of Prof. C.V. Ramakrishnan of Baroda University, India. He and his wife, Dr. Rajalakshmi, both lifelong vegetarians, are very interested in increasing production and consumption of plant foods in India. The author first visited India on 1 Feb. 1920.

In India there are plenty of cows but their milk yields is far lower than in Western countries. Since hygienic conditions are far from satisfactory, much of the milk is grossly contaminated. Therefore the Government of India, with the help of foreign aid, has established at Anand, near Baroda, a large dairy farm to which milk is brought by farmers from surrounding areas, pasteurized, and spray dried for sales in tins. "In this powdered baby food most of the protein now comes from plant foods, the proportion gradually being increased as investigations at CeFTRI [CFTRI = Central Food Technology Research Institute, at Mysore] show its suitability for replacing cow's milk protein, at a lower cost." CeFTRI has already made, on a pilot plant scale, non-dairy milks made entirely from plants, which it hopes eventually to commercialize.

"Many Indians, especially among the Jains and Theosophists, pressed me to suggest how they could make for general domestic use a liquid vegetable milk similar to that in my tins of Plamil. They listened with interest to my descriptions of what is being done at CeFTRI, where among other things a study is being made of *Vitasoy,* the liquid soya milk, made by wet grinding and processing of steeped soya beans by a method developed by Dr. Harry Miller, who first made soya milks in China nearly forty years ago [actually 1936] and described it to me over twenty years ago, when I first saw samples of his products. In Hong Kong, *Vitasoy* is said to be rivalling *Coca Cola* in public favour."

Also discusses CeFTRI's interest in leaf protein, and problems with aflatoxins in groundnuts in India.

1578. Ashton, Maureen R.; Burke, Carole S.; Holmes, A.W. 1970. Textured vegetable proteins. *British Food Manufacturing Industries Research Association, Scientific and Technical Surveys* No. 62. 36 p. Aug. [92 ref]
• ***Summary:*** Contents: Introduction. Protein sources. Extraction. Spinning. Extrusion. Gelation. Other methods for generating texture. Commercial aspects. Nutritional aspects. Legal aspects. References. Appendix. The appendix contains an extensive list of patents (mostly British and U.S.) on textured vegetable proteins grouped by the company assigned to or inventor. For each patent, the inventors, country, patent number and year are given, with a brief description of the subject. No patent titles are given in either

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the appendix or bibliography. The companies/inventors are Archer Daniels Midland Co. (2 patents), R.A. Boyer (3), F.P. Research Ltd (1), General Foods Corp. (7), General Mills Inc. (23), C. Giddey (1), J.H. Kellogg (2), Lever Bros. and/or Unilever (20), G.K. Okumura and J.E. Wilkinson (1), Ralston Purina (4), Swift & Co. (4, including 2 listed for R.A. Boyer), Dr. A. Wander A.-G. (2 Swiss), Worthington Foods Inc. (2), C.L. Wrenshall (1). Address: 1-2. BSc; 3. PhD, FRIC. All: British Food Manufacturing Industries Research Assoc., Randalls Road, Leatherhead, Surrey, England.

1579. Briggs, George M. 1970. Memories of an "oldtimer." *Soybean Digest.* Aug. p. 50-53.
• ***Summary:*** "My personal interest in soybeans has spanned nearly 60 years–from September 1912 to the present. My introduction to the crop came when, with a fellow agricultural student at the University of Minnesota, we attempted to thresh out some soybeans with old fashioned flails in a high-sided boarded wagon box at the University Farm. In a half-hour's time we harvested about 10 pounds of little soybeans!"

"Following my graduation from the College of Agriculture of the University of Minnesota, I became the 14th county agricultural agent in Wisconsin, serving for 3½ years in Burnett County.

"This county has a large proportion of light, sandy soils. People needed a cash crop, as well as a legume hay. Soybeans seemed to offer an answer to the problem of producing cheaper feed. So, it was natural that we had considerable interest in the development of a program that would answer the needs of the farmer.

"During my Burnett County years, and later, in my years of agricultural extension work at the University of Wisconsin, it was my privilege to advise and counsel with people on farm crop culture. An attempt was made to establish a recommendation that farmers plant soybeans according to the rule of 1 acre for hay, 1 acre for seed, and 1 acre to plow under as green manure."

"The production of soybeans in Wisconsin, as well as in the whole country, was never too great until the combine was perfected." Dr. Harry Miller, an ASA member from Ohio, had been a missionary in China. "He related to me how he helped develop and distribute a soybean milk for Chinese infants who were deprived of nutritional foods.

"Soybean milk was introduced in many parts of this country. Over 50 years ago, one of my nephews in Minnesota was nurtured to health and growth by its use when regular milk could not be assimilated properly. The use of soybean milk as a regular milk substitute in special diets is now well established."

Also discusses early problems of soybean production, soybean hay which was piled in cocks then fed to dairy cows to increase their milk production, the slow acceptance of soybean meal for livestock feeding in America, how I.C. Bradley educated farmers about soybean meal, why Wisconsin didn't favor margarine, and work with the ASA.

Photos show: (1) Early shocks of soybean hay in a field. (2) Soybean pioneer V.P. Atwell (Stevens Point, Wisconsin) harvesting soys with an old-fashioned reaper. (3) Portrait: "George 'Soybean' Briggs was one of the founders of the American Soybean Association, and its fourth president. In fact, he may be the only member who was at the first meeting at Camden, Indiana" [at the Fouts Bros. farm]. Address: Univ. of Wisconsin, Agric. Exp. Station.

1580. *Food Processing* (*Chicago*). 1970. Textured vegetable protein granules have natural meaty flavor. Summer. p. F10-F11. Foods of Tomorrow section.
• ***Summary:*** About Ground Beef-Like Granules, "spun soy granules," made by Worthington Foods, Worthington, Ohio. "The granules are made from spun soy protein fibers, plus binders and flavoring; no animal products are used in their production." They closely match the flavor, texture, and appearance of cooked ground beef. Advantages of the dry granules over beef: Less than half the calories, no fats, no cholesterol, and less than half the cost. A full-page color photo shows the product, as sold, and in a casserole.

1581. Hartman, Warren E. 1970. Textured soy proteins. In: SOS/70 Proceedings of the Third International Congress, Food Science and Technology. 951 p. See p. 245-47. Held 9-14 Aug. 1970 at Washington, DC.
• ***Summary:*** "Worthington is currently offering four types of plant-protein products. The first type of product must be classified as a raw material. This major raw material is the textured spun-protein fiber [made of soy protein]. The second type of product is a mixture of raw materials formulated to have a specific function. Among these are extenders for poultry meat and extenders for red meat. These mixtures contain fibers, binders, emulsifiers, fillers, color, and flavors similar to those in the extended product. Hamburger chain-outlets are looking with renewed interest at the fiber red-meat extenders.

"The third type of products are special formulations with or without fiber which may be mixed and extruded to produce units simulating ground beef or other meatlike portions. These bits, or granules, may be large or small, colored or uncolored, flavored or unflavored...

"The fourth type of Worthington's food ingredients consists of the present end-products. This includes all the simulated meats and the various canned foods currently available from Worthington Foods. These products are sold fresh or frozen or canned. The simulated meats may also be purchased diced, air-dried, or freeze-dried...

"Early this year [March 1970], Worthington Foods became a totally owned subsidiary of Miles Laboratories, of Elkhart, Indiana. The objective is to become to a greater

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degree, *architects of change* rather than *victims of change!*...

"Whether the products of our technology be called 'Fake Steak,' 'Sham Ham,' or 'Phoney Baloney' [Phony], these protein fabricated foods *will survive.* And they will find extended and varied uses." Address: Worthington Foods, Worthington, Ohio 43085.

1582. *Soybean Digest.* 1970. ASA's honorary life members 1946-1969. Aug. p. 40-41.
• ***Summary:*** 1946–W.J. Morse,* agronomist, USDA, president, ASA; W.L. Burlison,* chief, agronomy division, University of Illinois, president, ASA. 1947–I.C. Bradley, J.C. Hackleman, G.G. McIlroy. 1948–J.B. Edmondson, David G. Wing, C.M. Woodworth. 1949–Keller E. Beeson, Jacob Hartz Sr., E.F. (Soybean) Johnson.

1950–G.H. Banks, E.J. Dies, Taylor Fouts. 1951–Frank S. Garwood, James W. Hayward. 1952–Garnet H. Cutler. 1953–George M. Briggs. 1954–J. Ward Calland. 1955–Geo. M. Strayer. 1956–J.L. Cartter, John P. Gray. 1957–Howard L. Roach, Ersel Walley. 1958–Harry W. Miller. 1959–John W. Evans, W.E. Hodgson.

1960–Frederick Dimmock, Edgar E. Hartwig. 1961–Shizuka Hayashi, Albert H. Probst. 1962–Chester B. Biddle, Joseph E. Johnson. 1963–Allan K. Smith, C.R. Weber. 1964–A.J. Ohlrogge, Leonard F. Williams. 1965–Russell Davis, Jake Hartz Jr. 1966–Dwayne Andreas, Dale W. McMillen. 1967–Whitney Eastman, Chas. V. Simpson. 1968–Herbert W. Johnson, John Sawyer, Walter W. Sikes. 1969–Frederic R. Senti, Hays Sullivan.

As shown above with Burlison and Morse, with each person's name is give their current position or title, whether or not they are still living (* = deceased), and offices they have held in the American Soybean Association (ASA). Page 41 is filled with small, individual photos of each of ASA's honorary life members.

1583. *Soybean Digest.* 1970. Dr. [Harry] Miller's lifelong work with soy foods. Aug. p. 37.
• ***Summary:*** Photos show: (1) Dr. Miller in Libya, 1957. (2) Dr. and Mrs. Miller with Madame and Generalissimo Chiang Kai-shek.

1584. Strayer, George M. 1970. Basic problems haven't changed. *Soybean Digest.* Aug. p. 54-57.
• ***Summary:*** This is an interesting history of the American Soybean Association as seen through the eyes of its most important early member.

"Geo. M. Strayer served as executive officer of the American Soybean Assn. from 1940 until 1967, through the formative years when most of the present structure was established. His term of service on the board of directors started 3 years earlier and was probably longer than that of any other one man. Today he is secretary of Associated Hybrid Producers, as he has been for many years. He exports corn, soybeans, grain sorghum, popcorn, and other midwestern products through Agricultural Exports Inc. He is associated with his brother Gordon and other members of his family in Strayer Seed Farms. He recently was elected mayor of Hudson where he has resided for the past 30 years. The above sketch of Mr. Strayer as mayor is by Jack Bender of the Waterloo (Iowa) Daily Courier.

"Soybeans to me 52 years ago were just a lot of work–a novelty of which a small amount of seed had been secured by my father from W.J. Morse in the Department of Agriculture. Planted in the hills of a small patch of popcorn, they had to be pulled by hand, dried, and then threshed out by hand and with a flail. They were too late for complete maturity in our latitude–but we found out they would grow here!

"By the spring of 1924 there were enough varieties (all imports from the Orient) that my father, B.S. Strayer, in cooperation with USDA and the local Smith-Hughes agricultural instructor, planted a testplot of about 3 acres, and included some 15 or 20 strains of varying maturities. There were black, green, brown, yellow, and vari-colored varieties."

"First exposure to the American Soybean Assn. came in September of 1924 when my father attended the fifth meeting at Ames, Iowa. It was a 2-day meeting, in the days of dirt and gravel roads, and the 100 miles to Ames was a major journey taken the day prior to meetings. I heard the stories of the wonders of the soybean crop secondhanded–I was in high school, the meetings came after school started, and such meetings were no place for kids anyway!

"Wonders of the soybean world: It was not until 1930 that I had my first exposure to the American Soybean Assn., except for reading the proceedings of each of the annual meetings as mailed to all members. The sessions that year were held at the University of Illinois.

"Four of us drove over for the meetings. We stayed at a private home in Urbana. I was indoctrinated into the wonders of the world of such men as W.L. Burlison, J.C. Hackelman, Soybean Briggs, Bill Riegel, John T. Smith, W.K. Kellogg, Keller Beeson, W.J. Morse, Charlie Meharry, Taylor Fouts, Scott Wilkins, and others.

"Today, only Soybean Briggs is still living. But they were the men who had the vision and the foresight and the fortitude to preach and talk soybeans, to plant and harvest them, and to interest people in their possible uses.

"At these 1930 meetings, held while I was a college student, I found my real interest for future years. I believe it was in 1937 after graduating and starting to farm that I was first elected to the board of directors of ASA. My father had served several years ahead of me.

"In 1936 the ASA annual convention was held in Iowa, and I was a member of the committee given the responsibility for planning the program. The first day was held at Iowa State University at Ames, the second day at Cedar Rapids, where processing facilities could be visited,

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and the third day was held at Hudson on our farms.

"In preparation for the big event we had freshly painted our farm buildings with paint made with soybean oil."

Also discusses: The launching of *Soybean Digest* (Nov. 1940). First trips abroad (1949 with Jack Cartter as members of ECA Technical Assistance Mission No. 1 to Europe, especially Germany; in 1952 to visit potential customers in Western Europe at his own expense; in 1954 as a member of the official USDA-sponsored agricultural trade mission; in 1955 weeks with Paul Quintus, head of USDA's fats and oils division, to study the possibilities of selling soybeans to that country. "I spent 7 weeks in Japan meeting with processors, foods manufacturers, shoyu manufacturers, tofu makers, miso makers, and Japanese government officials").

"The Japanese American Soybean Institute was formed in early 1956, and became the first overseas market development project on soybeans or any oilseed.

"With soybean production zooming, and with the Japanese project well underway, it appeared logical to explore other possible markets. In May of 1956 Paul Quintus again asked me to serve as an emissary of USDA and the soybean industry, this time to survey market possibilities and potentials in 10 Western European countries. Given a free hand, I spent about 2 months on this assignment, came back convinced that we had both problems and opportunities in Europe.

"I recommended that an industry-wide organization be formed. The European market was not solely a soybean market. Some countries would use oil, others meal, still others soybeans. It was too big a job for the small American Soybean Assn. Processors as well as growers had a stake in that market. Out of the arguments, discussions and deliberations the Soybean Council of America was formed to do the market development work in Europe and eventually in South America and in parts of Asia, with both growers, through ASA, and processors, through the National Soybean Processors Assn., participating.

"The problems are the same: Today's problems are the same as those of 1945–creation of larger and larger markets for U.S. soybeans." Address: Former Executive Vice President, American Soybean Assoc. and former editor, Soybean Digest.

1585. *Los Angeles Times.* 1970. Program to focus on world ills. Sept. 22. p. H9.
• ***Summary:*** Orange County, California–World food shortages, population control, and pollution will be among the subjects included in a program today titled "Creating tomorrow" at the Psynetics Foundation headquarters.

The main speaker will be Wayne D. Lamont, president of Earth Steward Inc. and education chairman for Planned Parenthood World Population.

A "foods of the future buffet," prepared under the direction of Dorothea Van Gundy Jones, will accompany the talk.

1586. Dinshah, Freya. 1970. The vegan kitchen. 6th ed. Malaga, New Jersey: The American Vegan Society. 44 p. Illust. Recipe index. Sept. Saddle stitched. 21 cm. The Ahimsa book series No. 2.
• ***Summary:*** With a bonus chapter: Why veganism? by Eva Batt. Page 6 notes that soya beans can be sprouted. The authors believe that the best way to eat cereal grains is to sprout them. In a section titled "About Vitamins" we read: "Some people, at least in the transition period, may wish to supplement the menus given, with a glassful of B-12 fortified soya-milk. In the USA, Loma Linda Soyagen and Worthington Soyamel are marketed in various flavors. In England there is Granogen, Velactin, and a leaf-protein milk known as Plantmilk or Plamil. (Plamil is now also being made available in North America)." Soy-related recipes include: Soya patties (with soya meal or flour, baked in an oiled dish, p. 20). How to shell green soya beans (p. 21). Soya loaf (with cooked soya beans, baked, p. 23). Soya milk (with soya powder/flour and dates, p. 24). Soya cheese Americana (tofu made with soya powder/flour and coagulated with lemon juice, p. 25). Australian soya cheese (tofu made with soya powder, coagulated with orange and lemon juice, jelled with agar-agar, p. 25). British Plantmilk cheese (tofu made with Plamil and lemon juice, p. 25). Vegan "mayonnaise" II (with soya milk and mashed potatoes, p. 26).

A lifetime vegetarian, the author has been a vegan since 1959, and the Secretary of the American Vegan Society since 1960. Married to AVS President H. Jay Dinshah, she is an accomplished author, lecturer, and teacher. Address: The American Vegan Society, 501 Old Harding Highway, Malaga, New Jersey 08328.

1587. Nussbaum, Jean; Forest, Alice de. 1970. Science et cuisine. Nouvelle édition [Science and cuisine. New edition]. Dammarie-les-Lys, France: Éditions S.D.T. [les Signes des Temps]. 207 p. Color plates. Recipe index. 20 cm. [Fre]
• ***Summary:*** Part I is about vegetarianism; part II is vegetarian recipes. Pages 116-17 discuss oilseeds (*fruits oléagineux*) and give 5 recipes for Protose (made from a mixture of wheat gluten and oilseeds [soya]; "In France this preparation is sold under the name of slices of vegetable meat, Végé-Pural, Végé-Via, etc."). The only other soy-related recipe is Salad with soy sprouts (p. 145). Address: 1. Docteur, France.

1588. *Soybean Digest.* 1970. China Doctor is now in paperback. Sept. p. 61.
• ***Summary:*** "*China Doctor,* the exciting story of Dr. Harry Miller who pioneered medicine and nutrition, notably with the soybean, is now available in paperback." While in the United States, Dr. Miller built a soymilk plant at Mt. Vernon,

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Ohio.

1589. Dimler, R.J. 1970. Expanded soybean and corn uses. *Notes from the Director of the Northern Division* (*Peoria, Illinois*) No. 1005. p. 2. Oct. 23.
• ***Summary:*** "Miles Laboratories has announced two major changes of direct interest to NU products and developments. One is a multimillion-dollar expansion in Worthington Food Division for the manufacture of textured protein foods primarily based on soybean isolates and wheat gluten. The other is the formation of a new Division called Marschall which incorporates its Union Divisions (wet-milling) and other industrial operations, including dialdehyde starch, citric acid, enzymes, and chemicals." Address: Director.

1590. Lane, Mary Margaret. 1970. Tomorrow's foods today. *Nursing Homes* 19(10):28-29. Oct.
• ***Summary:*** The author visited the Worthington Foods plant near Columbus, Ohio. There she saw foods made from spun soy protein fibers, such as Prosage, Stripples, corned beef, smoked beef, and turkey-style slices. "The meat shortages of World War II brought meatless protein into popular demand. Only in 1962, however, did Worthington begin to turn its attention to the manufacture of analogues–those products which taste and look like meats." The vegetarian products in the Worthington line of "meatless meats" include "fried chicken, choplets, cutlets, pot pies, Skallops which are like seafood, and Veja-Links which contain only 15% fat–half that of regular frankfurters." Address: R.D.

1591. Wilding, M.D. 1970. Oilseed proteins. Present utilization patterns. *J. of the American Oil Chemists' Society* 47(10):398-401. Oct. [10 ref]
• ***Summary:*** A review of the uses of soy protein. Soybean is the most economical source of protein in terms of yield/acre. Flavor problems have been solved. Textured soy protein is reported. Figure 1 shows the relative efficiencies of protein conversion from some major protein sources. "The time has now come as predicted by Harry W. Miller in 1943, that our chief interest in the soybean is in its value as a human food."

The first significant development in texturizing proteins was made by Robert Boyer in 1947; he developed an edible soy protein fiber using a process similar to that for making textile fibers. This process is described. Today such fibers are being produced commercially by General Mills, Worthington Foods, and Ralston Purina, and used in some very sophisticated "engineered meat-like items." General Mills recently announced its intention to construct a multimillion dollar plant to make these "fabricated engineered foods."

Figure 1 shows the number of days of protein requirement (by a moderately active man) produced by one acre, yielding selected food product. Legumes make very efficient use of the land, grains make fairly efficient use, and livestock make very inefficient use. Soybeans make the most efficient use of the land to produce protein; they will sustain a man for 2,224 days. Beef cattle make the least efficient use; they will sustain a man for only 77 days.

Tables show: (1) The estimated production and prices of soy proteins. Soy flour and grits (120-126 million lb, 7-8 cents/pound). Soy concentrates (19-33 million lb, 18-26 cents/pound). Soy isolates (24-38 million lb, 35-45 cents/pound). (2) Amount of soy flour (million lb) used in various applications (both extrapolated from Eley 1968). (3) Physical properties and functional advantages of textured soy protein.

Large amounts of soy protein are also now being used to make fluid beverages. In Brazil, the Coca-Cola Co. has launched Saci, a chocolate flavored soy beverage. In British Guiana, Monsanto is making Puma. In Hong Kong Vitasoy is a commercial success. Address: Research & Development Center, Swift & Co., Oak Brook, Illinois.

1592. Wokes, Frank. 1970. Plantmilk (Letter to the editor). *British Vegetarian.* Sept/Oct. p. 462.
• ***Summary:*** During his tour of research centers in India, his stock of Plamil samples was eagerly tasted by colleagues who wished such a product were available in India. Discussions with industrialists and research workers showed him that it would be easier and cheaper to prepare a plantmilk in India from soya beans grown domestically using Dr. Harry Miller's original method, which calls for wet-grinding soaked soya beans, then processing them into a vegetable milk. "The product would be cheaper than cow's milk, which in India is relatively scarce and expensive... In Hong Kong Dr. Miller's efforts have led to the production of a soya milk cheaper than the equivalent amount of cow's milk..."

Margarine would not be available today in the UK "at prices lower than that for butter if it had not been bought by vegetarians who helped Hugh Mapleton in his pioneer efforts on its production." Address: V.N.R.C. [Vegetarian Nutrition Research Centre], Watford, Herts., England.

1593. **Product Name:** [Soyalac {Soymilk} (For General Use)].
Foreign Name: Soiyarakku Ippanyô.
Manufacturer's Name: College Health Foods. Later renamed San-iku Foods.
Manufacturer's Address: 1-1 Nagaurataku, Sodegaura-machi, Kimizu-gun, Chiba-ken 299-02, Japan.
Date of Introduction: 1970.
Wt/Vol., Packaging, Price: 425 gm can.
New Product–Documentation: K. Tsuchiya. 1982. Dec. *Tonyu* [*Soymilk.* 2nd ed.]. p. 74. States that Soiyarakku Ippanyô was introduced in 1970. It is now sold by Saniku Fuuzu in a 425 gm can and distributed nationwide.

1594. **Product Name:** [GranoVita Tender Soymeat Cutlets].
Foreign Name: GranoVita Soja-zart (Zartes Sojafleisch).

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Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1970.
Ingredients: Soya protein, water, corn-germ oil, egg protein, salt, dextrose, spices.
Wt/Vol., Packaging, Price: 175 gm can wholesales for DM 4.65; 350 gm for DM 6.95 (1980).
How Stored: Shelf stable; refrigerate after opening.
Nutrition: 14% protein.
New Product–Documentation: Full-page ad for 8 granoVita soy products in the book by Manfred Heide. 1977. *Vegetarische Ernährung: 193 Rezeptvorschläge und Speisepläne für ein Vierteljahr* [Vegetarian nutrition and food: 193 recipe suggestions and meal plans for a quarter of a year]. Stuttgart, West Germany: Paracelsus Verlag.

DE-VAU-GE leaflet. 1980? Rezepte aus der GranoVita Versuchskueche. Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p. Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products.

Label sent by Anthony Marrese. 1990. Jan. 10.5 by 2 inches. Red, green, and white on beige. Color photo shows the product, resembling a golden-brown tofu burger with sesame seeds showing, surrounded by peas and carrots. "Soyameat in slices (Sojafleisch in Scheiben)." Neuform certification symbol. Ingredients now read: Whole soybean puree, water, soy oil, egg protein, soy protein, wheat protein, salt, seasonings, dextrose, celery, carob bean flour and guar seed flour as thickeners, onions, spices. Sauce: Water, seasonings, soy sauce, salt. 8 slices per can weigh 200 gm, but 310 gm with sauce. Retails for DM 4.98 (1/90). Composition per 100 gm.: Protein 15 gm, fat 16 gm, usable carbohydrates 5 gm, calories 221.

1595. **Product Name:** Loma Linda Canned Meatless Loaves (Based on Spun Soy Protein Fiber) [Meatless Chicken Loaf, Meatless Beef Loaf, Meatless Smoked Turkey Loaf, Meatless Ham-like Loaf, or Meatless Luncheon Loaf].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1970.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening. Or, Frozen.
New Product–Documentation: *Soybean Digest Blue Book.* 1970. p. 114. "Soy loaves (chicken, turkey, beef, and hamlike flavors)." Loma Linda probably purchased the spun soy protein fibers from General Mills. Sold frozen in 1 or 2 lb packages.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Beef-Like Loaf (Loma Linda)." This is an institutional product.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. Turkey-like Loaf is a canned product and Smoked Turkey Loaf (72 oz) is a frozen product. Both are based on spun soy protein fiber.

1596. **Product Name:** Loma Linda Soybeans Boston Style (Canned).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1970.

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Ingredients: Water, soybeans, tomato puree, brown sugar, molasses, salt, corn starch, onion powder, paprika, garlic powder, spices.
Wt/Vol., Packaging, Price: 15 oz can. Retails for $1.30 (July 1990, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Manufacturer's catalog. 1979, dated.

Labels sent by Loma Linda Foods (a Seventh-day Adventist company). 1988. Oct. 5. This product was introduced in 1970. The date on the label (at far left edge) is "5/78."

Product with Label purchased at Adventist Book Center, Pleasant Hills, California. 1990. July 8.

1597. **Product Name:** Loma Linda Soy Sausages (Three Varieties).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1970.
New Product–Documentation: *Soybean Digest Blue Book.* 1970. p. 114. Loma Linda probably purchased the spun soy protein fibers from General Mills.

1598. **Product Name:** Loma Linda Chicken-Like Loaf.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1970.
Ingredients: In 1971: Water, textured soybean protein, vegetable oil, albumin [egg protein], soybean protein, rice

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flour, hydrolyzed vegetable protein, yeast extract, plant extractive flavorings, sugar, monosodium glutamate, onion powder, salt, soybean lecithin, carrageenan, seasonings.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: *Soybean Digest Blue Book.* 1970. p. 114. "Soy loaves (chicken, turkey, beef, and hamlike flavors)." Loma Linda probably purchased the spun soy protein fibers from General Mills. Sold frozen in 1 or 2 lb packages.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 163. Lists the ingredients in "Chicken-Like Loaf (Loma Linda)." This is an institutional product.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned chicken-like product based on spun soy protein fiber.

1599. **Product Name:** Loma Linda Beef-Like Loaf.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1970.
Ingredients: In 1971: Water, textured soybean protein, vegetable oil, albumin [egg protein], soybean protein, vegetable shortening, rice flour, brown sugar, caramel, salt, plant extractive flavorings, yeast extract, hydrolyzed vegetable proteins, soybean lecithin, carrageenan, MSG, onion powder, seasonings, and U.S. certified color.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: *Soybean Digest Blue Book.* 1970. p. 114. "Soy loaves (chicken, turkey, beef, and hamlike flavors)." Loma Linda probably purchased the spun soy protein fibers from General Mills. Sold frozen in 1 or 2 lb packages.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Beef-Like Loaf (Loma Linda)." This is an institutional product.

1600. **Product Name:** Loma Linda Luncheon Loaf (Chicken, Turkey, Beef, and Ham-like Flavors).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1970.
Ingredients: In 1971: Water, textured soybean protein, vegetable oil, albumin [egg protein], soybean protein, vegetable shortening, hydrolyzed vegetable protein, yeast extract, rice flour, monosodium glutamate, onion powder, brown sugar, plant extractives, flavorings, salt, soybean lecithin, carrageenan, seasonings, caramel, U.S. certified color.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening. Or, Frozen.
New Product–Documentation: *Soybean Digest Blue Book.* 1970. p. 114. "Soy loaves (chicken, turkey, beef, and hamlike flavors)." Loma Linda probably purchased the spun soy protein fibers from General Mills. Sold frozen in 1 or 2 lb packages.

Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 163. Lists the ingredients in "Luncheon Loaf (Loma Linda)." This is an institutional product.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned or frozen (4 lb) product based on spun soy protein fiber.

1601. **Product Name:** Fibroprotein–Spun Protein Fibers [Ground Beef-Type Granules, Textured Simulated Meats, Bacon-Style Chips, Dehydrated Hamlike Nuggets, Chicken Meat Extender, Chickenlike Cubes, or Plain Spun Protein Fibers].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1970.
New Product–Documentation: Horan, Odell, & Forman. 1971. PAG Bulletin. No. 13. p. 25. "Textured Vegetable Proteins." These are all institutional products.

Soybean Digest Blue Book. 1972. March. p. 108. "Vegetable protein entrees–over 45 canned, frozen, and dehydrated products, simulating beef, pork, and poultry."

1602. **Product Name:** Beef Style.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1970.
Ingredients: In 1971: Soybean protein [Fibroprotein spun soy protein fibers], water, corn oil, vegetable shortening, egg albumin, wheat flour, yeast extract, hydrolyzed vegetable protein, flavorings, salt, corn syrup solids, MSG, caramel color, sodium phosphate, U.S. certified color.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Beef Style (Worthington)." This is an institutional product.

Horan, Odell, & Forman. 1971. PAG Bulletin. No. 13. p. 25. "Textured Vegetable Proteins." These are all institutional products.

Soybean Digest Blue Book. 1972. March. p. 108. "Vegetable protein entrees–over 45 canned, frozen, and dehydrated products, simulating beef, pork, and poultry."

1603. **Product Name:** Corn Beef Style.

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Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1970.
Ingredients: In 1971: Soy protein [Fibroprotein spun soy protein fibers], wheat protein [wheat gluten], water, corn oil, vegetable shortening, wheat flour, egg albumin, sugar, hydrolyzed vegetable protein, salt, MSG, garlic and onion powder, caramel color, flavoring, U.S. certified color.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 163. Lists the ingredients in "Corn Beef Style (Worthington)." This is an institutional product.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 175. The ingredients in "Corn-beef Style, frozen, Worthington" are "Fibrotein [spun soy protein fiber], wheat protein, corn oil, partially hydrolyzed vegetable oils, egg white solids, wheat flour, yeast extract, HVP, sucrose, salt, artificial flavorings, garlic powder, onion powder, caramel color, spices, disodium inosinate/disodium guanylate, certified coloring, niacinamide, thiamin, mononitrate, iron, vitamin B-6, riboflavin, vitamin B-12."

1604. Barnard, W.G. 1970. Health via the carrot and other vegetables. St. Catharines, Ontario, Canada: The Provoker Press and Paul S. Eriksson, Inc. xiv + 144 p. No index. 19 cm.
• ***Summary:*** This is apparently a reprint (with several words missing from the title) of the original edition (which Soyfoods Center has never seen), published in about 1939 by the Natural Foods Institute of Cleveland, Ohio. This edition contains 37 short chapters on a variety of subjects such as: What causes good health and poor health? Personal experiences of the author. The natural laws that govern health–God's simple rules of natural living. About vitamins and minerals. Various health problems or diseases and testimonials of cures and prevention. Good and bad foods, etc. Enemies of health: Coffee, alcoholic liquors, tobacco, denatured foods, tea, cocoa, cola drinks.

The introduction begins: "One of the most wonderful gifts God gave to man is a healthy body. It costs not one penny to preserve your health, but it may cost you a fortune, untold suffering, yes, even life itself, once health is lost... Primitive man sustained himself on natural foods..." (p. ix). "In our opinion some of the worst enemies man has today are High Pressure Advertising of Denatured foods, drugs, etc... Through the powerful medium of radio, billboard, magazine, and newspaper advertising, the public has fastened themselves upon the use of aspirins, alkalizers, narcotics, pills, laxatives, seltzers, cold cures,... Some of the largest buildings in our cities are the hospitals... Oh, what tragedy!" Sadly man fails to recognize that he has brought all these diseases upon himself (p. xiii).

Chapter 3, titled "My personal experiences with carrots and other fruits and vegetables" (p. 11) begins: "For the past 14 years the writer has been lecturing in food shows, trade shows, and expositions on the proper preparation of foods. I lectured at the Century of Progress in Chicago [Illinois] in 1933 and again in 1934, and at the Great Lakes Exposition in Cleveland in 1936 and again in 1937. I am the founder of the Natural Foods Institute in Cleveland, Ohio. He has proclaimed the health-giving carrot to thousands.

"Up to ten years ago, I had been living the average life, eating anything and everything, drinking coffee, tea, cocoa, and colas. The base of my meal was potatoes and white bread. I acquired an excessive weight of 212 pounds. Heartburn followed every meal." He then describes a typical day's diet, loaded with meats, sugar, fat and refined foods–and the agony that followed. He lost his pep and ambition, and was refused life insurance because of sugar in his urine. His family became very concerned. A doctor warned him of the possibility of immanent death, and "prescribed a diet of milk, bananas, lots of raw vegetables and vegetable and fruit juices, which I heeded" (p. 14). He began to feel better from the first day. "Today I feel like a new man... at the age of sixty-six my recovery is so complete that I am now enjoying exceptionally good health" (p. 15).

"With the return of spirituous liquors [in Jan. 1934], cocktail recipes and cocktail bars are prevalent all over the land. We all know that alcoholic cocktails are injurious regardless of the content as long as alcohol prevails... There are cocktails however, that can be made from Nature's vegetables and fruits that are healthful, exhilarating and bracing." "A new machine called a liquefier propelled by electricity liquefies vegetables in from one to three minutes and marvelous Health-Cocktails can thus be prepared at least once each day for the entire family" (p. 16-17). He also mentions the "liquefier" on p. 34, and p. 53 ("liquefying machine"). So this book was apparently not written mainly to promote the liquefier. Note: This liquefier would later become known as a "blender" and Barnard's company would later make and market the Vita-Mix or Vitamix, a powerful type of blender.

"Constipation is a disease known mainly to the civilized races" (p. 29). Barnard regularly cites and summarizes the writings or Dr. John Harvey Kellogg.

Essential for good health is a "pure, red blood stream created by natural foods, fresh air, sunshine, and exercise. Soy bean products, spinach, parsley, celery, cabbage and beets, as well as carrots help make good red blood. Eat a plate of salad made of three grated carrots together with orange juice dressing. Drink freely of carrot juice daily" (p. 49). "Carrot juice and other vegetable and fruit juices can be included in the diet of every child every day." In growing boys or girls, beware of "False Sugar Appetites."

"A strict vegetarian diet is used in the treatment of cancer with notable success..." (p. 88).

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Like many in the 1930s, the author believes that an alkaline diet fights acidosis and promotes good health (p. 91). "Salt is a very harmful substance if not used in moderation" (p. 119).

Chapter 35, titled "Soy bean (the perfect protein food)" (p. 127-28) begins: "For centuries the Chinese have used the Soy Bean as a source of protein and fat and the necessary Amino acids that are found in flesh foods. In America the production of the soy bean is now running into millions of bushels and vegetable meat factories and milk factories are springing up all over the country.

"Henry Ford, who has done so much to educate the American people to the value of the Soy Bean, recently made the prophecy that the cow and hog were destined to oblivion and we will soon be eating our meat from the Soy Bean and drinking our milk from the Soy Bean. In other words obtaining our food direct from the soil first hand instead of second hand..." "It is the experience of the Natural Foods Institute that babies taken from the natural mothers milk thrive on soy bean milk and we have found no one allergic to it.

"Soy Meat substitutes, Soy Milk, Soy Flour, Soy Cheese [tofu], Soy Coffee substitutes, canned green soy beans, canned soy beans in tomato sauce, soya macaroni are fast becoming popular among health minded people."

In conclusion (p. 133-34): "In writing this book I have consistently followed one line of reasoning. It is agreed to by many physicians, dieticians [sic, dietitians], and food scientists, that vegetables and fruits are absolutely essential for maintaining good health, natural balance, and physical well being. I have tried to help those who are afflicted by giving this information." I also want to help those who are healthy to stay healthy. At the end of the book is a food dictionary and lists of acid-forming foods (bad) and foods with an alkaline reaction (good). Address: Cleveland, Ohio.

1605. Hooker, Alan. 1970. Vegetarian gourmet cookery. San Francisco, California: 101 Productions. 192 p. Edited by Helen Morrow. Illust. by Sara Raffetto. 21 x 21 cm.
• ***Summary:*** The section on "Entrees" states (p. 101-02) that one of the easiest ways to get one's daily protein is by using soya flour, which can be added to many foods.

Soy-related recipes include: Baked soy beans (p. 56). Tofu with tempura vegetables (p. 132). Page 181 recommends various vegetarian food products, including Vegeburger and Choplets (made by Loma Linda Foods), Kikkoman brewed Soy Sauce, Bakon Yeast, and Gravy Quik (which contains soy and other vegetable proteins). Address: Founder, Ranch House vegetarian restaurant, Ojai, California.

1606. Miller, Harry W. 1970. Nutritional value of soymilk. Riverside, California: International Nutrition Foundation. *
• ***Summary:*** Basic factual and nutritional information on soymilk. Address: Riverside, California.

1607. Schwarz, Richard W. 1970. John Harvey Kellogg, M.D. Nashville, Tennessee: Southern Publishing Assoc. 256 p. Illust. Index. 22 cm. See p. 44, 120-23, 243. Also published in 1970 by Andrews Univ. Press (Berrien Springs, Michigan).
• ***Summary:*** This excellent biography of Dr. J.H. Kellogg was originally written as a 1964 PhD thesis at the University of Michigan. Although it contains no references or footnotes, and thus lacks the documentation and completeness of the dissertation, it is still (March 2009) the best biography of Dr. Kellogg. The author is a Seventh-day Adventist.

Contents: Preface. 1. The boy foreshadows the man. 2. A convert (the early health reform and vegetarian movements in America). 3. From teacher to doctor. 4. A man is what he eats. 5. Changing American habits. 6. Developing the Battle Creek Sanitarium. 7. Sanitarium ups and downs. 8. A torrent of words. 9. Variations on a boyhood dream. 10. The unwilling surgeon. 11. Products of an active mind. 12. All work, but little play. 13. What manner of man. 14. Father of forty-two children. 15. His brother's keeper. 16. The ties of fifty years are broken. 17. Food manufacturing and family quarrels. 18. New outlets for promoting an old program. 19. The last battles. 20. An epilogue.

Concerning meat substitutes (p. 121-23): "During the years in which he directed the experiments which led to the production of flaked cereals, Bromose, and Malted Nuts, Dr. Kellogg also attempted to develop a substitute for meat from plant sources. He traced his interest in such a product to conversations with Dr. Charles W. Dabney, noted agricultural chemist and former president of the University of Tennessee. When Dabney was serving as President Cleveland's Assistant Secretary of Agriculture [probably about 1893-1897], he had discussed with Kellogg the problem of supplying adequate protein for the world's rapidly expanding population. The men agreed that it was better economics to use grain for human food than to feed it to animals and then use them for food. The problem, as Dabney saw it, was to produce a grain product which would have all the nutritional value and taste appeal of meat.

"In 1896 Kellogg announced that he had perfected the ideal substitute for meat in Nuttose, a nut product which he could prepare to taste much like beef or chicken... The doctor's interest in new vegetarian meatlike protein foods continued active until shortly before his death. Among some of the more popular creations later developed in his laboratories were Protose, Battle Creek Steaks, and Battle Creek Skallops. Various combinations of nuts and wheat gluten composed the principal ingredients in the imitation meats...

"Kellogg's last major food discovery was an artificial milk made principally from soybeans. He was particularly enthusiastic over soy milk because it proved an excellent

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host for the *acidophilus* bacteria which the doctor believed needed to be implanted in the intestinal tract in order for it to function perfectly. Shortly after Kellogg had developed soy acidophilus milk, he chanced to read that Marie, smallest of the Dionne quintuplets, was suffering from bowel trouble. Immediately wiring the quints' physician, Dr. A. R. Dafoe, he announced he was sending him a supply of soy acidophilus milk, which he was certain would cure Marie's problem. About ten days later he received a letter from Dafoe which indicated that the soy acidophilus milk had indeed corrected the situation and asked that a continuous supply be sent to Callander, Ontario [Canada], for the five little girls."

In summarizing Dr. Kellogg's major accomplishments, the author notes (p. 243): "His introduction of peanut butter added another widely accepted item to the American diet, and it probably did more to provide a market for peanuts than did the efforts of any other person, with the possible exception of George Washington Carver. John Harvey's development of meatlike products from nuts and legumes combined with wheat gluten has not only helped to enrich the dietary of thousands of persons who for ethical, health, or religious reasons choose to be vegetarians, but such high-protein foods also hold possibilities for supplementing the diet in countries where the supply of meat is insufficient to provide enough protein for a rapidly expanding population."

Concerning Granola: In the early 1860s, Dr. James Caleb Jackson of Dansville, New York, developed Granula, America's first successful cold breakfast cereal, made solely from wheat. For 40 years, Dr. Jackson operated "Our Home on the Hillside," probably the most successful of the "water-cure" institutions that blossomed in the 1850s. "In an atmosphere approaching that of a European spa, Jackson provided hydropathic treatments and a special diet for as many as a thousand patients a year." In about the 1870s, at the Battle Creek Sanitarium, John Harvey Kellogg developed a similar product, which he named Granola. It differed from Jackson's Granula in that it consisted of several grains, and longer baking dextrinized the starch more thoroughly. "At first he apparently had no thought of selling it. He intended it solely for sanitarium patients. Gradually, however, as former patients and others interested in dietetic improvement sent to the sanitarium for Granola, a small commercial business developed, and Battle Creek thus took its first step toward becoming the 'Breakfast Food Capital of the World.'... Shortly after the production of Granola for patients at the sanitarium began in 1877, Dr. Kellogg organized the Sanitarium Food Company as a subsidiary of the Battle Creek Sanitarium. Operated as an adjunct to the sanitarium bakery, for more than a decade it marketed a variety of oatmeal, graham, and fruit crackers and whole-grain cooked cereals–all originally devised to provide variety in the menu of sanitarium patients." All products were made from whole grains without artificial additives, and all underwent prolonged high-temperature baking designed to dextrinize their starch. "By 1889 the Sanitarium Foods had become popular enough to warrant the establishment of a separate factory; Granola alone sold at the rate of two tons a week." But when Dr. Kellogg wanted to expand the business, other sanitarium doctors refused to vote the funds. So Dr. Kellogg launched the private Sanitas Food Company, relying heavily on his younger brother, Will Keith, who had served as his personal accountant and business manager since 1880. John Harvey's new flaked cereals and vegetable meats became the property of the Sanitas Company. In mid-1906 Dr. Kellogg decided to change Sanitas' corporate name to the Kellogg Food Company. Then: "In the spring of 1921, to avoid further difficulties with Will Kellogg's manufacturing business [Battle Creek Toasted Corn Flake Company], Dr. Kellogg changed his concern's name to the Battle Creek Food Company."

Concerning flaked breakfast cereals: The first ones were developed from wheat jointly by Dr. J.H. Kellogg and his brother Will, in about 1894. Dr. Kellogg named their first successful wheat flakes product Granose Flakes, and on 31 May 1894 he applied for a U.S. patent on "Flaked cereal and process for preparing same." But in 1903 courts declared the doctor's patent invalid. Will Kellogg developed the product into a great commercial success, in part by adding sugar to the malt and corn combination from which he made the flakes. "The sugar greatly enhanced the cereal's taste appeal, and, as a result, the Corn Flakes business was booming by late 1905." Will convinced his brother, John Harvey, to relinquish Sanitas' rights to Corn Flakes, and in early 1906 Will established a separate Battle Creek Toasted Corn Flake Company with outside financing. John Harvey agreed not to take an active part in the new company's management. Six months later John Harvey decided to change Sanitas' corporate name to the Kellogg Food Company. The new company "began operating in July 1908, with Dr. Kellogg owning all but two of its fifteen thousand shares of stock. Not only did the new company absorb the old Sanitas Company, but it also leased the entire plant, machinery, goodwill, and business of the Battle Creek Sanitarium Food Company, thus bringing the manufacture and distribution of all the food products with which Dr. Kellogg was associated into one organization. By then John Harvey had decided that it would be a good thing to put out all company products under the trade name 'Kellogg's.'"

Will became very upset when Dr. Kellogg attached the family name to his new food company and products. Eventually a series of legal battles developed between the two brothers over this and other products. Will Keith Kellogg is discussed on pages 64, 118-20, 122, 144, 148, 192, 210-18, 224, 237-38.

On pages 193-208 are 16 pages of excellent black-and-white photos from the life of Dr. Kellogg, starting with a portrait of him and his wife in 1884.

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Association (Hagerstown, Maryland)–but with the new subtitle: "Pioneering health reformer." Adventist pioneer series. On the new cover, on a snipe in the upper right corner: "Father of the health food industry." Address: Andrews Univ., Berrien Springs, Michigan.

1608. Schwarz, Richard W. 1970. The boy foreshadows the man (Document part). In: Richard W. Schwarz. 1970. John Harvey Kellogg, M.D. Nashville, Tennessee: Southern Publishing Assoc. 256 p. See p. 9-16.
• ***Summary:*** For nearly 200 years the Kellogg family had lived in Hadley, Massachusetts. Then in the summer of 1834, John Preston Kellogg loaded his wife, Mary, their young sons, Merritt and Smith, and some household belongings into a wagon and headed for Albany, New York, the eastern terminus of the Erie Canal. They traveled by canal boat from Albany to Buffalo, boarded a lake steamer for Detroit, then journeyed northwest by wagon for about 60 miles until they reached the farm of their former neighbor, Lansing Dickinson, near the present city of Flint, in the Michigan Territory. There were only about 6 families and a few Indians in the area.

John Kellogg filed a claim for 320 acres of government land and soon began farming. But over the next 4 years the health of his wife steadily deteriorated until, in the fall of 1841, she died. John persuaded Ann Stanley, age 18, to care for the children and the house. In March 1842 she and John were married. She soon found that the family had financial difficulties. Before long they moved southwest to Tyrone Township in Livingston County. "Within ten years the Kelloggs had one of the most prosperous farms in the neighborhood." Soon John was baptised and the family joined the Heartland Center Congregational Church. They tried to demonstrate their religion in practical ways, as by becoming active abolitionists and occasionally passing fugitive slaves on toward the Canadian border and freedom. Ann learned to distrust traditional medical practitioners after the death of Emma, one of her first children. The family began to subscribe to Dr. Joel Shew's the *Water Cure Journal.*

On 26 Feb. 1852 Ann gave birth to her second son, John Harvey Kellogg. In the summer 1852 they got to know the Millerite movement, that would later become the Seventh-day Adventist Church. In 1853 the Kellogg family accepted Adventism and moved to Jackson, Michigan, to be with a larger group sharing their convictions. In 1856, when John Harvey was 4, the family moved to Battle Creek, already on its way to becoming Adventist headquarters. One day he admitted that Satan had made him tell a tall tale. Then, after a little sober thought he said, "Mother, I wish God would kill Satan." Address: Andrews Univ., Berrien Springs, Michigan.

1609. Schwarz, Richard W. 1970. A convert (Document part). In: Richard W. Schwarz. 1970. John Harvey Kellogg, M.D. Nashville, Tennessee: Southern Publishing Assoc. 256 p. See p. 17-25. Chap. 2.
• ***Summary:*** In 1864, at age 12, John Harvey Kellogg began to work with the Seventh-day Adventist health reform movement as a printer at the Review and Herald Press. Discusses: Ellen G. White's health reform vision at Otsego, Michigan, in June 1863. Social reform movements in America. Dr. James Caleb Jackson. Dr. Russell T. Trall. Doctors, their treatments, and medical schools in the mid-1800s. The great cholera outbreak of 1832-34. Dr. George Cheyne. Andrew Combe. William Metcalfe. The American Vegetarian Society. Edward Hitchcock. Prof. Reuben D. Mussey. Dr. William Alcott. Sylvester Graham. Mrs. Mary Gove. Dr. Joel Shew. Hydropathy. The water treatments given by Vincent Priessnitz, an uneducated Silesian peasant at Graefenburg, Austria. *Water Cure Journal.* Dr. L.B. Coles of Boston, Massachusetts, and his book *Philosophy of Health.* Our Home on the Hillside in Dansville, New York. Granula (America's first successful cold breakfast cereal, developed by Dr. James C. Jackson in the early 1860s). Dio Lewis. Publication of the *Health Reformer.*

"In 1817 a group of vegetarian Christians, led by William Metcalfe, arrived in Philadelphia from Manchester, England. Metcalfe helped organize the American Vegetarian Society in New York City in 1850."

"In May, 1830, another recruit joined the ranks of American health reformers when Dr. William Alcott adopted a strict regimen which included a vegetarian diet and excluded all liquids except water. A graduate of Yale University's Medical School [in Connecticut], Alcott mixed part-time farming and years of teaching with the practice of medicine. He was one of the first health reformers to publish his ideas widely in printed form. In 1835 Alcott launched *The Moral Reformer,* a monthly journal devoted to the cause of healthful living. He also authored numerous popular books on physiology and hygiene, sex education, and character training... The doctor served as the first president of the American Vegetarian Society.

"In order to attract public attention in an era of limited communications media, the health reform movement needed an orator. Sylvester Graham, a former Presbyterian preacher and onetime General Agent for the Pennsylvania Temperance Society stepped into the role in the 1830's. At the start of the decade Graham spent several months in an intensive study of physiology and diet. It was probably then that he came into contact with and accepted the dietetic views of William Metcalfe's vegetarian congregation in Philadelphia. Reading the experiences of a fifteenth- and sixteenth-century Italian nobleman, Luigi Cornaro, who believed that he had regained his health by adopting a radical change in diet, also deeply impressed Graham." Graham soon "decided that diet was the most important factor in the maintenance of good health." Address: Andrews Univ., Berrien Springs, Michigan.

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1610. Schwarz, Richard W. 1970. Work to expose the dangerous effects of using alcohol, tobacco, tea, and coffee (Document part). In: Richard W. Schwarz. 1970. John Harvey Kellogg, M.D. Nashville, Tennessee: Southern Publishing Assoc. 256 p. See p. 106-07. Chap. 9.
• ***Summary:*** Dr. Kellogg's activities in this area of health education began at the two Battle Creek colleges, the American Medical Missionary College, and the variety of schools associated with the Battle Creek Sanitarium. "He entered the modern field of audiovisual education as early as the 1880's, when he prepared a series of ten colored charts depicting the harmful effects of alcohol and tobacco. Temperance lecturers used them widely. Several years later he developed two series of charts for school use. Going beyond the conventional fundamentals of anatomy and physiology, the charts showed the effects of bad habits in dress and posture and the results of neglecting to secure sufficient exercise.

"The doctor also participated in a wide variety of adult education ventures. Along with James and Ellen White and G.I. Butler, he had organized the American Health and Temperance Association in 1878 in an effort to expose the dangerous effects of using alcohol, tobacco, tea, and coffee. Dr. Kellogg served as the Association president during its fifteen-year life-span and actively organized public meetings and campaigns to distribute temperance tracts and pledges. In later years John Harvey served as president of the Michigan Anti-Cigarette Society, and following World War I he became a member of the Committee of Fifty to Study the Tobacco Problem. Kellogg assisted the latter group–which included Henry Ford, George Peabody, and John Burroughs–in producing one of the first educational motion pictures devoted to the dangers of tobacco smoking." Address: Andrews Univ., Berrien Springs, Michigan.

1611. Schwarz, Richard W. 1970. Products of an active mind: Peanut butter (Document part). In: Richard W. Schwarz. 1970. John Harvey Kellogg, M.D. Nashville, Tennessee: Southern Publishing Assoc. 256 p. See p. 120-21.
• ***Summary:*** "Another important item in the American diet which Kellogg first introduced was peanut butter. Shortly after 1890, he had a quantity of roasted peanuts ground up into a paste for use by patients who had difficulty in masticating nuts or peanuts (which are a legume) well enough to digest them properly. Later he decided that roasting caused the fat content to begin to decompose, irritating the digestive organs. From that time forward the sanitarium made its peanut butter from steam-cooked rather than roasted peanuts. Kellogg also devised a variety of nut butters, which he claimed were 'sweeter, more palatable, and more digestible' than regular butter. Making no attempt to secure patents which would let him control the production of either peanut butter or any of his nut butters, he announced that he believed that they were products that 'the world ought to have; let everybody that wants it have it, and make the best use of it.'

"During the decade following the appearance of peanut butter, Dr. Kellogg developed several other food products with a nut base. In 1896 he patented a product labeled 'Bromose,' which he claimed to be a vegetable equivalent of malted milk...

"At about the same time, John Harvey originated a similar product which he named Malted Nuts. Derived principally from peanuts and almonds, one could mix Malted Nuts with water to form a vegetable milk which Kellogg maintained looked 'exactly like milk, and tastes so nearly like it that it is a very satisfactory substitute.' He designed the latter product primarily for infants who could not tolerate cow's milk..." Address: Andrews Univ., Berrien Springs, Michigan.

1612. Trager, James. 1970. The enriched, fortified, concentrated, country-fresh, lip-smacking, finger-licking, international, unexpurgated foodbook. New York, NY: Grossman Publishers. xv + 579 p. Illust. Index. 24 cm. [350+* ref]
• ***Summary:*** This hefty volume is packed with information about a multitude of interesting, little known, or bizarre subjects related to food. It is divided into 11 major chapters, each of which contains many mini-chapters, often with witty or enticing (but often undescriptive) titles such as "mushrooms take savvy" or "Farmer Jefferson." The extensive index is very useful, containing entries for such things as Accent/MSG (p. 445-48), prehistoric agriculture and food (p. 3-11), meat analogs and Bac*Os (p. 450-51, 457, 501), Archer Daniels Midland (p. 450), bean curd (p. 333, 362), Battle Creek Sanitarium (p. 460), Kellogg (p. 384, 460-61), miso soup (p. 362), soybeans (p. 21, 262, 382, 450-51, 518), soy protein (p. 450), vegetarianism and vegetarians (p. 3, 324, 343, 457-59).

In Chapter 10, titled "Nuts in the Fruitcake" (p. 455-86), the author takes the opportunity to make fun of anything he discusses related to health/natural foods or vegetarianism. To him, it all smacks of food faddism and extremists. There are sections about vegetarians past and present ("there are no convincing nutritional justifications for vegetarianism"), Sylvester Graham ("One of America's first home-grown food faddists"), Horace Fletcher, Dr. William Howard Hay and acidosis, Gayelord Hauser ("Perhaps the most prominent diet and health mythologist in recent years"), organic foods baloney ("DDT has not yet been shown to have harmful effects for humans"), Carlton Fredericks and Adolphus Hohensee, Tiger's Milk, aphrodisiac foods, and food and astrology. Address: New York.

1613. Elmshaven, the house in which Ellen G. White spent the last years of her life (Photograph). 1970?
• ***Summary:*** Image courtesy of the Ellen G. White Estate.

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"Elmshaven. The house in which Ellen G. White spent the last years of her life is located near St. Helena, Napa County, California. Mrs. White did most of her writing in the tower room to the right. Editorial details were handled in the office building appearing behind and to the left (color)."

1614. Dimler, R.J. 1971. ED technology applied to commercial soy beverage. *Notes from the Director of the Northern Division* No. 1013. p. 1. Jan. 8.
• ***Summary:*** In Feb. 1969 Mr. J.E. Minesinger (chemist) and D.J. Keeler (manager) of Loma Linda Foods (Mt. Vernon, Ohio) visited the NRRC and learned about their process to inhibit the development of rancid flavors and odors in full-fat soy flour. Loma Linda adopted their process to inactivate lipoxygenase and now reports obtaining a highly significant improvement in the flavor of its soy beverage products.

"After receiving a sample of our new soy beverage, Mr. Minesinger came on Dec. 9 to discuss with Mr. Mustakas (ED = Engineering & Development) our research in more detail. Loma Linda is marketing 'Soyagen,' a spray-dried formulated soy milk powder selling at about $1.00 a pound. Each pound of water dilutes with water to make about 1 gallon of beverage. This new product is highly nutritious and is also available with a carob (chocolate-like) flavoring. Mr. Minesinger commented specifically about using our process to inactivate lipoxygenase to improve flavor quality." Address: Director.

1615. Harris, Jean. 1971. Engineered food is on the way! *News and Observer* (*Raleigh, North Carolina*). Jan. 17.
• ***Summary:*** Henry Ford's desire to make cloth from soy protein started the original research on "meat analogues." The technology for producing spun soy protein products developed from a process to produce casein fibers in Italy in the mid-1920s. A second group of "soy meats," called textured meat analogues, is made by an extrusion process applied to textured vegetable proteins made from soy protein isolates; one example is Bac-Os.

"Most of these soy meats are available only to the institutional trade. They are now in use in prisons, hospitals, and orphanages." Two manufacturers of such products are Loma Linda Foods and El Molino Mills.

In North Carolina a full soybean product, made from toasted soybeans, is sold under the name of Golden Nuggets; all Raleigh seems to be eating them.

Recipes are given for: Soya cake (with sifted soya flour). Soyanaise (with Soyamel soymilk). Golden nut pie crust (with soya flour). Soya cookies (with soya flour). Roasted soybeans (made from canned soybeans, either dry roasted at 350 degrees or deep fat fried). Puree of soybean soup (with sieved soybean pulp). Address: Food editor.

1616. Carberry, James F. 1971. Our daily bread: Food faddism spurts as young, old people shift to organic diets. Concern on pesticides cited, but some see deception by quacks claiming cures. Yin and yang ice cream. *Wall Street Journal.* Jan. 21. p. 1, 12.
• ***Summary:*** Written from Hollywood, California, this article reports that "food faddism has been particularly prevalent lately." Kahan & Lessin Co., one of the nation's biggest distributors of organic foods, reports that its sales have doubled to $12 million a year from $6 million in 1968. New Age Foods of San Francisco [owned by Fred Rohé] recently opened a branch store in suburban Palo Alto, where it expects to gross $1 million during its first year.

"Health and organic food advocates say the popularity of such items–as well as the more conventional products grown under 'natural' conditions–reflects the growing public concern over pesticide poisoning and the publicity over the dangers of food additives, preservatives, and substitutes like cyclamates."

Richard Hansen is a sociologist at the University of California at Davis; he is researching the organic food movement.

"New insights into universe: Bruce MacDonald [sic Macdonald], president of Erewhon Trading Co., a Boston and Los Angeles concern that specializes in such exotic foods as hacho miso (a soybean paste), says that organic foods appeal to many dropouts from the drug culture. 'It's not just that the body's malnourished from being on drugs a long time,' he says. 'It's also that organic foods can give a person new insights into the order of the universe."

Warren Stagg, the bearded proprietor of H.E.L.P., a popular vegetarian restaurant, believes in the mystical,

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spiritual value of certain foods. A vegetarian diet can help elevate a person to a higher level of consciousness and bring him into harmony with the order of the universe, he says. Since 75% of H.E.L.P.'s clientele are nonvegetarians, the "restaurant offers some meat substitutes such as 'beef' stroganoff made from vegetable protein, mushrooms, scallions, bell peppers and sour cream sauce, and a 'vegeburger' sandwich that's also made from vegetable protein. Other dishes on its menu include braised tofu (soybean cake) with brown rice and a salad of cottage cheese, alfalfa sprouts, sunflower seeds, grated carrots, scallions, figs and apricots."

Note 1. This is the earliest English-language document seen (April 2013) that uses the term "braised tofu" to refer to grilled tofu.

"A group of young people following a macrobiotic diet live in an old Victorian mansion above Hollywood's Sunset Strip. They are students of the late Georges Ohsawa, a Japanese philosopher who taught about the delicate balance between yin and yang; they eat ascetic meals that include pressure-cooked brown rice and seaweed soup. There have recently been well-publicized cases of the deaths or severe illnesses of a few young people subsisting on only brown rice, the extreme form of the macrobiotic diet.

"Another famous food-faddist helped found a huge business in breakfast cereals. He was John Harvey Kellogg..." according to Ronald Deutsch, author of a history of food fads called "The Nuts Among the Berries." Deutsch then tells his inaccurate version of how Mr. [sic, Dr.] Kellogg got into the cereal business.

"One man who spends a great deal of time pooh-pooing various nutritional eccentricities is Dr. Fred Stare, chairman of the department of nutrition at Harvard University's School of Public Health." Dr. Stare discusses his pet peeves.

Note 2. Bruce Macdonald recalls (April 1992): "In early 1971 *The Wall Street Journal* ran a front-page feature story on the emerging new natural foods industry. A person from Merrill-Lynch came in and said, 'We could package this business and raise millions for you.'"

Advest Co. 1972. Dec. "A recent *Wall Street Journal* article named this industry as one of the ten highest growth industries for the 1970s." Address: Staff Reporter.

1617. Horan, F.E.; Odell, A.D.; Forman, M.J. 1971. Textured vegetable proteins. *PAG Bulletin* (*Protein Advisory Group, WHO / FAO / UNICEF*) 2(1):22-26. Winter. No. 13.
• ***Summary:*** This paper was compiled from background documents presented by the authors at the 18th PAG [Protein Advisory Group] meeting held on 9-12 Feb. 1971 at Rome, Italy. Contents: Introduction. Spun monofilament products. Extrusion-expansion products (currently marketed at about $0.45/lb). General considerations. Case studies: Thailand (ADM's TVP), Brazil (Swift & Co.'s textured meat analogs), India (Swift & Co., ditto). Textured vegetable protein products: Fibroprotein–Spun Protein Fibers (Worthington Foods Div., Ohio), Textured Edi-Pro (Ralston Purina Co., Missouri), Texgran (Swift & Co., Illinois), Bontrae (General Mills, Minnesota; spun vegetable protein products), Carne Vegetal (Industria e Comercio de Productos Alimenticios Vegetal Ltd., Brazil). LiveLong–VP (Nisshin Flour Milling Co. Ltd., Japan; a wheat gluten extract in the form of a dried or frozen mincemeat-like product. "It seems to be made by a filament extrusion process using isolated wheat gluten protein"). The Farmarco Co. (Far-Mar Co., Kansas), The Fuji Oil Co. (Japan; thermoplastic extrusion), and Shefa Protein Foods Ltd. (Israel) each manufactures texturized soy food products by thermoplastic extrusion.

Introduction: "The chief virtue of the individual members of this new class of foods rests in their ability to supply precisely reproducible balanced dietary inputs of essential amino acids with greatly enhanced agronomic efficiency and with high consumer acceptance... At the moment two broad classes of meat analogues are apparent. The extrusion–expansion products sell for US 10-15¢ per pound; the spun monofilament products sell at present in the USA for 20-25% less than meats, but are still too expensive to be of interest for developing countries."

"General considerations: Meat analogs do not appear to have a negative connotation to vegetarians; there are many examples of eager acceptance of meat analogs by such groups. The textured protein approach is also a stride forward in food efficiency, since conversion of soy to animal protein averages about 7% efficiency."

"Over the past few years US/AID has entered into contracts with twelve different U.S. commercial companies to investigate and evaluate low-cost proprietary protein products in some ten developing countries."

Note: This is the earliest English-language document seen (Dec. 2004) that uses the word "Fibroprotein" to refer to edible spun soy protein fiber. Address: 1. ADM, Decatur, Illinois; 2. General Mills, Minneapolis, Minnesota.

1618. Leneman, Leah. 1971. Plantmilk and sex! *British Vegetarian.* Jan/Feb. p. 6.
• ***Summary:*** The author (and many other people she knows) prefers the taste of Granogen to that of Plamil as an alternative to cow's milk. Granogen, however is not made in Britain.

On a different subject, she finds sex outside of marriage to be a glorious and rewarding experience. Address: St. Pancras, London, W.C.1, England.

1619. Robinson, R.F. 1971. Plant proteins: Their advantages as extenders in meat products. *Meat Processing* 10(2): Feb.
• ***Summary:*** Extruded plant protein products are made from soy flours and soy concentrates. "The spun protein fibers today are opening a new horizon to the meat processor..." "Fibered extenders have a stabilizing effect on comminuted

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meat products." "The price of fibered extenders is lower than the cost of the natural product and therefore the final convenient extended meat item is more economical to the consumer." The cost of "fibered plant protein extenders has been gradually going down."

Note 1. It is interesting that the term "plant proteins" rather than "vegetable proteins" is used. Note 2. It is not clear whether extruded soy concentrates are being made commercially. Address: Marschall Div., Miles Labs., Inc.

1620. Martin, Roy E. 1971. Edible soy proteins: Challenge and opportunity. *Soybean Digest Blue Book Issue.* p. 26-30, 32-33. March. [6 ref]

• ***Summary:*** Contents: Introduction ("A new frontier is being forged in food technology with the development of soy protein for human consumption"). The proteins defined (Soy flour, flakes, and grits). Types of soy flour (Full-fat, low-fat, defatted). Soy proteins. The concentrates. The isolates. The spun proteins. Textured proteins. Soy milk. Soy beverages. Blended foods (USDA CSM, WSB). Special products for overseas (Puma, Sobee {"A U.S. full-fat soy flour product nutritionally adequate to support infant growth, introduced in Taiwan"}, Cerealina, Pro-Nutro, Saridele, Saci, Nutresco, Nestle's soy-corn flour marketed in Brazil). How large is the market? Further reading.

Soy milk: "Soy milk has been used for centuries in the Orient for infant feeding [sic] and other purposes... the process has been refined and its application greatly extended in the Far East by Dr. H.W. Miller and others. K.S. Lo [of Vitasoy, Hong Kong] has been bottling soy milk as a nutritious low-cost soft drink and selling many millions of bottles yearly." In 1959 the World Health Organization built a $1 million soy milk plant in Indonesia [to make spray-dried Saridele]. In the Western soy protein [isolate] is used in soy-based infant forumlas. "It is also used by adults with allergies, diabetes, or who for other reasons prefer" a non-dairy milk.

Tables show: (1) New Protein Food Program of the Agency for International Development (an independent federal agency). Five columns show: Country. U.S. company. Date of product [launch]. Product description & contract [no product names are given]. Raw materials. Of the 11 products in 7 countries, eight contain soya. They are: Brazil, Krause Milling Co., March 1967. Brazil, Monsanto, June 1967. Brazil, Swift, April 1967 (two products). Kenya, Del Monte, June 1968. Pakistan, General Mills, June 1968. Thailand, ADM, Aug. 1968. India, Swift, July 1968.

(2) Protein cost per pound of various foods:
Beef (retail) $4.44.
Chicken (dressed) $1.50.
Wheat flour $0.60.
Bulgar wheat [bulgur] $0.47.
Peanut meal (defatted) $0.43.
Dry skim milk [nonfat dry milk] $0.40.
Wheat (whole) $0.30.
Cottonseed flour $0.17.
Fish meal (food) $0.14.
Soy flour (food) $0.11 (from Bean 1966).

(3) Efficiency of land use for protein production. Three columns give the name of the crop or animal, average yield per acre, and pounds of protein per acre.
Soya bean, 24.2 bu, 508 lb.
Other legumes, 20.7 bu, 293 lb.
Maize, 64.2 bu, 323 lb.
Wheat, 25.1 bu, 180 lb.
Milk, 2,780.0 lb, 97 lb.
Beef, 342.0 lb, 58 lb.

Note: No earlier source of this table can be found; it is not in Bean (1966).

Photos show: (1) Sukiyaki made with textured vegetable protein. (2) A stable whip of soy protein being ejected from the spout of a pressurized can onto the top of a parfait dessert. (3) Defatted soy flakes, which are the raw material for defatted soy flour, special soy protein, soy protein concentrate, isolated soy protein. Address: General Manager, Vegetable Protein Products, Swift Chemical Co.

1621. *Battle Creek Enquirer and News* (*Michigan*). 1971. San's glamour spa era ends: Presidents, tycoons, stars 'took the cures' in its heyday. April 21. Wednesday. Address: Battle Creek, Michigan.

1622. **Product Name:** Temptein (Spun Soy Protein Fibers) [Meat-Like Nuggets, Bacon-Like Chips, Seapro, Ham-Like Cubes, Pepperoni-Like Links, or Pro-Lean 45].
Manufacturer's Name: Miles Laboratories, Inc. Marschall Div.
Manufacturer's Address: Elkhart, Indiana 46514.
Date of Introduction: 1971 May.
New Product–Documentation: Ad in Food Technology. 1971. 25(5):44-45. May. "These spun vegetable fibers could revolutionize your new foods. Temptein: The spun textured protein."

Miles Laboratories Inc. Marschall Div. 1973. Jan. Technical information on Temptein spun textured vegetable protein. Ad in *Soybean Digest.* 1973. Nov. p. 19A-B. "From Miles–Six specific ways to whittle costs in your meat and seafood formulations. And maintain quality."

1623. Miles Laboratories, Inc. Marschall Div. 1971. These spun vegetable fibers could revolutionize your new foods. Temptein: The spun textured protein (Ad). *Food Technology* 25(5):44-45.

• ***Summary:*** Temptein, the new textured protein from Miles, is significantly different because its spun. "We spin refined soy isolate (more than 90% protein) using platinum spinnerettes, each containing 15,000 tiny holes. The result is a highly manageable protein 'tow.'"

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Much more easily than other forms of protein, it "assumes the texture of almost any food you choose. The genuine texture. Of anything from ground beef to chicken, lobster to scallops. Moreover, Temptein accepts flavors, colors and additional nutrients in precisely measurable quantities. his means that variables like taste, texture, bulk density and nutritional content are calculable. Controllable."

A large photo shows Temptein held between a thumb and forefinger.

Note: This is the earliest English-language document seen (March 2009) that mentions Temptein spun soy protein. Address: Elkhart, Indiana. Phone: (219) 264-8716.

1624. Tabuchi, Ichiro. 1971. Saishoku-shugi no riron-teki haikei: Shokubutsu-sei tanpaku shokuhin kaihatsu ni okeru shûkyô-teki tachiba ni tsuite [Theoretical background on vegetarianism: The religious viewpoint in the development of vegetable protein foods]. *Shokuhin Kaihatsu* (*Up-to-Date Food Processing*) 6(6):31-35. June. [5 ref. Jap]

• ***Summary:*** Contents: Seventh-day Adventists. Ellen G. White's viewpoint. Seventh-day Adventist food enterprises and their purposes. Popularization of Soyalac made by San-iku Foods (Shokuhin) in Japan. The campaign for quitting tobacco in 5 days at the Adventist Tokyo Hospital (*Tokyo Eisei Byoin*).

The section on the popularization of Soyalac states: "Although in a recent issue of *Shokuhin Kaihatsu* magazine, soymilk was described as an illusory food (*maboroshi*), at least for us, it is a very real food, because San-iku Shokuhin has been making soymilk for the last 12 years and providing it for our school dormitory cafeteria meals. We have gotten good results in both taste and nutrition. With this experience and Loma Linda's formula and technique (they make formulated dairylike [chôsei] soymilk), Neo-Soyalac was born. It is a superior, nutritious infant formula.

"Soyalac was developed by Dr. Harry W. Miller, who was the world's leading authority in the field of soymilk. He spent half a century researching and developing Soyalac. It started to be produced and sold in the 1940s. Since that time it has contributed as an infant formula, and a milk substitute for children who are allergic to or dislike dairy milk. Its effectiveness and safeness have been proved by clinical experimentation. Also, Soyalac was used after World War II as an especially nutritious food for the protein-rich food program of the World Health Organization (WHO), FAO, and UNICEF and it saved many children from starvation and kwashiorkor.

"San-iku Shokuhin is now starting this work in Japan. We are trying to popularize our soymilk through very special methods such as via our religious network, health food stores, and doctors detailings. Babies who can't drink cow's milk or had allergies have been saved. Those with rashes and sweat rashes have been cured. We have received many expressions of thanks. One mother raised her 3 children on soymilk only, and one of the three was selected at a healthy baby contest in her county (*gun*). Formulated soymilk is not a medicine, therefore we are not allowed to promote its medicinal effects. Nevertheless, these various good effects have been proved clinically and in actual experience.

"A century ago, Ellen G. White predicted that 'the time will come when we will not even drink dairy milk.' Now we feel that this prediction is coming true as we see our dairy milk contaminated with penicillin, BHC, DDT, etc. I feel that in this day and age our work to popularize soymilk, which contains no antibiotics, no chemicals, and no cholesterol, and which is so nutritious and healthy, is very meaningful." Address: Product Development Dep. (Kaihatsu-bu), San-iku Foods, Japan.

1625. Starr, Paul. 1971. Hypercholesterolemia in school children: A preliminary report. *American J. of Clinical Pathology* 56(1):515-22. July. [15 ref]

• ***Summary:*** 3,000 Seventh-day Adventist school children, ages 6 to 14 years, in Southern California schools were screened for serum cholesterol. 6-7% of them had serum cholesterol concentrations above 220 mg per 100 ml, which means they have hypercholesterolemia as defined by Wilkinson (1950). In the age range from 9 to 12 years, 10% have hypercholesterolemia. Address: Univ. of Southern California, School of Medicine, Los Angeles, California.

1626. Rodale, Robert. 1971. The right way to vegetate: Organic food. *Washington Post, Times Herald*. Aug. 19. p. H4.

• ***Summary:*** Many young people are turning to vegetarianism. Here are some of the main reasons: 1. Reverence for life. 2. Mystical [and ethical] reasons. 3. Economy. 4. Animal feeds are drugged. 5. A vegetarian diet can be healthful–as shown by studies of Seventh-day Adventists. Rodale then offers a few words in favor of eating meat. His personal preference in diet is a compromise between a vegetarian diet and the standard American meat-heavy diet.

Some vegetarians eat novel foods. "Health food stores catering to vegetarians do a big business in millet, buckwheat groats, unpearled barley, nutritional yeast, and even Japanese Azuki beans."

Both vegetarians and meat-eaters show a growing interest in such healthy foods as wheat germ, sunflower and pumpkin seeds, brown rice, raw or lightly roasted peanuts, and peanut butter.

1627. Laine, Iris Coyn. 1971. Soy goes to school. *School Lunch Journal* 35(7):41-43. July/Aug.

• ***Summary:*** "On February 22, 1971, USDA authorized the use of textured vegetable protein, fortified with vitamins and minerals, to meet part of the minimum requirement of two ounces of cooked meat for the Type A school lunch."

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Discusses: What this means: Main dishes, sandwiches. What are textured vegetable proteins? Look and taste. Nutritional content. What products are available? Want more information? Contact the Food Protein Council. The nine regular members of the Council are listed: ADM, Cargill, Central Soya Co, Far-Mar-Co, Griffith Laboratories, Miles Laboratories, Ralston Purina Co., A.E. Staley Manufacturing Co., and Swift Chemical Co.

"For schools that prepare their own foods, there are several recipes in USDA's 'Quantity Recipes for Type A School Lunches', that are ideal for including textured vegetable protein products." The names of ten main dishes (with the USDA Card No. for each) and 2 sandwiches are given. A photo shows three school lunch dishes which include textured vegetable proteins: Hamburger, sloppy joe, and spaghetti sauce. Address: Foodservice Relations Director, Food Protein Council.

1628. *Los Angeles Times.* 1971. Kahan and Lessin Co. big in health foods. Sept. 26. p. H1, H7.
• ***Summary:*** Kahan and Lessin Co. (Compton) is one of California's largest distributors of health and diet foods. It was formed in 1945 by the union of two small Los Angeles food distributors: The Ben Kahan Co. and the Joseph E. Lessin Co. During the depression years of the 1930s, they both distributed health foods such as breads, dried fruits, honey, juices, herb teas, candles, etc. When World War II started, Joe Lessin entered the service–and thus ended his business. When the war ended, in 1945, Joe and Ben got together and formed Kahan & Lessin Co. (K&L). In 1948 Art Miller (who had started in the health food industry in the 1930s in New York with All Health Food Distributors and Brownie's Natural Foods) joined the company and in 1955 became a partner. Today, Kahan is president, Miller is vice president, and Lessin is secretary-treasurer of the company.

Ben Kahan recalls that in 1932, when he graduated from the Los Angeles City school system, the health food industry was virtually non-existent. He started the Ben Kahan Company because of economic necessity, but he soon came to realize the value of natural and organic foods. Early meetings and associations with the patriarchs of the industry such as Otto Carque, William T. Thompson Sr., and Eugene Vandercook Sr. deepened his interest.

In those early days, Ben's company served the few existing health food stores in Southern California. Those still in business include The Grist Mill in Los Angeles, House of Nutrition in San Diego, Schulman's in Long Beach, and Seilers in Huntington Park.

Major early manufacturers of health foods included El Molino Mills, Hain, Ayers & Held, Battle Creek [J.H. Kellogg, in Michigan], Alberty, Dia-Mel, Cellu, Modern Products, American Dietaids, and Schiff.

By the mid-1940s, K&L was distributing a previously unimagined 1,500 items, compared with 8,000 items today.

In 1950 K&L moved into a facility of 5,000 square feet on Hunter St. in Los Angeles. In 1955 it moved again to a building of 18,000 square feet on the same street.

Last year Kahan & Lessin opened a 65,000 square foot warehouse and office on a 2-acres site at 3131 E. Maria St. in Compton, to serve 2,000 health food stores in 11 western states, Texas, Alaska and Hawaii. It boasts 11 shipping docks, 126 parking spaces, a railroad spur, freeway access, air conditioning, insulation, and resistance to earthquakes and fires. A refrigerator of 43,200 cubic feet is so large that a fork-lift truck can be driven in.

K&L, a full-service distributor, notes that efficiency plus accuracy equals service. Computers help to make operations more efficient.

All three principals share a deep personal belief in and commitment to health foods; they believe that the future of this industry looks very bright.

A large photo shows Kahan & Lessin's current warehouse at 3131 E. Maria St. in Compton.

1629. *Soybean Digest.* 1971. What's ahead for soy protein? Nov. p. 11-13.
• ***Summary:*** Discusses the work of the Food Protein Council, established this year as an autonomous organization within the National Soybean Processors Association. "The goal of the new FPC is to centralize promotion of edible vegetable protein for use in human food." The focus in 1972 will be on the school foodservice market, plus the institutional and commercial restaurant market. "The Food Protein Council, like its parent association, the National Soybean Processors Assn., is managed by Smith, Bucklin & Associates Inc... Member companies of the Council are: Archer Daniels Midland Co.; Cargill Inc.; Central Soya Co. Inc.; Far-Mar-Co, Inc.; Griffith Laboratories; Miles Laboratories Inc.; Ralston Purina Co.; A.E. Staley Manufacturing Co.; and Swift Chemical Co."

1630. Dwyer, Johanna; Mayer, Jean. 1971. Vegetarianism in drug users. *Lancet* ii(7739):1429-30. Dec. 25.
• ***Summary:*** The authors are engaged in a study of the motivations leading increasing numbers of American adults to become vegetarians, people turn to vegetarianism and how they fare on this regimen. "Our greatest interest is in the hard-core vegetarians–i.e., those who are the most committed to totally vegan diets and most strict in their observance of them–since we believe potential health risks are highest among such persons." Seventh-day Adventists are praised for their balanced vegetarian diets. Vegetarian immigrants also generally follow sound diets. A third group, which excites much greater concern, is the hard-core native American vegetarians who follow a casual or communal life style, were not raised as vegetarians, lack sound dietary knowledge, and were in many case hard-core drug users in the past. Many switched to vegetarian diets to save them from drugs. A

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discontinuation of the diet might cause a relapse into drugs, which would be even harder on their health. Address: Dep. of Nutrition, Harvard Univ., School of Public Health, Boston, Massachusetts 02115.

1631. **Product Name:** Protose (Meatlike Product Made of Peanuts and Wheat Gluten).
Manufacturer's Name: Battle Creek Food Co. Div. of Worthington Foods.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1971.
Ingredients: In 1971: Wheat protein [wheat gluten], water, peanuts, vegetable oil, salt, yeast extract, soy sauce, MSG.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Ad for Protose by Sanitas Nut Food Co., Ltd. 1900. July. *Good Health* (Battle Creek, Michigan). Protose is described as an easy to digest, perfect substitute for meat. There is no evidence showing that gluten was used in this product until 1971. Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Protose (Battle Creek)." Note that in 1960 Worthington Foods had acquired Battle Creek Food Co.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned peanut product resembling cold cuts. Can also be used in salads or sandwiches.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Protose (Battle Creek)" are "wheat protein [wheat gluten], peanuts, wheat and soy flour, corn oil, yeast extract, soy sauce, salt, HVP, niacinamide, thiamin, iron, vitamin B-6, riboflavin, vitamin B-12."

1632. **Product Name:** Loma Linda Vita-Burger (Meatless Dehydrated Beef-like Product) [Chunks, or Granules].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1971.
Ingredients: Soy flour, salt, natural (vegetable) flavor, caramel color, artificial flavor, spices, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin), ferrous sulfate.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable.
Nutrition: Per ¼ cup (0.75 oz–21 gm): Calories 70, protein 15 gm, carbohydrate 6 gm, fat (less than one gm), cholesterol 0 mg, sodium 150 mg, potassium 460 mg.
New Product–Documentation: Recipe booklet. 1979, dated. Comes in "regular or chunks."

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a dehydrated beef-like product.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1971.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1633. **Product Name:** Loma Linda Proteena (Meatless Peanut or Gluten Loaf or Cold Cuts–with Soy Flour).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1971.
Ingredients: Wheat protein [wheat gluten], unroasted peanut meal, tomato puree, soy flour, salt, yeast extracts, soy sauce, corn sugar, MSG, seasonings, onion powder, caramel color, water.
Wt/Vol., Packaging, Price: 20 oz (567 gm) can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: In 1988: Per ½ inch slice (2.5 oz–71 gm): Calories 140, protein 17 gm, carbohydrate 5 gm, fat 6 gm, cholesterol 0 mg, sodium 460 mg, potassium 260 gm.
New Product–Documentation: See next page. Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. The ingredients in "Proteena (Loma Linda)" are: Wheat protein [wheat gluten], unroasted peanut meal, tomato puree, soy flour, salt, yeast extracts, soy sauce, corn sugar, MSG, seasonings, onion powder, caramel color, water.

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned peanut product resembling cold cuts. Can also be used in salads or sandwiches.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Proteena (Loma Linda)" are "wheat protein [wheat gluten], unroasted peanut meal, tomato puree, soy flour, salt, yeast extract, dextrose, L-lysine, HVP, MSG, caramel color, onion powder, flavorings."

Label sent by Loma Linda Foods. 1988. Oct. 5. The ingredients now are: Wheat gluten, raw peanut butter, water, tomato puree, soy flour, salt, natural (vegetable) flavors, dextrose, L-lysine, caramel color, onion powder spices, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). This product was introduced in 1963. A product called "Soy Beans with Proteena and Tomato Sauce" was introduced in 1934.

1634. **Product Name:** Loma Linda Vegeburger (Meatless Hamburger–With Soy Flour). Later renamed VegeBurger or Vege-Burger.
Manufacturer's Name: Loma Linda Foods.

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Manufacturer's Address: 11503 Pierce St., Riverside, California.
Date of Introduction: 1971.
Ingredients: In 1971: Wheat protein [wheat gluten], water, soy flour, hydrolyzed vegetable protein, salt, yeast extract, dextrose, powdered onion, caramel color, lysine, MSG, celery and parsley extractives.
Wt/Vol., Packaging, Price: 19 oz can. Retails for $2.13 (12/80).
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per ½ cup (3.8 oz–108 gm): Calories 110, protein 22 gm, carbohydrate 4 gm, fat 1 gm, cholesterol 0 mg, sodium 190 mg, potassium 110 mg.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. The ingredients in "VegeBurger (Loma Linda)" are: Wheat protein [wheat gluten], water, soy flour, hydrolyzed vegetable protein, salt, yeast extract, dextrose, powdered onion, caramel color, lysine, MSG, celery and parsley extractives.

Patricia H. Black and Ruth L. Carey. 1971. *Vegetarian Cookery.* 5 vols. This set of vegetarian cookbooks contains at least one recipe calling for "Vegeburger" (see Vol. 3, p. 18; Oatmeal Herb Loaf).

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. VegeBurger is a canned steak or burger-like product based on wheat protein.

Recipe booklet. 1979, dated. Consumer Reports. 1980. June. p. 357-65. The protein PER is 1.21. Sensory comments: Slight meat flavor. Spicy. Salty. Smoky flavor. Vegetable-oil flavor. Too moist. Crumbly. Granular.

Label for Vege-Burger sent by Loma Linda Foods. 1988. Oct. 5. This product has been reformulated, so that one of the ingredients is now soy protein isolate.

1635. **Product Name:** Loma Linda Gluten Steaks.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, California.
Date of Introduction: 1971.
Wt/Vol., Packaging, Price: 14 oz can (1971).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Patricia H. Black and Ruth L. Carey. 1971. *Vegetarian Cookery.* 5 vols. This set of vegetarian cookbooks contains many recipes calling for "gluten steaks," which are sold in 14 oz cans.

1636. **Product Name:** Loma Linda Scallops.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, California.
Date of Introduction: 1971.
Wt/Vol., Packaging, Price: 14 oz can (1971).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Patricia H. Black and Ruth L. Carey. 1971. *Vegetarian Cookery.* 5 vols. This set of vegetarian cookbooks contains many recipes calling for "Scallops" or "Skallops" (See Vol. 1, p. 37; Green bean and gluten salad), a gluten-based product.

1637. **Product Name:** Primeburger.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, California.
Date of Introduction: 1971.
Wt/Vol., Packaging, Price: 20 oz can (1971).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Patricia H. Black and Ruth L. Carey. 1971. *Vegetarian Cookery.* 5 vols. This set of vegetarian cookbooks contains several recipes calling for "Primeburger," a gluten-based product which is sold in 20 oz cans (See Vol. 3, p. 16-17).

1638. **Product Name:** Sanitarium Health Foods Vegelinks (Vegetarian Frankfurter).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1971.
Ingredients: Wheat protein, vegetable oil, yeast, soy protein, salt, Savex, hydrolysed vegetable protein, onion.
Wt/Vol., Packaging, Price: 430 gm can.
How Stored: Shelf stable.
New Product–Documentation: Letter from Sanitarium Health Food Co. 1981. Label. 10 by 4 inches. Full color. Photo shows a frankfurters on a bed of sauerkraut "Vegetable Protein–Serve fried, boiled, barbecued, roasted or grilled." Recipes for Party Pleasers and Danish Open Omelette.

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Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1971. But note that Worthington Foods introduced a product by this name in 1960, and in 1971 its main ingredient was Fibrotein, spun soy protein fiber.

1639. **Product Name:** Sanitarium Health Foods Soya Loaf (Canned Meatless Meatloaf).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: Sydney, N.S.W., Australia.
Date of Introduction: 1971.
Ingredients: Soya beans, wheat protein, soy sauce, vegetable oil, peanuts, tomato, monosodium glutamate, onion, salt, herbs.
Wt/Vol., Packaging, Price: 425 gm can.
How Stored: Shelf stable.
New Product–Documentation: Label. 1980, undated. "Vegetable Protein–Ideal for casseroles, stews, patties." Letter from Sanitarium Health Food Co. 1981.

Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1971.

1640. United Nations Children's Fund. 1971. Soybean for protein. Proceedings of the Eastern Africa regional follow-up meeting on the Kampala Seminar on the Production, Utilization, and Marketing of Soyabeans. Rome, Italy: UNICEF/FAO. *

1641. **Product Name:** Nutmete.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: 614-885-9511.
Date of Introduction: 1971.
Ingredients: In 1971: Peanuts, corn flour, soya, salt, MSG, water to process.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 160. Lists the ingredients in "Nutmete (Worthington)."

1642. **Product Name:** Meat Loaf Mix.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1971.
Ingredients: Textured soybean protein [Fibroprotein spun soy protein fibers], rolled oats, vegetable shortening, rice flour, egg albumin, nonfat milk solids, bread crumbs, wheat protein [wheat gluten], dehydrated onions, potatoes, celery, carrots, parsley, sweet red and green peppers, hydrolyzed vegetable protein, salt, MSG, flavorings, caramel, U.S. certified color.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 163. Lists the ingredients in "Meat Loaf Mix (Worthington)." This is an institutional product.

1643. **Product Name:** Redi-Loaf Mix.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1971.
Ingredients: Textured soy protein, albumin [egg protein], vegetable oil, soy protein, vegetable shortening, plant flavorings and seasonings, rice flour, hydrolyzed vegetable proteins, brown sugar, caramel color, dried onion, salt, yeast, monosodium glutamate, soy lecithin, carrageenan, vegetable mono- and diglycerides, U.S. certified color.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 163. Lists the ingredients in "Redi-Loaf Mix (Worthington)." This is an institutional product.

1644. Black, Patricia Hall; Carey, Ruth Little. 1971. Vegetarian cookery. 5 vols. Mountain View, California, Omaha, Nebraska, and Oshawa, Ontario, Canada: Pacific Press Publishing Assoc. Illust. by Henry Rasmussen. Recipe index. 24 cm.
• ***Summary:*** These are lacto-ovo vegetarian cookbooks. "Most of the recipes in these cookbooks have been collected over many years. Some came from association in years past with Paradise Valley Sanitarium and Hospital and with White Memorial Hospital; others came from more recent association with Loma Linda University." The complete nutritional composition of each recipe is given in that back of each book. Note 1. Monosodium glutamate is used in many recipes (For explanation, see Introduction to each volume). Other interesting meaty seasonings include Savorex, Smokene, and G. Washington Broth. Apparently generic names for meatlike products are used ("gluten burger" rather than "Gluten Burger") when more than one Adventist company makes such a product.

Contents: Vol. 1. Appetizers, beverages, salads, dressings and relishes, cooking guides. Vol. 2. Breads, soups, sandwiches. Vol. 3. Main dishes, vegetables. Vol. 4. Pies, cakes, cookies, desserts. Vol. 5. Exotic foods, candies, cooking for a crowd.

Soy- and gluten-related recipes include: Vol. 1: Nut and Soyameat pinwheels (with light Soyameat, p. 16-17). Soyameat puffs (with canned Soyameat, p. 17). Soybean milk (homemade, p. 30). Green beans and gluten salad (p. 37; Skallops [also spelled Scallops, gluten based] or Soyameat may be substituted for diced gluten). Chop suey salad (with Soyameat, or light or dark nutmeat, p. 44). Note 2. This is the earliest vegetarian or health food cookbook seen (June 2004) with "Appetizers" as one of the recipe categories.

Vol. 2: Whole wheat soy bread (with soy flour, electric

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mixer recipe, p. 15-16; Sponge method, p. 17). Soy cheese spread (with canned tofu, p. 44). Soy cheese and egg filling (with tofu, p. 44). Gluten spread (with canned gluten burger, p. 45). Hot burger sandwich patties (with canned gluten burger, p. 46). Hot gluten sandwich (with canned gluten steaks, p. 46). Hot savory sandwich (with Proast or other nutmeat, p. 47). Nutmeat and olive filling (with Proteena or Nuteena, p. 47). Savory Soyameat filling (p. 48). Soyameat and egg filling (with light Soyameat, p. 48). Soyameat, nut and olive filling (p. 48). Grilled gluten sandwiches (p. 52).

Vol. 3: Homemade gluten (. 15). Gluten roast (p. 15). Gluten burger loaf (with canned "gluten burger," p. 16). Primeburger loaf (with Primeburger [gluten], p. 16-17). Normandy loaf (with Proteena, p, 17). Walnut Proteena roast. Holiday roast (with gluten burger). Oatmeal herb loaf (with Vegeburger, p. 18). Nut roast (with Proteena, p. 21). Cashew nut and gluten loaf (p. 22). Seaside loaf (with Soyameat, p. 23). Ocean fillets (with Soyameat, p. 23). Soy soufflé burger (with dry soybeans, p. 24). Savory soy loaf (with canned soy cheese [tofu], p. 24). Soy cheese (or tofu) loaf (p. 24). Tofu loaf (no eggs, p. 25). Tofu (or soy cheese) patties (p. 25). Browned tofu with mushrooms (p. 25). Nuteena balls (p. 26). Basic gluten balls (p. 26). Nutmeat and rice patties (with Proteena and Nuteena, p. 31). Cottage cheese gluten burgers (p. 31). Chum la King (with Vegesteaks, p. 33). Stroganoff (with canned Soyameat, p. 34). Gluten stroganoff (with canned gluten or Soyameat, p. 34). Savory gluten casserole (with canned Chickettes or other gluten preparation, p. 35). Scalloped Soyameat (with light or dark Soyameat, p. 36). Gluten steaks deluxe (with canned gluten steaks, p. 37). Gluten steaks with mushrooms (p. 37). Shish kebab (with gluten steaks or Tender Bits [made of gluten], p. 37-38). Hearty soybean casserole (with canned Zoyburger, p. 42). Garbanzo and cottage cheese loaf (with Vegeburger, p. 44). Stuffed green pepper (with canned Vegeburger, p. 46). Oriental rice casserole (with gluten or Chickettes, p. 49-50). Chop suey (with fresh tofu, p. 51). Quick chop suey or chow mein (with canned Soyameat, p. 51). Spaghetti marzetti (with canned Vegeburger and Smokene, p. 56). Lasagna (with gluten burger, p. 57). Tetrazzini (with canned white Soyameat, p. 57). Quick eggs Benedict (with beef-style smoked Soyameat, p. 61-62). Eggs con burger (with gluten burger, p. 62). Eggs Vienna (with 6 vegetable wieners, p. 63). Baked soybeans (p. 80). Soybeans creole. Soybeans southern style.

Vol. 4: Soy nut cookies (with 1 cup soy flour, p. 97). Vol. 5: Gluten stew (p. 14). Spanish gluten (p. 14). Gluten nut loaf (with canned gluten burger, p. 16). Ocean fillets (with gluten and Soyameat). Browned tofu (p. 22). Chop suey (with soy cheese [tofu], p. 23). Soy cheese patties (with canned tofu, p. 23). Gluten burger sandwiches (p. 31). Chinese sweet-sour gluten (with canned gluten steaks, p. 41). Sweet-sour Tender Bits (with canned Tender Bits or other gluten preparation, p. 42). Chinese evergreen tofu (p. 42). Japanese sukiyaki (with canned gluten, Tender Bits, or Scallops, p. 45). Scrambled tofu (p. 46). Philippine adobo (with gluten, Tender Bits, or Scallops, p. 48). Philippine gluten curry (p. 49). Philippine gluten escabeche (p. 49). Korean seasoned gluten (with canned gluten, p. 50). Indian gluten curry (with canned gluten, p. 52). Kurma (Indian, with Soyameat, p. 53). Soyameat Indian curry (with canned light Soyameat, p. 53-54). Brazilian Palmito soy loaf (with canned or cooked soybeans, p. 57). Brazilian-style gluten (p. 57).

Can sizes: Chickettes (20 oz). Gluten (14 oz or 20 oz). Gluten burger (14 oz, 28 oz, or 30 oz). Gluten steaks (14 oz). Nuteena (14 oz.). Primeburger (20 oz). Proteena (14 oz). Scallops (14 oz). Soyameat (9 oz or 13 oz). Soyameat, white (13 oz). Soy cheese (12 oz or 14 oz; tofu). Tender Bits (20 oz). Vegesteaks (14 oz). Zoyburger (19 oz). Address: 1. M.S.; 2. PhD.

1645. Kloss, Jethro. 1971. Back to Eden. New York, NY: Beneficial Books. ix + 671 + xiii p. *
• ***Summary:*** After the copyright for the original 1939 edition of *Back to Eden* expired in 1967, the Kloss family, because of a complex set of circumstances, neglected to renew it. The book then went into the public domain. For the sad story of how this book came to be published, see interview with Doris Kloss Gardiner (Nov. 1990).

1646. Seventh-day Adventist Dietetic Assoc. 1971. About nutrition. Nashville, Tennessee: Southern Publishing Assoc. 187 p. Illust. 21 cm. Revised ed 1974. *
• ***Summary:*** Authors: Alice G. Marsh and others. Coordinator: Darlene R. Schmitz. A layman's guide to vegetarian nutritional principles, including food groups, menu planning, and nutritional needs of various age groups.

1647. Seventh-day Adventist Dietetic Assoc. 1971. Diet manual, utilizing a vegetarian diet plan. Revised edition. Loma Linda, California: Seventh-day Adventist Dietetic Assoc. 174 leaves.
• ***Summary:*** A comprehensive loose-leaf handbook for the planning, selection, and coordination of vegetarian diets. The editors of this revised edition are listed alphabetically by surname (with their degrees) on the title page as: Phyllis Acosta, Ardis Beckner, Ruby Hayasaka, Eloise Jenks, Martha Miller, Shirley Oakley, Irma Vyhmeister, Elizabeth Wenz. The SDADA's main office is now Box 75, Loma Linda, California, 92354.

Table XXI (p. 160-64) is titled "Ingredients of vegetable protein foods." 57 commercial products, with their ingredients, are listed. Most of the manufacturers are Seventh-day Adventist food companies, mainly Worthington Foods and Loma Linda Foods, but also Madison Foods, Nu Vita (Lange), Battle Creek (acquired by Worthington Foods in 1960), and Nutrition International Corporation. The products are divided into three categories: 1. Egg free and

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gluten free (11 products). 2. Egg free but not gluten free (24 products). 3. Ingredients (22 products).

Interesting non-soy products include: Savita (Extract Brewer's yeast, fresh vegetable extracts [carrots and onions], salt, ferric citrate; the manufacturer's name is not given). Savorex (Extract Brewer's yeast, vegetable seasonings, salt; the manufacturer's name is not given).

1648. U.S. Department of Agriculture. 1971. The annual report on activities carried out under the Public Law 480, 83d Congress, as amended, during the period January 1 through December 31, 1970. Washington, DC: U.S. Government Printing Office. 132 p. See p. 113-20. Cover reads: Food for Peace: 1970 Annual Report on Public Law 480.

• ***Summary:*** Table 19 is titled "Title II, Public Law 480–Total commodities by program sponsor, fiscal year 1970." The main program sponsors and distributing agencies, listed alphabetically, are AJJDC (American-Jewish Joint Distribution Committee), CARE, CRS (Catholic Relief Service), CWS (Church World Service), LWR (Lutheran World Relief), SAWS (Seventh-day Adventist World Service), UNICEF, UNRWA (United Nations Relief and Works Agency), WFP (World Food Program). Each of these are Private Voluntary Organizations (PVO/PVOs), registered with USAID. Only two foods containing soy protein were distributed: CSM (Corn soya mix) and WSB (wheat soya blend). They were sent in the following amounts (in thousands of pounds) to the following continents and countries: Africa (50,362 CSM and 6,087 WSB): Cameroon (82 CSM), Ghana (1,104 CSM and 201 WSB), Malagasy [Madagascar] (425 CSM), Malawi (61 CSM), Nigeria (41,343 CSM and 5,886 WSB), Rwanda (200 CSM), Senegal (5,301 CSM), Sierra Leone (699 CSM), Tanzania (887 CSM), Togo (260 CSM).

Near East-South Asia (192,116 CSM and 2,504 WSB): Ceylon (50 WSB), Gaza [occupied by Israel since 1967] (814 CSM and 1,892 WSB), India (189,044 CSM and 105 WSB), Jordan (680 CSM), Jordan-West Bank [occupied by Israel since 1967] (1,110 CSM), Lebanon (160 CSM), Pakistan (457 WSB), Syria (308 CSM).

East Asia (21,530 CSM and 451 WSB): Hong Kong (384 CSM and 100 WSB), Indonesia (9,245 CSM and 150 WSB), Korea (4,586 CSM), Laos (275 CSM), Malaysia (220 CSM), Philippines (1,545 CSM and 201 WSB), Ryukyu Islands [located south of Japan, incl. Okinawa, Sakishima, and Amami island groups. Self governing from 1966. Returned to Japan in 1972] (50 CSM), Vietnam (5,225 CSM).

Latin America (53,761 CSM and 2,305 WSB): Antigua (37 CSM), Bolivia (555 CSM and 173 WSB), Brazil (29,919 CSM and 506 WSB), British Honduras [Belize] (225 CSM and 20 WSB), Chile (1,726 CSM and 151 WSB), Costa Rica (679 CSM and 100 WSB), Dominica (23 CSM), Dominican Republic (7,429 CSM and 105 WSB), Ecuador (1,295 CSM), El Salvador (836 CSM and 200 WSB), Grenada (114 CSM), Guatemala (1,944 CSM), Guyana (72 CSM), Haiti (1,010 CSM), Honduras (674 CSM), Jamaica (208 CSM and 100 WSB), Montserrat (18 CSM), Panama (765 CSM and 450 WSB), Paraguay (491 CSM and 400 WSB), Peru (5,842 CSM and 100 WSB), St. Kitts (59 CSM), St. Lucia (69 CSM), St. Vincent (30 CSM), Uruguay (81 CSM).

Grand total by commodity: 317,769,000 lb of CSM and 11,347,000 lb of WSB. Agencies distributing the most CSM and WSB (in million lb): CARE 180, CRS 68, UNICEF 42.

Countries receiving more than 1 million lb of CSM and WSB combined (in millions of pounds): India 189.1, Brazil 30.4, Indonesia 9.3, Dominican Republic 7.5, Peru 5.6, Vietnam 5.2, Korea 4.6, Guatemala 1.9, Chile 1.8, Philippines 1.7, Ecuador 1.3, Jordan-West Bank 1.1, Haiti 1.0.

Concerning "veg oil" (soybean oil) shipped under P.L. 480 Title II in fiscal year 1970: India received 54.227 million lb [24,597 metric tons] (p. 116). Address: Washington, DC. Phone: 703-875-4901 (1991).

1649. **Product Name:** Loma Linda Dinner Bits.
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: 11503 Pierce Place, Riverside, CA 92515.
Date of Introduction: 1971?
Ingredients: In 1971: Wheat protein [wheat gluten], water, vegetable oil, soy flour, oat flour, dried yeast, salt, onion powder, monosodium glutamate, dextrose, lecithin, caramel.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. Lists the ingredients in "Dinner Bits (Loma Linda)."

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned steak or burger-like product based on wheat protein.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 175. The ingredients in "Dinner Bits (Loma Linda)" are "wheat protein, vegetable oil, soy flour, oat flour, dried yeast extract, salt, onion powder, MSG, dextrose, lecithin, caramel."

1650. **Product Name:** Loma Linda Tastee Cuts (Imitation Beefsteak).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1971?
Ingredients: In 1971: Wheat protein [wheat gluten], water, yeast extract, salt, hydrolyzed vegetable protein, MSG, dextrose, onion powder, lysine, caramel color, celery and parsley extracts.

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Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 162. Lists the ingredients in "Tastee Cuts (Loma Linda)."

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned steak or burger-like product based on wheat protein.

Ad in Natural Foods Merchandiser. 1984. Feb. p. 113. "A lot more than meats the eye. Loma Linda Foods taste great."

1651. **Product Name:** Lange Breakfast Style Vegetable Links.
Manufacturer's Name: Nu Vita.
Manufacturer's Address: -
Date of Introduction: 1971?
Ingredients: In 1971: Wheat gluten, potato meal, filberts, peanuts, unbleached flour, brown rice, dehydrated onion and garlic, hydrolyzed vegetable proteins, vegetable oil, soy sauce, salt, seasonings, processed in water and condensed smoke.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1971. *Diet Manual, Utilizing a Vegetarian Diet Plan.* 3rd ed. p. 161. Lists the ingredients in "Lange Breakfast Style Vegetable Links (Nu Vita)."

1652. *Unknown newspaper* (*Fontana, California*). 1971? No meat on menu? Timely subject. March.
• ***Summary:*** "Vegetarian expert Dorothea Van Gundy Jones will conduct a class in vegetarian cookery from 7 to 9 p.m., March 26–29 at Cypress School, 9751 Cypress Ave.

"Mrs. Jones, a native Californian, is a graduate of Loma Linda University's School of Dietetics. and received her B.A. degree from Pacific Union College. Her background includes experience in the following capacities: head of a college home economics dept.; director of food service for a junior college; hospital therapeutic dietitian; hospital administrative dietitian; physician's diet counselor, and diet consultant for a clinic.

"For the past 20 years Mrs. Jones has conducted cooking classes and lectured for the International Nutrition Research Foundation and Loma Linda Foods in Riverside.

"Classes and lectures have been given in all major cities in the U.S., with attendance ranging from 50 to 1,200... In 1970, she was invited to be an observer at the Second World Food Congress in the Netherlands, under the sponsorship of the World Food Program and the Food and Agriculture Organization. Her work his called her to other countries in Europe and in the South Pacific.

"She is associate editor of *Today's Food*, a nationally circulated nutrition magazine, and has authored articles on nutrition that have appeared in man well-known journals. She also wrote the popular *Soybean Cookbook*..." A portrait photo shows Dorothea Van Gundy Jones.

1653. B.A.S. 1972. Food of the future? Hospital food notes. *Hospitals* 46(1):69. Jan. 1.
• ***Summary:*** Victor F. Froelicher, M.D., fellow in cardiology at the Univ. of Alabama Medical Center, Birmingham, Alabama, held a special luncheon for physicians, research fellows, and medical students "to demonstrate that fat-modified diets can be enjoyable and that soybean imitation products could be the 'food of the future.'" He believes these meatlike products, which are free of cholesterol and low in saturated fat, can and should be used to reduce the rate of heart disease. Seventh-Day Adventists make and have been using these products for many years.

1654. Jacobs, Sanford J. 1972. What tastes terrible and doubles in sales every 60 days or so? Crunchy Granola, that's what, and Layton Gentry is ready to sell the formula to you. *Wall Street Journal.* Feb. 16. p. 1.
• ***Summary:*** A great, original, funny front-page story on the modern origin and early modern history of granola. Collegedale, Tennessee: John D. Goodbrad, age 28, runs a small cereal factory in Collegedale; he makes Crunchy Granola, but neither he nor his employees are particularly fond of the stuff. He prefers Cheerios. An employee says that her kids don't like it much either, but she recalls that she once had a horse who really liked it.

Crunchy Granola is made of rolled oats, wheat germ, sea salt, sesame seeds, coconut, brown sugar, and soy oil. These are mixed and baked. "Crunchy Granola is the biggest thing to hit the cereal market since the cardboard box was invented." Goodbrad says his sales have been doubling every 60-90 days for the last 2½ years. He now makes 12,000 lb per day of Granola, which sells for 73 cents a pound, and runs his factory 24 hours a day. Another company, Lassen Foods, Inc., in Chico, California, is said to make even more; last year they sold $3 million worth of Granola. Total nationwide sales are estimated to be about $5 million. He says his family started the business, Sovex, Inc., in this idyllic valley in 1964.

Why are people eating so much Granola? No one sure. One theory: It is part of the anticommercialism movement of the younger generation. Another: It's a health food, making it part of the "back-to-nature" movement. But the main reason may be that many younger folks really like it–especially with milk poured over as a breakfast cereal.

Although it is clearly a fabled food in the underground, and sold mostly at health-food stores, some supermarkets are beginning to stock it. Rock singer Neil Diamond even has a popular song titled "Crunchy Granola Suite." The words are given.

While Crunchy Granola appears to have a bright future, it also has an interesting past. It seems to have been invented

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by a man named Layton Gentry who, in 1964, sold his recipe and oven to John Goodbrad's father for $3,000. He and his wife started making it at home, then built a little factory, and now it is made in a big factory–in the idyllic little valley.

After Layton Gentry left Tennessee he headed out West. In about 1968 (four years ago) he sold the recipe again–to Lassen Foods, but this time for at least $15,000. Not until the two Granola makers bumped into each other at a health food convention 2 years ago did they realize that they were both making the same product. No problem–both were doing just fine.

Mrs. Gentry says that Layton is a hard man to find. She says they separated after the move West, and her ex-husband had made some more money selling the recipe to folks in Hawaii, Canada, Australia, and Missouri.

But didn't he miss a golden opportunity to make more money? Not really. Mrs. Gentry explains that Layton never liked things to get too big. "'He was in the Army 12 years. You know what that does to a man.'"

Note 1. This is the earliest document seen (Aug. 2010) that tells the tale of Layton Gentry and the birth of Granola–in its modern incarnation.

Note 2. According to the Website www.ancestry.com, a person named "Layton S. Gentry" was born on 18 April 1918 in New Pine Creek, Lake County, Oregon. His parents were John Urban Gentry and Mildred G. Gentry. He was married in 1942. He died on 11 Feb. 2007 in New Pine Creek, Oregon. A 1989 obituary for his wife states: "Gentry: Myrtle Frona Gentry, 70, died July 1, 1989, at Lakeview Hospital in Oregon. She was born in Rosedale, daughter of the late William Preston & Lula (Davis) Franz. Surviving are her husband, Layton Gentry; 1 daughter, Karen Angelo of New Pine Creek; 1 grandchild; and 2 sisters, Vivian St. Clair of Molalla, Oregon, and Beulah Mawhinney of Bend, Oregon. 1 sister, Prudence Beilsmith, preceded her in death. Services were conducted at Pine Creek Baptist church, Oregon. Burial was in New Pine Creek cemetery." Address: Staff reporter, Wall Street Journal.

1655. Cohen, Charles A.; Hudson, A.R.; Clausen, J.L.; Knelson, J.H. 1972. Respiratory symptoms, spirometry, and oxidant air pollution in nonsmoking adults. *American Review of Respiratory Disease* 105(2):251-61. Feb. [34 ref]
• ***Summary:*** "A comparison of respiratory symptoms and pulmonary function tests in two similar groups of nonsmoking adults who were chronically exposed to essentially the same mean value but different peak values of oxidant air pollution did not show a difference in the prevalence of symptoms suggestive of pulmonary disease." Note: *Webster's Dictionary* defines spirometer (a term first used in 1846) as "an instrument for measuring the air entering and leaving the lungs." Spirometry is the use of this instrument. Address: Bio-Medical Research Branch, Div. of Health Effects, National Environmental Research Center, Research Triangle Park, North Carolina 27711.

1656. *Food Engineering.* 1972. Ingredients expand food frontiers. 44(5):69-73. May.
• ***Summary:*** Textured soy proteins "are creating new meat extenders and simulated meat products." For example, Maxten, made by Miles Laboratories, is formulated to have the appearance of cooked ground meat.

1657. Robinson, Radcliffe F. 1972. What is the future of textured protein products? *Food Technology* 26(5):59-60, 62-63. May.
• ***Summary:*** Contents: Introduction. How it all began. Two types of products developed: Spun protein (1957), and extruded protein ("Soy flour, soy concentrate, or soy isolate–individually or in combination, with or without fibers–can be combined with other ingredients, including colors and flavors, and extruded to form beef-like strips, meat-like nuggets, or various other analogs in various shapes and sizes. The extruded products are usually sold as a dehydrated ingredient for use in place of or in conjunction with fresh meat.") Products improved: New uses and products, improved characteristics, specifications, supply, and cost. Effect on industry. Effect on institutions. Effect on consumers. Educational program necessary. Major effort required (The plant protein industry has great potential).

"How it all began: Dr. John Harvey Kellogg started the plant protein industry in 1866. He was one of the early pioneers in the field of nutrition who are today referred to as food faddists."

"In 1879, Dr. Kellogg married a girl from New York whose hobby was running an experimental kitchen. They worked together to invent the toasted wheat flake, decaffeinated coffee, and a peanut butter and also made many clever products which tasted vaguely like beef or pork or veal–the first protein analogs. Dr. John Harvey Kellogg created an industry, but he never became a part of it. Plant proteins per se had no economic place in the food picture of 1879 when meat was plentiful, and his meat analogs were destined to be used only by vegetarians who for religious, ethnic, or health reasons preferred not to eat meat.

"He died in 1942, probably one of the greatest serendipitists of our times. Although he had pioneered the plant protein industry as a healthful and expedient way to escape the putrefactive and disease-causing factors in the meat and perishable commodities of his time, what he really did was develop a means of nourishing a world with high quality protein when the price of meat or its availability become factors in family nutrition.

"Plant protein products today differ greatly from the prototype veal steaks which Dr. Kellogg and his wife made from fresh wheat gluten." Address: Manager, Product Development- Food Ingredients, Marschall Div., Miles Laboratories, Elkhart, Indiana 46514.

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1658. Hewitt, Jean. 1972. Food talk: Teen-agers choose the meatless diet. *New York Times.* June 5. p. 39, col. 1.
• ***Summary:*** Article describes the increasing number of youths who are turning to vegetarianism. Cites various views of youths who have changed. Notes on institutional approach to vegetarianism provided by Seventh Day Adventists, who are vegetarians as part of their 'healthful living' regime. Describes church-operated New York Center, which includes health food department and book store that carries books on nutrition and recipe books to help vegetarians. Cites views of Drs. F.J. Stare and J. Mayer, who are writers on vegetarianism. Recipes for vegetarian main dishes' from *An Apple A Day,* published by Woman's Auxiliary to Alumni Association, Loma Linda University School of Medicine.

1659. Webber, Ella V. 1972. Perry A. Webber: Pioneer missionary in true education to Japan. Chattanooga, Tennessee: Southern Missionary College. 87 p. *
• ***Summary:*** Perry A. Webber was born on 15 June 1890 in Northville, Michigan. His parents became Seventh-day Adventists (SDAs) during his early childhood. In 1904 the family moved to Berrien Springs, Michigan, and Perry was educated there. In 1911 Perry graduated with a BA from Emmanuel Missionary College [in Berrien Springs] and in 1912 he was married to Ella Mae Verney.

In 1913 he was appointed by the SDA General Conference Foreign Mission Board to go, with his wife, as missionaries to Japan. In Tokyo they studied Japanese language for 2 years, then began pioneering educational work in Japan until 1927. For 4 years (1915-19) they worked in Fukuoka (in northern Kyushu), then returned to Tokyo. A son, Alfred B. Webber, was born in Dec. 1919; he later became a medical doctor. In Tokyo they worked at a school in Ogikubo. By 1921 Perry was teaching about the virtues of brown rice. In 1923 Perry found 25 acres of land in Sodegaura; in September of that year the Great Tokyo Earthquake (*Kanto Daishinsai*) took place. Later in 1923 the family returned to California because of the wife's respiratory problems. Harry Webber was born in Glendale. After a year in Honolulu, Hawaii, in 1934, they returned to Japan in the summer of 1925 and moved the college into the country. In the spring of 1926 the students and teachers started to build their own self-supporting school, with Perry as principal. This school later grew into the Japan Missionary College (*Saniku Gakuin*). The Japanese name means "three-sided school" since equal emphasis was placed on mental, moral, and manual development.

During these years Perry grew very fond of Japanese food and especially of Inari-zushi (made of deep-fried tofu pouches filled with vinegared rice). On his way to language school, he used to stop in regularly at the Shinoda Sushi Shop in Kanda (in Awaji-cho by the 1970s) to enjoy their Inari-zushi. The shop once developed a special Webber Sushi, named after him, and they used his name in some of their promotional materials. He was also very fond of regular tofu and of miso soup.

In 1927 the Webbers returned to America to educate themselves in good health. At this time Adventists believed that the true remedies are "pure air, sunlight, abstemiousness, rest, exercise, proper diet, the use of water, and trust in Divine power (*Ministry of Healing,* p. 127). In the fall of 1928 Perry entered Michigan State University to study biological chemistry while his wife, Ella Mae, studied nutrition; both were deeply interested in understanding the principles of good health. By May 1929 Perry was considered "one of our teachers" by Madison College in Madison, Tennessee.

During the early 1930s and the Great Depression, many students' only hope of getting an education was to rely on their own efforts. Madison, which offered a work-study program, became a very attractive alternative school.

In Sept. 1930 the family moved to Madison while Perry finished his thesis. In June 1931 Perry was awarded his PhD degree in biological chemistry, with special interest in chemistry and soyfoods development. At Madison he became a instructor of chemistry with a strong interest in food chemistry. In the following years he became the main person at Madison responsible for the school's growing involvement with soyfoods. In Nov. 1931 Perry wrote a long two-part article for *The Madison Survey* titled "Facts Concerning the Soybean." During the early 1930s he put a great deal of creative energy into expanding Madison's line of commercial soyfood products. Most of the products that were introduced between 1931 and 1934 were the result of his work. In August 1933 Perry Webber and Frances L. Dittes attended the annual convention of the American Soybean Association (ASA) in Baton Rouge, Louisiana. Webber presented a lecture with slides about the importance of soyfoods in Asia and their potential in America. He also prepared an exhibition of Madison soyfoods that was displayed at the convention. Webber was secretary-treasurer of the ASA for one year at this time. He visited Edsel A. Ruddiman at the Ford Motor Company and gave a talk to him and other leading research scientists about soyfoods. He was also a close friend of Dr. John Harvey Kellogg. He visited Kellogg, talked about soyfoods, and did some work developing a preservative for some of Kellogg's crackers.

Perry Webber worked at Madison until Sept. 1935 when, after a big farewell party, he returned to Japan to serve as principal of the Japan Missionary College (Saniku Gakuin). There he taught a lot about nutrition and the value of a vegetarian diet. In about 1936 Webber visited Dr. Harry Miller in Shanghai, China, and helped him set up a sanitation and research lab for analyzing the Vetose soymilk products at his new plant.

From 1939 to 1943, during World War II, Webber was back in the USA, teaching at Madison as head of the

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chemistry department. He was also at Madison from 1946 to 1953 and from 1959 to 1962, each stay punctuated by work in Japan. While serving as an administrator at Madison Foods (1959-1963) he and Sam Yoshimura pulled the factory out of debt and put it several thousand dollars into the black in one year's time.

During his trip to Japan that began in the spring of 1953, he taught one food plant how to make gluten, soymilk, and soy croquettes. Also in 1953 he started a self-supporting organization at Mt. Akagi, about 125 miles northwest of Tokyo; there he worked for more than 7 years. In the winter of 1956 he suddenly became ill with pneumonia. He returned to America in the summer of 1958 and was found to have Parkinsonism; no medicine was prescribed until 1962. In 1966 Perry was an outpatient at the Madison Sanitarium / Hospital for a time, then he became a inpatient from Oct. 1967 to Jan. 1968. In Sept. 1968 he went to a convalescent home in Lodi, California. His son, Dr. Alfred B. Webber, was living and practicing medicine in Lodi. In 1969 he returned to the Wildwood Sanitarium, a self-supporting Seventh-day Adventist convalescent home and health care facility in Wildwood, Georgia (northern Georgia). He passed away there in January 1973 at age 82 of Parkinsonism.

1660. Irwin, William E.; Hartman, Warren E. 1972. "Textured vegetable proteins:" Their method of manufacture, properties and use in food processing. Paper presented at the American Chemical Society National Meeting. 10 p. Held Aug. 27–Sept. 1, 1972 at New York, New York. [10 ref] Address: Worthington Foods (a subsidiary of Miles Laboratories, Inc.), 900 Proprietors Rd., Worthington, Ohio 43085.

1661. Orr, Elizabeth. 1972. Africa Basic Foods Co. in Uganda (Document part). *Tropical Products Institute Report* No. G73. p. 25. Aug.
• ***Summary:*** "The Africa Basic Foods Co. was set up in Uganda in 1965 by Dr. Warren Harrison, one time advisor on health and nutrition to the Government. A feasibility study by consultants had suggested the use of soya, a comparatively new crop in Uganda. UNICEF supplied raw materials, particularly full fat soya flour, for trial marketing. Full-scale marketing began early in 1968. The basic product produced is full fat soya flour. This is supplied to bakeries for the manufacture of enriched bread and buns. The company also produces enriched maize meal, porridge and soya nut 'butter'. Annual soya flour production is in the region of 75 tons. Sales of the products are approximately 110-135 tons of enriched bread, 50 tons of porridge and 100 tons of 'school' porridge per year. Institutions provide 60-75 per cent of the outlet, although retail sales are said to be increasing.

"The company has had a number of production difficulties. Originally the intention was to contract for production of the soya flour with local mills, but difficulty was experienced in getting regular production of a consistent quality in what was, to the firms, a new line of production. The fact that several varieties of maize and soya beans have to be purchased continues to give rise to problems. Technical problems have arisen, with which a private US firm has assisted on a goodwill basis. Sales have been slow to develop. An initial attempt to develop the market primarily through a single distributor failed. The major problem as seen by the company is the lack of local personnel with appropriate expertise, particularly in the marketing field. The company recognizes that a good deal of attention should be paid to promotion, particularly of the personal approach type and on the basis of blanketing particular areas, and would apparently like more Government support with promotion. There is also an indication that it is disappointed in the rate of growth of sales to institutions, which it considers should provide a basis for development of the market at large. It has also been suggested, although not by the company, that the slow growth in sales may be partly attributable to the failure of the products to fit into the local diet. Although there are parts of Uganda where maize is an important item of consumption, it is the case that the staple diet of the area in which the factory is situated is based on plantains." Address: Foreign and Commonwealth Office (Overseas Development Administration), TPI, 56/62 Gray's Inn Rd., London WC1 8LU, England.

1662. Worthington Foods, Divion of Miles Laboratories. 1972. Happy cooking: With recipes by Worthington (Leaflet). Worthington, Ohio. 3 panels each side. Each panel: 22 x 9 cm. Aug.
• ***Summary:*** Contains ten recipes using the following Worthington products: Frozen Chicken Style Slices. Wham (16 oz can). Granburger (dry). Prosage (frozen). Choplets (20 oz can). Veja-Links (19 oz can). Vegetable Skallops (20 oz can). Vegetarian Burger (20 oz canned). Soyameat Fried Chicken Style (13 oz can). Non-Meat Balls (19 oz can). The cover is gold and black on white. Address: Worthington, Ohio 43085.

1663. **Product Name:** GranBurger (Dehydrated Granular Burger-like Product).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1972 August.
Ingredients: In 1975: Soy protein concentrate, Fibrotein [spun soy protein fiber], isolated soy protein, onion powder, HVP, sucrose, salt, caramel color, artificial color, niacin, iron, calcium pantothenate, vitamin B-6, riboflavin, thiamin, vitamin B-12.
Wt/Vol., Packaging, Price: Dehydrated in 10 oz Pure Pak paper carton (like milk). Retails for $2.70 (7/90, California).

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New Product–Documentation: Worthington Foods, Division of Miles Laboratories. 1972. "Happy cooking: With recipes by Worthington" (Leaflet). Worthington, Ohio. 3 panels each side. Contains a recipe using Granburger (dry).

It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a dehydrated beef-like product based on spun soy protein fiber.

Predicasts. 1974. World Manufactured Soybean Foods. p. 13. Horan. 1974. Meat analogs. p. 380. This product is made of textured soy flour (50% protein).

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 175. The ingredients in "Granburger (Worthington)" are given.

Worthington Foods. 1981. Feb. 1. Dealer wholesale price list–order blank. Lists Granburger.

Shurtleff & Aoyagi. 1983. History of Worthington Foods. p. 11.

Color photo of package in *Linda McCartney's Home Cooking.* 1990. p. 18. The package is a Pure-Pak gable-top carton (like a milk carton). The label is orange, brown, red, and white. 10 oz. 283 gm. "Vegetable protein granules. Artificial beef flavor. Contains no meat. Use like ground beef. Makes over 1.8 pounds."

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. Ingredients are now: Textured soy protein concentrate and isolate, onion powder, hydrolyzed vegetable protein, sugar, salt, artificial color, iron (as ferrous sulfate), niacinimide [niacinamide], natural smoke flavor, calcium pantothenate, vitamin B-6 (pyridoxine hydrochloride), sulfating agents, vitamin B-2 (riboflavin), vitamin B-1 (thiamine mononitrate), vitamin B-12.

1664. Hellman, Hal. 1972. The story behind those meatless "meats." *Popular Science.* Oct. p. 78-80, 164.

• ***Summary:*** Discusses the production of meat analogs from soybeans, with their economic and health advantages. The article focuses on meatlike products made from spun soy protein fibers by Worthington Foods of Ohio. Gives the history of how Robert Boyer and Henry Ford developed spun soy protein fibers. One color photo shows about 50 of Worthington's "meatless meats," most of which are canned. Four black-and-white photos show how spun protein fibers are made into meatless meats (such as Stripples and Add-A-Bits) in the Worthington plant. Frank Poston predicts that the "meat analogs will be generally available in supermarkets by 1975." Worthington president Jim Hagle is more cautious, putting the date at 1976 or 1977.

1665. Midwest Natural Foods Distributors, Inc. 1972. Catalog and price list 11/1/72. Offering the best in natural foods. Ann Arbor, Michigan. 58 p. Nov. 1. Index. Illust. 22 cm.

• ***Summary:*** This is a very early natural foods catalog, typewritten and mimeographed on pink paper; it contains a few logos of manufacturers but no ads. On the front cover is a stylized illustration of a rayed sun, with each ray represented as a fruit or vegetable. Contents: Hi! Who, where, phone, why. General information: Service, terms, freight, notes, contact (Henry Bednarz and Larry Kociela, p. 1-2). Special case lot discount–5%. Lines on which case lot discounts are not allowed (7). "Computerized billing by January 1, 1973 including Quantity, Unit, Description, Size, Sugg. [Suggested] Retail, Unit cost, extension, 10 day 2% discount, 10 day case lot discount" (p. 4).

The body of the catalog is an alphabetical listing of suppliers / manufacturers, with major brands or product categories a cross references (e.g. Bakon Yeast, see Sovex). Within each, products are listed alphabetically (shown below in parentheses). These include: Acme juicer Co. Appliances & utensils. Barth's Nutra Foods (Barth Soya Date Cereal). Books (Nutri-Books Corp., Denver, Colorado). Chico San (Rice Cakes, Lima Tamari Soy Sauce, Miso Soybean Puree, Sesame Salt, Sesame Butter, Salt Plums, Kuzu {wild arrowroot}, azuki beans, Mu Tea, kombu, soysauce tableserver–glass, chopsticks), Celestial Seasonings teas, Continental Culture Specialists (acidophilus culture, kefir grains, royal yogurt), Dr. Bronner & Assoc. (dulse sea lettuce, lecithin protein cereal, Do It Twice Soy Vege Base, pure peppermint oil soap), El Molino (7 Grain Cereal, soy beans–whole, soya flour, soya grits, soya meal, Graham flour), Fearn Soya Foods (Pancake S.F. [Soya Flour] Mix, liquid lecithin, High Protein (carob, chocolate, vanilla), soya protein 96%, Protein 600 Tablets (vanilla, chocolate), Muscle Protein, Soya Powder–Natural, Soya Powder–Low Fat, Soya Granules, cooking soybeans, Wheat Cereal Soya Mix, Corn Bread Soya Mix, Salted Plain SoyoSnax, Soybean–sprouting, lecithin granules, Soy O Snaks–Natural, barley–hulled organic, triticale flour–organic), Flavor Tree (Pernola, Pernuts {unsalted, sea salted, mild garlic, onion, carosel [carousel] carob covered}), Gides, Inc. (Nu-Life {vitamins & minerals–has the most products of any supplier}; A Soyadophilus, vitamin E natural mixed tocopherols), Lassen Foods (granola), Malt-O-Meal (Soytown) (salted soy beans [roasted], unsalted, barbecue flavor, garlic, soy spread, soy honey bar, soy nut bar), Miracle Juicer Co., Modern Products (Gayelord Hauser), Norganic (vegetable oils, incl. peanut oil, soy oil, safflower oil, sesame oil, sunflower oil, Gold Soya Mayonnaise), Richter Bros. (Familia cereals {Swissy Cereal, Fritini Mix}, Morga vegetable bouillon, Pero coffee substitute, Herbmare seasoning salt), A. Sahadi Co. (sesame tahini), Sourdough Jack's Country Kitchen (sourdough starter), Sovex (granola, Bakon Yeast), Seelect Dietary Products: Herb teas (incl. Bladderwrack, dulse leaves, saw palmetto, Irish moss), St. Laurant Peanut Butter, Sunshine Valley, Viobin (lists 16 products, incl. wheat germ oil), Mineral Waters (incl. Apollinaris, Vichy, Perrier, Mountain Valley), Grist Mill (granola, Wunder Bars, Honey Graham

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Cracker, Super Protein Concentrate), Norwalk Juicer Co., Parkelp (Ocean Labs, Inc.; lists 4 kelp products), Nuvita Foods (Langes; Soya Carob Macaroni). Organic Sun Valley Dried Fruits (incl. Calimyrna figs, Monukka raisins, Black Mission figs, Zahadi dates). Honey Preserves–No sugar added. Index by products and suppliers.

Note 1. This is the earliest document seen (May 2006) concerning Midwest Natural Foods.

Note 2. This is the earliest English-language document seen (June 2006) that mentions the "Acme Juicer" or the "Acme Juicer Co." Address: 310 W. Ann St. (P.O. Box 100), Ann Arbor, Michigan 48107. Phone: 313-761-2997.

1666. *Loma Linda University Observer* (*California*). 1972. China doctor noted surgeon, scientist, and missionary. Nov. 30. p. 7. [1 ref]

• ***Summary:*** A brief biography of Harry W. Miller, MD, "surgeon, scientist, financial genius, and missionary." He was "named alumnus of the year for 1968 by graduates of the School of Medicine [at Loma Linda University in California]. Dr. Miller, now 93, has been classed with Livingston, Judson, and Schweitzer as one of the greatest modern missionaries. When only 23 years of age, he turned his back on a promising career at the University of Chicago and went to China as a missionary."

"The Brilliant Blue Cross, highest awarded conferred by the government of the Republic of China, was presented to Dr. Miller by Generalissimo Chiang Kai-shek for his development of palatable milk from soybeans. This discovery is credited with saving the lives of countless Chinese children who otherwise would have starved."

A portrait photo shows Dr. Miller. Note: (1) Livingston was David Livingston (lived 1813-1873), Scottish missionary and explorer in Africa. Henry M. Stanley, who finally met him in Ujiji, Central Africa on 10 Nov. 1871 said "Doctor Livingstone, I presume?" (2) Judson was Andoniram Judson (1788-1850), American missionary to Burma. (3) Schweitzer was Albert Schweitzer, MD, (1875-1965), French theologian, philosopher, physician, and music scholar. Missionary physician and founder of Lambarene Hospital in French Equatorial Africa in 1913. He earned the PhD degrees and won the Nobel Peace Prize in 1952.

1667. Baker, Alonzo L. 1972. My years with John Harvey Kellogg. *Spectrum: Journal of the Association of Adventist Forums.* Autumn. p. 40-45.

1668. Glyer, John. 1972. Diet healing: A case study in the sociology of health. *J. of Nutrition Education* 4(4):163-66. Fall. [7 ref]

• ***Summary:*** "There is an increasing interest in 'natural' and 'health' foods. This study compares and contrasts the attitudes, beliefs, and habits of the new 'hip' groups with those of the older movement." This article is based on research conducted during the summer of 1971 under a National Institutes of Health grant. Twenty-three questions were asked of the new groups, and the results tabulated. The older 'health food faddists' wrote books that about half the members the hip group read. Adelle Davis's books were the most popular. Others were *Zen Macrobiotics,* by George Ohsawa (1965); *Mucousless Diet Healing System,* by Ehret [1924?]; and *Back to Eden,* by Jethro Kloss (1939).

On Ninth Avenue in San Francisco are three 'natural' foods stores near each other. Two are actually part of New Age Natural Foods, which grew so large it had to move the granary section to another storefront. Fred Rohe is the owner; he sells no meat and the dairy products come from certified raw milk. Address: Univ. of California Medical Center, San Francisco.

1669. Schwarz, Richard W. 1972. The Kellogg schism: The hidden issues. *Spectrum: Journal of the Association of Adventist Forums.* Autumn. p. 23-39. [68 ref]

• ***Summary:*** A refreshingly candid essay about the conflict between Dr. John Harvey Kellogg and the Seventh-day Adventist church, by the author of the best biography of Kellogg. Dr. Kellogg was almost continually embroiled in controversy with one or another church leader after he became superintendent of the Western Health Reform Institute in 1876. The causes for these numerous controversies were many and varied. Of central importance, however, was Kellogg's observation that there was a wide and uncalled-for difference between Adventist teaching and practice in healthful living–particularly when it came to the renunciation of flesh foods in the diet. For instance, although Ellen White had begun to advocate vegetarian diet in 1864, it was not until thirty years later that she felt able to banish meat completely from her household. She herself had continued to eat flesh foods, occasionally at least, as late as 1891.

"Kellogg appears to have considered the practice of health reform doctrines to be intimately bound up with spiritual growth and perfection... In the 1880s he began publishing his own books and hiring his own subscription agents because he was dissatisfied both with the financial arrangements offered him by the Review and Herald Publishing Association after James White's death and because he was convinced that his health book were not being pushed as vigorously as they should be... Kellogg had been at perhaps the height of his power within the church in 1901."

On 10 Nov. 1907 Dr. Kellogg was "disfellowshipped" from the Adventist church. The charges: being antagonistic "to the gifts now manifest in the church" and allaying himself "with those who are attempting to overthrow the work for which the church has existed." In retrospect the affair appears to have been basically an unfortunate personal and political struggle between the sometimes haughty czar

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of the Adventist medical institutions and a group of ministers that included A.G. Daniells, General Conference president; W.W. Prescott, editor of the *Review and Herald*, and Willie White (Ellen White's son). Caught in the middle was an aging Ellen White, whose authority became the focal point of the conflict.

1670. Sovex. 1972. Products (Document part). In: Midwest Natural Foods Distributors, Inc. 1972. Catalog and price list. Nov. 1. Ann Arbor, Michigan. 58 p. See p. 40.
• ***Summary:*** Bakon Yeast (2 or 12 oz). Granola cereal (1 or 3 lb). Granola Hi-Protein Cereal (1 or 3 lb). Granola Honey Almond (1 or 3 lb). Fruit and Nut Granola (1 or 3 lb). Granola Cookies (12). Address: [Collegedale, Tennessee].

1671. Compton, Walter A. 1972. Serving needs in health and nutrition: The story of Miles Laboratories. *Newcomen Society in North America, Pamphlet* No. 934. 28 p. *

1672. **Product Name:** Sanitarium Health Foods Soya Beans Natural (In Brine).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: Sydney, N.S.W., Australia.
Date of Introduction: 1972.
Ingredients: Soya beans, salt.
Wt/Vol., Packaging, Price: 430 gm can.
How Stored: Shelf stable.
New Product–Documentation: Label. 1980, undated. "A delicious protein-rich vegetable." Two recipes on label. Letter from Sanitarium Health Food Co. 1981.
Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1972.

1673. Dysinger, P. William. 1972. Traffic accidents and human ecology. *Medical Arts and Sciences* 26(3/4):27-41. [31 ref]
• ***Summary:*** A Seventh-day Adventist non-drinking population of approximately 100,000 in California had fewer traffic accidents than the general population. DRiving while intoxicated is the single most significant factor associated with fatal traffic accidents, especially in the 25-44 age group. Address: Assoc. Dean for Academic Affairs and International Health, Prof. of International Health, Loma Linda Univ. School of Health, Loma Linda, California.

1674. Harris, Thelma Bruner. 1972. Good foods for good health: A cookbook featuring menu tips and easy-to-prepare recipes calling for the use of vegetables, fruits, grain foods, nuts, and dairy products. Nashville, Tennessee: Southern Publishing Assoc. 223 p. Illust. Index. 22 cm.
• ***Summary:*** A Seventh-day Adventist vegetarian cookbook. Soy-related recipes include: Soy-wheat bread (with soy flour, p. 27). Tofu patties (p. 75). Soybeans–Boston style (if possible use "the immature or quick-cooking variety," p. 84). Soybean croquettes (with cooked soybeans, p. 84). Green soybean succotash (with green soybeans [not clear whether fresh or dry], p. 84-85). Soybean loaf no. 1 and 2 (with pureed soybeans, p. 85). Prosage croquettes (with Prosage sausage-like food made by Worthington Foods, p. 112; other entree recipes on pages 112-20 used brand-name soy and/or gluten products made by Seventh-day Adventist food companies, such as Veelets, Yum, Proteena, Soyameat frozen White Meat, Choplets, Soyameat Fried Chicken Style, Vegeburger, Wham, and Vegelona). Soy sugar cookies (with soy flour, p. 171).

1675. Kloss, Jethro. 1972. Back to Eden. Riverside, California: Lifeline Books. xx + 704 p.
• ***Summary:*** After the copyright for the original 1939 edition of *Back to Eden* expired in 1967, the Kloss family, because

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of a complex set of circumstances, neglected to renew it. The book then went into the public domain. For the bittersweet story of how this book came to be published, see interview with Doris Kloss Gardiner (Nov. 1990).

On the cover of the hardcover edition is written "The Kloss family heirloom edition. The classic guide to herbal medicine, natural foods, and home remedies. The copyright page states: "Copyright 1972 by Promise Kloss Moffett, Eden Kloss, and Doris Gardiner.

On the title page is written: "With two exclusive features only in this Kloss family edition. See pages xi and 673. American herbs for pleasure and health: natural nutrition with recipes and instructions for living the Edenic life."

For the bitter-sweet story of how this book came to be published, see interview with Doris Kloss Gardiner (Nov. 1990).

1676. Noorbergen, Rene. 1972. Ellen G. White. Prophet of destiny. New Canaan, Connecticut: Keats Publishing Co. xiv + 241 p. Illust. 22 cm. [15 ref]
Address: Fairfax, Virginia.

1677. Register, U.D.; Zolber, Kathleen. 1972. Vegetarianism (Sound recording; cassette tape). Chicago, Illinois: American Dietetic Association. *
• ***Summary:*** Discusses vegetarian history, motivations, and nutritional guidelines. Reviews published research dealing with such vegetarian issues as protein, vitamin B-12, and world food shortages. Address: 1. Dep. of Nutrition, Loma Linda Univ., Loma Linda, California.

1678. Snider, Nancy. 1972. Soybean (protein) recipe ideas. New York, NY: Arco Publishing Co., Inc. 112 p. Illust. Food category / recipe index. 18 cm.
• ***Summary:*** Contents: Preface. About this book. Who makes what: Archer Daniels Midland Co. (TVP), Central Soya (Promosoy), Far-Mar-Co (Ultra-Soy), General Mills, Inc. (Bac*os, Bontrae), The Griffith Laboratories, Inc., Ralston Purina Co. (Edi-Pro), A.E. Staley Co. (Mira-Tex), Swift & Co. (Texgran), H.B. Taylor Co. (Textrasoy), Worthington Foods, Inc. (Fibrotein). The facts about soy protein. Soy what? Cooking with soy protein. Cover-ups. Things to do with bacon-flavor soy protein. Soy cooking tips. Breakfast ideas. Breakfast put-ons. Appetizers. Soups. Garnishes for soups. Entrees. Soy sandwiches. Breads. Desserts. Food category / recipe index (within each major food category {appetizers, bread, breakfast ideas, desserts, etc.}, recipes are listed alphabetically).

1679. Proctor, Stoy. 1972? Unmeat: The case for vegetarianism. n.p. 48 p. Undated. Illust. No index. 19 cm. [13 ref]
• ***Summary:*** This booklet presents seven advantages of a vegetarian diet. Contents: Introduction. 1. Vegetarian foods are original. 2. Vegetarian foods are preventive. 3. Vegetarian foods are pure. 4. Vegetarian foods are disease-free. 5. Vegetarian foods are less expensive. 6. Vegetarian foods are energizing. 7. Vegetarian foods are adequate. Address: MPH degree from Loma Linda Univ.

1680. Misko, Karin. 1973. SeVa longevity cookery cookbook. Columbus, Ohio: Soybean Press. viii + 113 p. Jan. Illust. by Judy Post. Edited by Debora Bittaker. Introduction by Catherine Bicknell. 22 cm. [45 ref]
• ***Summary:*** A vegetarian cookbook from the SeVa Restaurant, printed on 100% recycled paper. Soy-related recipes include: Soy milk (p. 18). Tahini milk. Nut milk (p. 18). Miso vegetable soup (p. 25). Variety muffins (with soy flour, p. 36). Salad for Virgo (with green soybeans and roasted soybeans, p. 45). Miso-tahini sauce (p. 51). Brown sauce (with Tamari soy sauce or miso, p. 51). Stuffed cabbage rolls (with green soybeans and brown rice, p. 65). Campfire dinner (with cooked or canned soybeans, p. 65). Soy bean loaf (p. 73). Roasted soybeans (dry roasted, p. 84). Granola (with Soya granules, p. 84).

The glossary (p. 98-100) includes listings for cold-pressed oils, fertilized eggs, ginseng, glutin [sic, gluten], miso, seaweed, tamari soy sauce, and tofu ("a bean curd made from soybeans which is used for flavoring soups and sauces.")

Brand name products we use (p. 101; Note: Each contains soya). Smokene, Soyagen (spray-dried soymilk), and Vegeburger (Loma Linda Foods). Soya Granules (Fearn Soya Foods). Stripples (bacon alternative from Worthington Foods). Vege-Sal (Modern Products; flavored with soy bean extract). "Smokene: smoked seasoning spice made from toasted soy powder, dried yeast, soy sauce and condensed wood smoke. It is used for flavoring soups and sauces."
Address: Columbus, Ohio.

1681. Lockmiller, N.R. 1973. Increased utilization of protein in foods. *Cereal Science Today* 18(3):77-81. March. [13 ref]
• ***Summary:*** Details are given on each type of soy protein product and the way each is used. Table 4 gives the price per pound for various soy protein foods, the estimated annual production in 1972, and the current uses. Soy flour and grits, $0.15-$0.17/lb, 352-500 million pounds produced in 1972. Used as ingredients for baked goods, dog foods, sausages.

Soy protein concentrates, $0.21-$0.25/lb, 40-50 million pounds produced. Used in manufacturing textured products. Ingredients in processed meats, baby foods, and health foods.

Soy protein isolates: Regular $0.41-$0.45/lb, modified isolates $0.92-$1.33/lb. Production of both types: 35-40 million pounds. Regular isolates are used in manufacturing analogs such as meatless ham, bacon, hot dogs, etc. Modified isolates are used in whipping agents.

Textured soy protein products: Extruded flours, $0.27/lb and up. Spun isolates $0.50/lb and up. Production of

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both combined: 35-40 million pounds in 1972. Textured soy protein products are use in bacon bits, bacon strips and similar foods.

Table 6 shows what companies supply which of the following types of edible soy-based ingredients: Soy flour and grits (defatted, low-fat, full-fat), concentrates, isolates, spun fibers, textured soy prod. The companies are ADM (soy flour and grits–defatted, low-fat, and full fat, textured soy prod.), Cargill, Central Soya, Far-Mar-Co, General Mills, Griffith Labs, Gurley, Inc., Lauhoff Grain Co., Miles (Worthington), National Protein, Ralston Purina, A.E. Staley, Swift & Company. Address: A.E. Staley Mfg. Co., Decatur, Illinois.

1682. **Product Name:** Soy Protein Isolates, and Spun Soy Protein Isolates.
Manufacturer's Name: Miles Laboratories, Inc.
Manufacturer's Address: 1127 Myrtle St., Elkhart, IN 46514.
Date of Introduction: 1973 March.
New Product–Documentation: *Soybean Digest Blue Book.* 1973. p. 110.

1683. Register, U.D.; Sonnenberg, L.M. 1973. The vegetarian diet: Scientific and practical considerations. *J. of the American Dietetic Association* 62(3):253-61. March. [37 ref]
• ***Summary:*** "Without sound nutritional knowledge, following a vegetarian diet can be hazardous. However, as shown by a number of studies reviewed here, it is perfect possible to construct a vegetarian diet that provides all essential nutrients." One section in this article, titled "Soy products," discusses spun soy protein isolates, and textured soy protein products. Another discusses "The Pure Vegetarian [Vegan] Diet."

The introduction states: "The use of Zen macrobiotic diets is a well known example of problems that potentially may develop when the diet is improperly selected.

"The Zen macrobiotic regimen basically consists of ten diets, ranging from the lowest level (Diet -3) which includes fruits, vegetables, and some animal products in addition to cereals, to the highest level (Diet 7) made up entirely of cereals. Individuals who persist in following the more rigid diets are in great danger of developing serious nutritional deficiencies. Cases of scurvy, anemia, hypoproteinemia, hypocalcemia, emaciation due to starvation, and other forms of malnutrition, in addition to loss of kidney function due to restricted fluid intake, have been reported, some of which have resulted in death."

This review of the literature was reprinted in: Ioannis S. Scarpa and Helen C. Kiefer, eds. 1978. *Sourcebook on Food and Nutrition.* p. 220-28. Address: Dep. of Nutrition, School of Health, Loma Linda Univ., Loma Linda, California.

1684. *Forbes.* 1973. Why the makers of Alka-Seltzer want to help reduce your meat bill. April 1. p. 25-26.
• ***Summary:*** Miles Laboratories, the $319-million-a-year pharmaceutical company of Elkhart, Indiana, is famous as the maker of Alka-Seltzer. The company's food group [Worthington Foods] has sales estimated at $18 million a year. The company's "newest products are Morningstar Farms breakfast 'sausage' and 'ham.' They are currently being test-marketed in Florida and soon will be in Arizona and Southern California. Earlier tests, in Erie, Pennsylvania, and Fresno, California, were very successful. If the latest tests confirm the earlier results, Miles reportedly will go national next year, backed with a $9 million advertising campaign." Currently the biggest problem with these products is that they cost more than meat.

In one sidebar, titled "How it all happened," Robert Boyer tells how he developed spun soy protein fibers, starting with his work at the Ford Motor Co. "I first approached Worthington when I filed my first patent on an edible fiber in 1949 and they became interested immediately." A photo shows Boyer, who is now building a house in Florida, where he plans to retire eventually.

A second sidebar, titled "Verdict: Not as good, but not bad, either," gives the results of a 15-member taste panel test for taste and texture. 11 participants ranked the products as good in taste as their meat counterparts; 1 said excellent and 3 said fair. In texture, 4 said excellent, 9 said good, and 2 said fair. "As to price, four of the participants said they'd buy the products if they could save 10% on meat price; 11 said the prices would have to be 20% cheaper or more. One participant (middle-aged) said he'd consider buying the products at full meat prices because of the anticholesterol feature. The overwhelming conclusion was that most participants would prefer meat, but that price advantage could make them switch."

Note: This is the earliest English-language document seen (Jan. 2008) that uses the term "Morningstar Farms" to refer to products made from edible spun soy protein fiber.

1685. Fischer, Norman H. 1973. Beanburgers–More Americans turn to soybean products as meat substitutes: Restaurants, stores find consumers like the taste and especially the price. *Wall Street Journal.* April 3. p. 1, col. 1. Midwest ed.
• ***Summary:*** In the continuing struggle against high meat prices, King's Food Host, a restaurant chain based in Lincoln, Nebraska, has been adding TVP for several months now to its Big King burgers at about 20 of its 140 branches. It sells these "soyburgers" for $0.49, which is 10 cents less than usual. Sales have been very good, with no complaints.

In the past, soybean products have been slipped into a variety of consumer foods, but during the past few months, they have been increasingly advertised as extenders in hamburgers. Consumers seem to welcome the reduction in

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meat prices.

"The future is now: Over the past several years, such companies as General Mills Inc., Archer-Daniels-Midland Co., Ralston Purina Co., and the Worthington Foods subsidiary of Miles Laboratories Inc., have developed soybean products that have virtually the same appearance, texture and taste as beef, pork, poultry, seafood and even nuts. Some of these all-soy products already are on the market, and more are being added annually.

"U.S. Agriculture Department [USDA] researchers say that by 1980 soy protein could account for as much as 8% of the nation's 'meat' requirements."

This is good news for those who grow and process soybeans. The National Soybean Processors Association says that sales of soy protein products for use in human foods totaled about $75 million last year, a ten-fold jump from five years earlier. And buoyed by the growing use of soy as an extender for ground beef, sales this year are expected to reach $120 to $140 million.

"The biggest move was made in mid-March by Red Owl Stores Inc. in Minneapolis [Minnesota], when it introduced 'Juicy Burger II' in the fresh-meat counters of its 51 supermarkets in the Minneapolis-St. Paul area and its six Duluth stores. 'Juicy Burger II' is 75% ground beef and 25% soy protein, plus a few flavorings. It is selling for about 75 cents a pound, 20 to 25 cents less than all-beef hamburger sells for." Address: Staff reporter.

1686. Leonard, Agnes W. 1973. Grow your own protein. *New York Times.* April 8. p. 35. Supplement.
• ***Summary:*** One solution to the high cost of meat is to grow your own protein in the form of soybeans. Agnes grows green soybeans (Disoy variety) in her home garden in upper New York state. About 4 years ago she began hay mulching with spectacular results. Her worn-out sand heap responded like magic and weed growth–though not entirely eliminated–was greatly reduced.

Some excellent books about soybeans are: (1) "How to Have a Green Thumb without an Aching Back," by Ruth Stout. "The Soybean Cookbook," by Mildred Lager and Dorothea Van Gundy Jones. "The Useful Soybean," by Mildred Lager.

Illustrations by Matthew Kalmenoff show: (1) A soybean plant loaded with pods. (2) A cluster of soybean pods attacked to the plant stem.

1687. *Business Week.* 1973. Making it cheaper to eat protein. May 12. p. 184, 186.
• ***Summary:*** Skyrocketing food prices are forcing the food industry to develop new textured soy protein products to extend or substitute for meat, suing either of three general methods: Spinning (Miles Laboratories/Worthington Foods), concentrating (Central Soya Co. concentrates), or extruding (ADM, this is now the leading method for making textured vegetable protein).

"Archer Daniels Midland vigilantly protects both its broad product patent and its copyright on the initials TVP (for textured vegetable protein). The company cemented its patent position with a court suit in 1971. Today, five of its eight competitors–Cargill, Miles Laboratories, A.E. Staley, Swift, and Ralston Purina–sell vegetable protein lines under license from ADM.

"Burger mixes: TVP got its first big boost when the Agriculture Dept. [USDA] in 1971 approved its use in the national school lunch program. By the end of 1972, total demand had grown to about 55-million lb. a year, with ground beef as the largest single market.

"Red Owl Stores, Inc., sells such burger mixes across its butcher counters, usually in a mix of 75% meat to 25% vegetable protein. Called Juicy Burger II, or Juicy Blend II, the product sells for $0.75 a lb., compared with $0.99 a lb. for ground beef. Red Owl says that the mixture outsells whole meat by 3 to 1. Kroger Co., the nation's third-largest food chain, last month came out with its own mix of ground beef and textured vegetable protein, called Burger Pro.

"Dr. Virgil O. Wodicka, director of FDA's Bureau of Foods, says: 'Don't tell consumers what it isn't–tell them what it is.'"

1688. Dwyer, Johanna T.; Mayer, L.D.V.H.; Kandel, R.F.; Mayer, J. 1973. The new vegetarians: Who are they? *J. of the American Dietetic Association* 62(5):503-09. May. [18 ref]
• ***Summary:*** One hundred young vegetarians (age 35 or younger), not affiliated with any organized religious group, were interviewed and asked to fill out a 200-item questionnaire. None were Seventh-day Adventists or Trappist monks. 97 were Caucasian and 3 were Negro. 25 were students who responded to notices posted in dormitories and advertisement in the undergraduate newspaper of a university; 75 participants, "most of whom were not students, were recruited at vegetarian-oriented restaurants, food stores, and communal residences throughout the city [of Boston]. Interviews were usually conducted wherever the subject was found.

Data were collected for the following factors: Personal data (age, sex, marital status, present weight, maximum weight reached in adulthood, occupation, educational level, past and resent affiliations with religious, philosophical, and/or spiritual groups). History of diet (incl. use of alcohol, tobacco, and drugs). Sources of information on diet. Social aspects of diet. Opinions about nutrition and various diets. Types of nutrition information and health services subject desired.

The results showed diverse dietary habits, lifestyles, and attitudes toward physicians and other health professionals. Food and other avoidances are discussed. At least 40% of those interviewed consumed poultry and/or fish; none consumed red meat. 26% were lacto-ovo vegetarians. 23%

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were "vegans" who avoided all animal foods. Weight loss: 94% of the men and 79% of the women (for whom numbers were available) lost weight on a vegetarian diet. 41% said their views on diet differed from those of nutrition scientists. An additional 15% said their views differed in part.

Note: This was an extremely influential paper, identifying a new subject for investigation, and defining the terms of discussion and debate among health professionals for more than a decade. The word "macrobiotics" is not mentioned, but the study was conducted in Boston, and later publications show that a significant number of those studied followed a macrobiotic diet. Address: Dep. of Nutrition, Harvard School of Public Health, Boston, Massachusetts.

1689. *Food Engineering.* 1973. TVP simulates pepperoni. 45(5):72. May.
• ***Summary:*** Temptein Pepperoni-like Links are made from spun soy isolate by the Marschall Division of Miles Laboratories. The product costs 25% less than meat pepperoni. Typical analysis of the links is: Protein 18.2%, fat 27.1%, carbohydrates 17.6%, ash 4.9%, and moisture 32.2%. Two photos show the product.

1690. Miles Laboratories, Inc. 1973. Which of your food ingredients is becoming too expensive? (Ad). *Food Processing* (*Chicago*) 34(4):Inside front cover. Spring. Foods of Tomorrow section.
• ***Summary:*** "Is it a meat product? Then Miles Laboratories can help cut your costs. With Temptein *spun* textured vegetable protein meat-like nuggets and beef-like granules."

"Temptein extenders, derived from soy isolate (over 90% protein), and spun into fibers. So the cost is significantly less than meat. After all, an acre of soybeans yields 10 times as much protein as the same land would feeding animals. Production, shipping and handling are less costly too.

"No skinning, boning, curing or trimming. And no waste or shrinkage. Temptein–a versatile product that can be stored conveniently at room temperature... Extenders engineered for up to 100% meat replacement. To cut ingredient costs in your existing food products. Or help you design delicious new foods."

The bottom half of the ad contains a photo of various colorful vegetables, mushrooms, grains, beans and pasta. Just above it is a smaller photo of Temptein spun fibers. Address: Marschall Div., Elkhart, Indiana 46514.

1691. *Food Engineering.* 1973. Cholesterol-free meat substitute: New products have all the advantages of real meat, but no cholesterol or animal fat. 45(6):60-61. June.
• ***Summary:*** Shows large labels of two Morningstar Farms products from Miles' new textured vegetable protein line. "Textured Vegetable Protein" and "Breakfast Patties." A nutritional comparison is made with an equivalent weight of pork sausage. An 8-oz package retails for $0.79.

1692. *Loma Linda Bulletin* (*Loma Linda, California*). 1973. China doctor [Harry W. Miller] decides against retirement at 94. July 18.
• ***Summary:*** Dr. Miller decided at the last moment to stay on for another year at the Seventh-day Adventist Hospital in Hong Kong. For 70 years he has served the Chinese people as a medical missionary. A large photo shows him, dressed in a shirt and tie, and holding a cop in one hand. The caption: "'Orient Angel–Dr. Harry Miller, Seventh-day Adventist medical missionary, doing what he loves best, passes out cups of soybean milk to undernourished children in a houseboat city on the Hong Kong waterfront."

1693. Rosenfield, Daniel. 1973. Feeding children through USDA programs. *Food Technology* 27(8):36-38. Aug.
• ***Summary:*** The author was formerly Director of Nutrition and Technical Services Staff of USDA's Food and Nutrition Service (FNS). The largest USDA program is the School Lunch Program, in which approximately 25 million children participate. These child food service programs, which have a turnover of over $2,600 million per year, encompass much more than feeding children lunch. The Child Nutrition Division of the U FNS operates three programs: School Lunch, School Breakfast, and Special Food Service. The FNS was established in 1969.

Textured vegetable proteins are now allowed to be used in combination with meat, poultry, or fish is the School Lunch Program and the lunch and supper of the Special Food Service Program. The maximum rate is 30 parts of hydrated textured vegetable protein to 30 parts of uncooked animal protein on the basis of weight. Address: Director of Nutrition Planning, Miles Laboratories, Inc., 1127 Myrtle St., Elkhart, Indiana 46514.

1694. Smith's Food King. 1973. Display ad: The best choice in meats. *Los Angeles Times.* Sept. 6. p. G21.
• ***Summary:*** The section titled "Frozen features" includes: "Morningstar Farms 75¢. Vegetable protein, links, patties, slices, 8-oz."

1695. Manchester, Harland. 1973. And a new way to trim your meat bill. *Reader's Digest.* Oct. p. 119-21.
• ***Summary:*** About the rise of TVP in the USA as a meat extender. It started to be used in school lunch programs but has now moved into supermarkets. In March 1973 "Red Owl Stores, Inc. of Minneapolis [Minnesota], placed a ground-meat product containing 25-percent soybeans and selling for about 20 cents a pound less than the all-beef hamburger at the meat counters of 51 of its stores in the Minneapolis-St. Paul area. It outsold all-beef hamburger three to one and is now marketed in all 136 Red Owl Stores, as well as 200 franchise stores. Red Owl also sells frozen pizzas and patties in which soybean proteins are used." Discusses ADM,

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Worthington Foods, Henry Ford, and Robert Boyer.

1696. Miles Laboratories, Inc. Marschall Div. 1973. From Miles: Six specific ways to whittle costs in your meat and seafood formulations. And maintain quality (Ad). *Soybean Digest.* Nov. p. 19A-19B.
• ***Summary:*** "Meat and seafood prices are on the rise. And what a crimp that puts in your new food product development. Miles has designed special textured vegetable proteins to extend or replace these costly ingredients. To whittle the costs.

"Temptein, our spun textured vegetable protein, is derived from the most refined soy isolate (90% protein)." Temptein comes in: (1) Meat-like Nuggets (Think about: Enchilada casserole, meat loaf squares, Beef balls in blankets, Porcupines or Rigatoni). (2) Bacon-like Chips (Think about: Bacon-like chips and peanut butter toaster pop-ups, Bac-omelet, Bacon and cheese rarebit, Bac-olive appetizers). (3) Ham-like cubes. (4) Pepperoni-like Links. (5) Seapro (developed to improve seafood specialties). (6) Pro-Lean 45 ("The first vegetable protein to be used successfully at 45% meat extension levels in patty formulations"). A large color photo shows different types of meat and crab. Address: Marschall Div., Elkhardt, Indiana 46514.

1697. Miles Laboratories, Inc. Marschall Div. 1973. From Miles–Six specific ways to whittle costs in your meat and seafood formulations. And maintain quality (Ad). *Soybean Digest.* Nov. p. 19A-B.
Address: Elkhart, Indiana 46514. Phone: 219-264-8716.

1698. Turk, R.E.; Cornwell, P.E.; Brooks, M.D.; Butterworth, C.E. 1973. Adequacy of spun-soy protein containing egg albumin for human nutrition. *J. of the American Dietetic Association* 63(5):519-24. Nov. [20 ref]
• ***Summary:*** Nitrogen balance studies were carried out on 5 young adults and 3 teen-agers during 5 consecutive 1-week periods in which spun-soy protein foods constituted the principal source of dietary nitrogen. The spun-fiber soy product used in these studies was Soyameat, made by Worthington Foods, Inc., and available either canned or frozen in beef or chicken flavor. Egg albumin, added to facilitate the commercial spinning process, represented slightly less than one-third of the total available dietary protein in these studies. It enhanced the nutritional quality of the finished product. "We conclude that spun fiber foods of the type employed in this study represent a high quality of protein for teen-agers and adults." Address: The Nutrition Program, Univ. of Alabama School of Medicine, Birmingham, Alabama.

1699. Hawley, Don. ed. 1973. Vegetarianism (Special issue). *Vibrant Life* (*Hagerstown, Maryland*). *

1700. Kuzma, J.W.; Dysinger, P.W.; Strutz, P.; Abbey, D. 1973. Nonfatal traffic accidents in relation to biographical, psychological, and religious factors. *Accident Analysis and Prevention* 5:55-65. *

1701. **Product Name:** Loma Linda Tender Bits (Fish-like).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: 11503 Pierce Place, Arlington, California.
Date of Introduction: 1973.
Ingredients: In 1973: Inc. spin soy protein fibers.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. Tender Bits is a canned fish-like products based on spun soy protein fiber.

Recipe booklet. 1979, dated.

Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. The ingredients are now: Vegetable protein (wheat [gluten] and soy), rice flour, corn or soy oil, oat flour, dried yeast, onion powder, soy lecithin, L-lysine, natural (vegetable) flavors, vitamins [niacinamide, D-calcium pantothenate, thiamine (vitamin B-1), vitamin B-6, riboflavin (vitamin B-2), vitamin B-12]. Broth: Water, salt, natural (vegetable) flavors, cottonseed oil. Label printed March 1990.

1702. **Product Name:** Loma Linda Little Links (Meatless Frankfurters Based on Spun Soy Protein Fibers).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce Place, Riverside, CA 92515.
Date of Introduction: 1973.
Ingredients: Inc. spun soy protein fibers.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: 1988: Per 2 links (1.6 oz–46 gm): Calories 80, protein 8 gm, carbohydrate 2 gm, fat 5 gm, cholesterol 0 mg, sodium 210 mg, potassium 40 mg.
New Product–Documentation: It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a canned frankfurter type product based on spun soy protein fiber which Loma Linda probably purchased from General Mills.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Linketts (Loma Linda)" are "wheat protein, vegetable oil, brown rice, defatted wheat germ, dried yeast, soy protein, salt, potato flour, onion powder, MSG, soybean lecithin, caramel color, HVP, garlic powder, L-lysine, flavorings."

Recipe booklet. 1979.

Label sent by Loma Linda Foods. 1988. Oct. 5.

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The ingredients are now: Wheat gluten, corn oil, water, wheat germ, dried yeast, rice flour, soy flour, natural (vegetable) flavors, potato flakes, onion powder, oat flour, caramel color, soy lecithin, wheat flour, garlic powder, L-lysine, soy protein isolate, spice, vitamins, (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). Broth: Water, salt. This product was introduced in 1963. A less sophisticated version of this product with the same name was introduced in 1953.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1703. **Product Name:** Soyalac (Soymilk) [Sweetened].
Manufacturer's Name: Spicer Health Foods, Spicer Memorial College.
Manufacturer's Address: Aundh Road, Ganeshkind Post, Poona 1, Maharashtra, India.
Date of Introduction: 1973.
Wt/Vol., Packaging, Price: Bottle.
New Product–Documentation: Note: This is the earliest known commercial soymilk made in India. Letter from Mr. Emerson David (Spicer Memorial College, Food Factory, Aundh Road, Ganeshkhind, Poona 411 007 India). 1975. July. He orders information about miso.

Letter from Charles D. Howes. 1978. Oct. List of Seventh-day Adventist soymilk plants.

Shurtleff & Aoyagi. 1984. Soymilk Industry & Market. p. 110. The plant started in 1972 or 1973.

Color photo sent by Anders Lindner of STS. 1987. Nov. 14. 150 ml bottle. Orange, white, black and yellow Label, with photo of baby's face. "Concentrated formula for infants and children (Hypoallergenic). Add water." This product is still on the market, sold in sterilized bottles.

1704. **Product Name:** Fish Fillets (Imitation Fish). Later renamed Vegetarian Fillets.
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1973.
Ingredients: In 1975: "Wheat protein [wheat gluten], Fibrotein [spun soy protein fiber], cracker meal, corn oil, egg white solids, hydrogenated vegetable oils, dehydrated potato, nonfat dry milk, artificial flavoring, soy protein, HVP, MSG, dehydrated onions, salt, dextrose, disodium inosinate/disodium guanylate, niacinamide, thiamin, iron, vitamin B-6, riboflavin, vitamin B-12."
Wt/Vol., Packaging, Price: 6 fillets in 10½ oz paperboard box.
How Stored: Frozen.
New Product–Documentation: It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. Fish Fillets (9 oz. or 6 lb) is a frozen fish-like product based on spun soy protein fiber.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 175. The ingredients in "Fillets, frozen (Worthington) are given.

Label. 1976, undated. "A Vegetable Protein Product. Artificial Fish Flavor." Consumer Reports. 1980. June. p. 357-65. The protein PER is 2.53. Sensory comments: Faint fishy flavor and aroma. Spicy. Dry. Chewy. Flaky; dark tuna color.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. Ingredients for "Fillets, frozen, Worthington Foods" are "textured soy protein concentrate and isolate, flavorings (artificial flavors, salt, sugar, spices, onion, garlic, celery, parsley), egg whites, soybean and/or corn oil, partially hydrogenated soybean and cottonseed oil, modified tapioca starch, corn syrup solids, monosodium glutamate, disodium inosinate, vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12."

Note: This is the earliest commercial meat alternative seen which has a name clearly indicating that it is an alternative to fish fillets.

1705. **Product Name:** Worthington's Meatless Chili.
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1973.

1706. **Product Name:** FriPats (Meatless Hamburger Patties).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1973.
Ingredients: In 1984: Textured vegetable protein (soy protein concentrate and isolate, wheat gluten), soybean and/or corn oil, flavorings (hydrolyzed vegetable protein, salt, spices, spice extractives, onion, garlic powder, paprika), egg white solids, partially hydrogenated soybean and cottonseed oil, calcium caseinate, modified tapioca starch, caramel color, emulsifiers (mono- and diglycerides, glyceryl lacto esters of fatty acids), yeast extract, niacinimide [niacinamide], iron (as ferrous sulfate), vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12.
How Stored: Frozen.
New Product–Documentation: It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118.

Manufacturer's catalog. 1984, undated. Frozen Products.

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Label reads: "Vegetable Protein Patties. Artificial Hamburger Flavor. Completely Meatless."

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1707. **Product Name:** Chic-Ketts (Meatless Chicken).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, Ohio. Phone: Tuxedo 5-5359.
Date of Introduction: 1973.
Ingredients: Textured vegetable protein (wheat gluten, soy protein concentrate and isolate), water, soybean and/or corn oil, yeast extract, salt, monosodium glutamate, onions, hydrolyzed vegetable protein, niacinamide, etc.
Wt/Vol., Packaging, Price: 1 lb (in 1973).
How Stored: Frozen.
New Product–Documentation: It's Your World Vegetarian Cookbook. 1973. Glendale, California: Seventh-Day Adventist Church. p. 118. This is a frozen product with chicken-like flavor based on spun soy protein fiber. Each pack weighs 1 lb.

Manufacturer's catalog. 1984, undated. Frozen Products. Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

Note: This product was first introduced in 1960, but did not contain textured soy protein concentrate or isolate until 1973.

1708. Adams, Ruth B. 1973. Callaloo and pastelles too: Plus hundreds of other delightful recipes. Mountain View, California: Pacific Press Publishing Assoc. 192 p. No index. 21 cm.
• ***Summary:*** This Seventh-day Adventist lacto-ovo-vegetarian cookbook, hampered by its lack of an index, plays down the fact that it avoids flesh foods and contains a strong flavor of the West Indies. The chapter on Entrées has a recipe for making gluten, and uses gluten in many recipes, such as Glutenburger casserole (p. 41), Onions and gluten cutlets (p. 48), Gluten macaroni (p. 49), and Pastelles (p. 49; which also calls for "2 cups cubed soya meat or homemade protose"). The various Nut Meat recipes (p. 43-44, resembling Nuteena) each contain peanut butter; one contains gluten. The various Protose recipes (p. 44-45) each contain peanut butter or commercial Protose; one contains gluten. Marmite and soy sauce are sometimes used interchangeably as a seasoning, as in soups (p. 87). Very little soy is used.

1709. Chen, Philip S.; Chung, Helen D. 1973. Soybeans for health and longer life. New Canaan, Connecticut: Keats Publishing, Inc. (A Pivot Health Book). xii + 178 p. Index. 18 cm.
• ***Summary:*** A revised and condensed pocketbook version of Chen and Chen 1956. Contents: Preface. Foreword. Introduction. Part I: Nutritive value of the soybean. 1. Protein. 2. Fat. 3. Carbohydrates and caloric value. 4. Minerals. 5. Vitamins. 6. Soybeans and world population. 7. Soybeans and disease.

Part II: Soy products. 8. Soybean oil: Phosphatides, margarine. 9. Soybean oil meal: Gelsoy, Multi-Purpose Food. 10. Soy flour. 11. Concentrated soy protein products: Soy protein concentrates (Griffith Laboratories makes Isopro and GL-301), soy protein isolates, and textured or spun soy proteins. 12. Soy milk. 13. Soy cheese (tofu). 14. Soy sauce. 15. Soybean sprouts.

Part III: Soybean culture and preservation. 16. Soybean culture. 17. Preservation of soybeans (preserving green soybeans by canning, freezing, and dehydration).

Part IV: Recipes. 18. Soybeans and soybean pulp. 19. Soy flour: Breads, cakes, cookies, pies, soups, other recipes. 20. Soy grits and soy flakes. 21. Soy milk. 22. Soy cheese. 23. Soybean sprouts. Appendix: Soybean utilization (chart). References.

Note: Helen Chung is the daughter of Philip S. Chen. Address: USA.

1710. Hardinge, Mervyn G.; Scharffenberg, J.A.; Sanchez, A.; Baldwin, M.; Sonnenberg, L.M.; Vyhmeister, I.B.; Crooks, H. 1973. Vegetarianism. Washington, DC: Review and Herald Publishing Assoc. 52 p. 29 cm. Life and Health Supplement. [81* ref]
• ***Summary:*** Contents: Vegetarianism–a new concept? Is man designed to eat meat? Why be a vegetarian? Is a nonflesh diet adequate? Plant foods and your diet. But what about protein? Still skiing at eighty-four! (ski champion Anders Haugen). Something new and different (meat-like products made from soybeans). Now, how?

1711. It's your world vegetarian cookbook. 1973. Glendale, California: Seventh-day Adventist Church. 128 p. Foreword by U.D. Register, and Clive McCay. Illust. 23 cm.
• ***Summary:*** It's Your World" is a television series hosted by Art Linkletter (his photo faces table of contents) and sponsored by the Seventh-day Adventist Church in Glendale, California. Soy-related recipes include: Saucy soy sizzlers (no eggs, p. 10). Carrot nut loaf (with soy flour, p. 12). Millet gourmet balls (no eggs, with soy beans, p. 13). Danish Proteena balls (p. 17). Rediburgers (with Rediburger, p. 18). Festive loaf (with Vegeburger, p. 22). Mayflower loaf (no eggs, with soy beans, p. 22). Fresh tofu loaf (p. 25). Soy beans Hawaiian (with Loma Linda Boston Baked Beans, p. 37). Baked soybeans Americana (p. 39). Plantation soy special (with soy beans, p. 39). Browned tofu with mushrooms (p. 42). Viking Roast (with Holiday Roast [frozen, ready-to-bake soy loaf with a smoked turkey flavor], p. 56). Scrambled tofu (p. 56). Crispy tofu sticks (p. 57). Bit o'soy waffles (with soy flour, p. 65). Soy-oat waffles (with soy beans, p. 66). Soy cream topping (with Soyamel powder,

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p. 114). Soy nut milk (with soy milk powder, almonds, and cashews, p. 116). Soy half-and-half (with All Purpose Soyagen, p. 116).

Pages 118 and 119 list all commercial vegetable protein analogs made by Loma Linda Food Co (Arlington, California) and Worthington Foods, Inc. (Worthington, Ohio). Address: Glendale, California.

1712. Miller, Harry W., Jr. 1973. Observations from forty years of soy protein processing and engineering (Continued–Document part II). Cedar Falls, Iowa: Soypro International, Inc. 8 p. Undated. Unpublished manuscript.

• ***Summary:*** Continued: "Flavor was no problem as the public enjoyed the bean-like cereal flavor of soy. We calculated that, if we could produce a product of high keeping quality and automate the production, we could produce and sell soy milk for $0.20 a quart in comparison to cow's milk at $1.00 per quart. To do this we used wide mouth bottles with a metal crown cap. By sterilizing these bottles in a pressure retort, we had a milk that kept indefinitely without refrigeration. This allowed us to divide the city into four quarters, and by delivering a week's supply at a time we were able to provide house delivery with one fourth the equipment and personnel of our competitors. We had many customers living in other cities that bought a month's supply at a time and carried the empty bottles back to us.

"During our first month of operation, the cost was $1.10 per bottle. The second month was $0.40 per bottle, the third month $0.19 per bottle and the fourth month $0.12 per bottle, which allowed a reasonable profit. We were unable to proceed further as the Japanese blew up the plant on August 7, 1937.

"Realizing the nutritive value of soy and its possibilities, and no longer being able to continue in the Far East, we established the 'International Nutrition Laboratory' in Mt. Vernon, Ohio.

"At first our endeavor was to perfect manufacturing equipment so we could return to the Orient and develop foods for low-income population. As a result, we worked with soy flour manufacturers and oil meal developers. Although many experiments were conducted in testing baking and roasting the bean, we learned very early that moist heat was best for developing high assimilability of this rich protein source.

"I believe I built some 21 different types of moist heat processors from pressure steam cookers to blowing line steam jets through liquid falls of the extracted protein. One day my father remarked, 'Son, you have more equipment out on the scrap pile than you have in the plant.'

"As World War II progressed, we found ourselves producing high protein products for feeding of people that had been undernourished due to the enemies' confiscation of food materials. However, as the war drew to a close, we saw a need for a change of income source. So, with the assistance of Dr. Baxter of Ohio State University, Soylac was brought on the market. Although we had to overcome diarrhea and other feeding problems, it was found that, with proper moist heat treatment and a proper balance of various carbohydrates and vegetable oil, we produced an infant milk that was readily accepted by the pediatricians.

"As we had a greater amount of soy protein fiber [okara] than extracted protein, we at first dried this and sold it for livestock feed.

"It was felt that meat analogs could not be produced from this protein casein residue. Again special equipment had to be made to handle and process this product so that palatability and high food value would result. With specially designed heat processes and modified meat manufacturing equipment, bolognas and beef-like cutlets were produced at first with the addition of wheat protein, later with soy spun protein fibers. As discussed in the latter part of this dissertation, we were also able to produce very satisfactory meatlike products entirely from the residue.

"In the late summer of 1960, I received a call from my father inviting me to a luncheon conference. Here I met Ronald Hill of UNICEF.

"After being introduced I was informed that UNICEF intended to install an infant formula plant in Indonesia under the direction of Dr. S.S. De of F.A.O.

"We were invited to be designers of the plant and I was to supervise the installation and training of the personnel to operate the installation.

"I was most fortunate to be assisted in the project by Dr. E.L. Rowe, a graduate Ph.D. from the University of Southern California. With his help at the Institute of Nutrition of Indonesia, and the assistance of the College of Medicine of the University of Indonesia we were able to determine the causes of diarrhea in infant feeding and correct it in our formula and processing methods.

"As in every country the natives of that locale must have a product that suits their individual organic reaction to nutrition in-take.

"It has not been possible to produce a product acceptable in all countries and cultures. Thus it has been necessary to adapt both production methods and formula to each area individually. In Indonesia we had a very delicate pH balance to maintain, and moisture quantities had to be regulated so the infant obtained a nutritious substance that its body could absorb without ill effects.

"Shortly after my return to the United States and during a periodic visit of my father, Dr. Perry Webber called upon us to assist Madison Foods to develop their soy products for greater market acceptance. They had some very commendable meat analogs using the combination of both soy and wheat derivatives. However, they wished to explore in the infant formula field which was creating a sizable market. Infasoy was originated at this time and a process

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was developed to increase the normal extracted quantity of protein from the traditional extraction method. This was done by the use of mechanical equipment and formulations. It was here, with a great quantity of wheat fiber in use, that we derived a method of using the soy residues [okara] to manufacture meat loaves, sausages, wieners, and bolognas entirely of soy except for seasoning materials and added fats. This greatly increased the nutritional value as well as the income derived from the sale of these products.

"As we were perfecting and developing equipment and products at Madison, a call came from Brazil for assistance in developing a soy and cow milk formula.

"As the Brazilian government felt that some animal product should be incorporated in this kind of formulation, processing experiments were carried out. As a result much was discovered in flavor control. It had long been determined that you could not mask the flavor of the soybeans. It was entirely a matter of using some of the flavors in the bean and eliminating the objectionable ones.

"While still at Madison I had a call to install a traditional soy milk plant in the Far East. Our technologies had progressed to the point that we had difficulty at first to retain sufficient soy flavor to satisfy the palate of the local clients. However, this was accomplished to the satisfaction of the customers.

"The last three years have been used in developing sophisticated analogous types of meat and milk. This has been accomplished in the laboratory and we feel will soon be available for countries now pressed with shortage of milk. Should milk fall short in dairy farming countries, we know we can supplement this shortage with a vegetable source as acceptable as the product in shortage.

"In summary let me review:

"1. We are facing shortages in milk, which is produced with a ratio of 8 lbs. of feed to produce one gallon. We can produce a gallon of vegetable milk with a total of l lb. of fat, carbohydrate, and beans.

"2. A breakthrough in flavor control has been achieved, which eliminates the former taste objections.

"3. Breakthroughs have also been made in using the soy milk by-products for low cost meat analogues which are highly acceptable and nutritious.

"We have approached the time that the soybean protein will not only relieve food shortages but will also satisfy the most sophisticated taste." Address: Cedar Falls, Iowa.

1713. Miller, Harry W., Jr. 1973. Observations from forty years of soy protein processing and engineering. Cedar Falls, Iowa: Soypro International, Inc. 8 p. Undated. Unpublished manuscript.

• ***Summary:*** "It was a late summer morning 1922 in the State of Maryland that my father announced at the breakfast table that I would accompany him on a short trip to Frederick, Maryland to look at a stone burr mill he wished to purchase for some soy milk experiments he wanted to conduct.

"Protein had always been a high priority topic in our house as Dr. John Harvey Kellogg had made a deep impression on my father (Dr. Harry W. Miller, Sr.) during his student medical days at Battle Creek, Michigan.

"On the way to Frederick my father explained to me that the mill he wished to purchase was to be used to prepare soybeans so that a white milky fluid of suspensible protein could be extracted from the beans. Little did I realize that I was to be introduced to a research field that would dominate my work and studies the rest of my life.

"Having purchased the mill the next step was to find a proper location to conduct the experiment. One of Maryland's larger dairy farms was chosen for this, and after transporting the mill to the farm, it was bolted to heavy timbers and one of the dairy's tractors was used to turn the pulley on the mill.

"To a boy of ten it was more interesting than spectacular to see a white milky liquid run down out of the mill instead of seeing the milk being drawn from the udder of a cow. However, this experiment made a lasting impression on a ten year old who was always experimenting and constructing contraptions of his own.

"No, the liquid from that mill did not replace the milk produced on the farm. However, at the present rate of population increase, and ever-increasing shortages of grazing area to produce milk, we may in the future be looking to the use of this mill and its complementary equipment to supplement the animal products in lands of large dairy production.

"Shortly after my introduction to the first experiments on that dairy farm, I traveled to the land of the soybeans. This country was to become my home and source of information as my parents had accepted a call to mission service in China.

"Having been raised a strict vegetarian, the foods made from vegetables and grain sources were always a challenge to my curiosity.

"Roaming the streets of Shanghai every portable food caterer, street sidewalk restaurant, as well as the more sophisticated Buddhist (vegetarian) restaurant held a new horizon of future products made from the soybean.

"It was indelibly inscribed on my young mind that each procedure in each shop had a very definite and end-resulting purpose behind it.

"The first visit I made to a shop which produced these foods, the owner would address me. 'What is your honorable name,' and my answer would be, 'my humble name is "Show Me,'" translated small rice.

"My childish curiosity either amused the shop keepers or my youth intrigued them. Regardless, I was soon known as 'small rice.' in all these shops and home processing establishments and was allowed to roam at will and have my questions answered frankly–so much so, that I was able to

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get answers and ingredient names that my elders were unable to secure.

"Basically, the first step in extracting protein was to hydrate the bean. I found that each shop had some variation in soaking the bean. Hot water was used in one place and cold in another. Some added chemicals to the soaking water and others varied by prewashing the bean before soaking while others washed the beans after soaking.

"Although I knew that all their variations were vital to the end product, it was to be several years before I would be using these various steps to achieve end results.

"During my earliest experience with processing, I learned that enzyme action is definitely affected by these variations in procedure.

"The Orientals extract soy protein to produce soy curd, in its various forms, and soy skin or film membrane. Note: This is the earliest English-language document seen (Oct. 2012) that uses the term "soy skin" or the term "film membrane" to refer to yuba.

"Soy curd is produced by coagulating the extracted, liquid-suspended protein. After being pressed from the granular residue [okara] of the bean, a liquid white protein suspension is left. Each shop had a different heat to bring the liquid to before adding the coagulatory chemical.

"Each producer had a different product for the customer. One would have a large cake of rather coarse curd. This they cut into blocks according to the purchaser's need. The buyer taking it would flavor and prepare it as he desired.

"Another shop would produce a firmer curd which was pressed into small cakes; some were flavored with sesame oil; some peanut oil in which they were deep fried; and others were boiled in soy sauce and sold in this form to the customers.

"They also had what I called the yogurt shop. This was a very exacting procedure of heat control and quantity of coagulant to produce a yogurt-like curd which was chilled in bowls and served with rice malt poured on top to flavor it.

"There was one shop that pressed a fine curd till it was rather dry. These cakes were cut into square pieces about 3/4 of an inch square, were stacked on bamboo mat trays and placed in a culture-inoculated, heat-controlled room for three days. After this period the mold-covered squares were put loosely in glass jars in a hot pickling juice with ginger, ground red peppers, rice wine, brown sugar, and salt, and were sealed so the sauce would preserve the curd and flavor it [to make fermented tofu]. This product is sent all over the world to delight the palates of the Orientals.

"Perhaps the most interesting to me was the film protein [yuba] produced by heating the liquid extract to a definite regulated temperature and allowing a film to form on the top of it. This is picked up with a long chopstick and hung on a wire line to dry.

"Here again, liquid flavored films were produced by temperature changes. One way of changing the thickness of the film was to allow the liquid to evaporate so that the last films to be produced from a pot of liquid would be thicker than the first. Also, the fuel used would change the flavor of the film as the smoke from coal, charcoal rice straw and wet saw dust, or bamboo splints each had a definite taste.

"Not being satisfied with seeing these products made, I was determined to see how they were used; so 'Small Rice' would go to the kitchen of the Buddhist Restaurant long before dawn to watch the cooks soak these film in various sauces, some to be rolled tightly into bologna-like rolls and broiled for hours in a soy sauce, ginger, and anise flavored juice. This roll, when sliced, had a beef-jerky like flavor. Another was to lay the films one after another on top of each other to be sprinkled (each one) with rice wine, sesame oil and monosodium glutamate. These films were folded into a half moon shape, placed in bamboo trays and steamed for several hours. They were then placed on a screen to dry the surface moisture, then fried in deep sesame oil or peanut oil whichever flavor was desired.

"When these foods with various seasonings were served you would have anything from fish to turkey or duck.

"It was the eating of these Buddhist meats that gave me the courage in later life to learn to eat animal tissue, as I had been raised a strict vegetarian.

"Had I not learned to eat and taste these various animal products, I am afraid I would be like the official in India: when describing to him how we could make meat analogs from soy milk residue he asked, 'Well, what does chicken taste like?'

"This early experience in China was a challenge to make extensive study into each country's dietary and food flavor habits before designing a product for them.

"In the early 1930's with the encouragement of W.J. Morse and La Clara Reed of the U.S. Department of Agriculture, my father and I, using equipment supplied jointly by the Department and ourselves, produced a spray-dried soy milk formula which was granted a patent by the U.S. Patent Office, and which the American Medical Association accorded its own highly valued seal of acceptance for an infant formula.

"The first commercial plant was installed in Shanghai, China, during 1936 and 1937. Although we were using soy milk for feeding babies and institutional employees, due to the high price of pasteurized cow's milk there was a challenge to install a soy dairy to produce a vegetable milk at a low price."

Note 1. This is the earliest document seen (Aug. 2013) that uses the term "soy dairy" to refer to a facility which makes soymilk and related products from soybeans. Continued. Address: Cedar Falls, Iowa.

1714. Mottern, H.H. 1973. Peanuts and human nutrition. In: C.T. Wilson, ed. 1973. Peanuts–Culture and Uses (A Symposium). Stillwater, Oklahoma: American Peanut

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Research and Education Association. vii + 684 p. See p. 593-602. Chap. 18. [56* ref]
• ***Summary:*** Contents: Introduction. Shelled peanuts: Composition, protein. Peanut oil: Composition. Peanut butter: History, standards of identity. Peanuts in candies and cookies. Roasted peanuts. Peanut flour. Other peanut foods.

"Peanut butter: About 55% of shelled peanuts in the United States are used to make some 500 million pounds of peanut butter annually. Until about 1900, peanuts were consumed mostly roasted in the shell. The use as peanut butter had been practiced on a small scale, using crude equipment, for 20 years before the first patent was obtained by John H. Kellogg of Battle Creek, Michigan (1897). Kellogg produced a 'nut-meal' and a 'nut-butter' by his process, He stated that the nut butter had a slightly nutty flavor and is used as a substitute for butter either for table use or in cooking. A rather complete list of expired peanut butter patents is included in the list of references (47 patents from 1897-1951).

"Peanut butter was first used as a food for invalids because of its high nutritive value, easy digestibility, and palatability. It was first prepared and served in sanitariums. A physician in St. Louis [Missouri] was the first to manufacture peanut butter commercially. As a 'diet food,'it was priced too high for general use and consequently its preparation in the home using simple equipment was recommended. Because of the widely expanding use in the home it became a staple food and commercial production was encouraged. It was first used in sandwiches but uses in candies and cookies quickly developed.

"It appears that peanut butter was slow to 'catch on' in the beginning. Beech-Nut Packing Company was the first to popularize commercially prepared peanut butter and offer it on a national scale as exemplified in the accompanying reproduction of a an appearing in the 1911 Park and Tilford Catalog. More rapid growth occurred after 1940 as research was conducted to improve the quality of peanut butter by selection and blending of varieties, control of roasting, improved methods of grinding to small particle size, stabilization to prevent oil separation, improving spreadability, extending shelf life and by developing uses for peanut butter cookies and candies."

An illustration (p. 596–2/3 page) shows an ad for peanut butter appearing in the Park and Tilford Catalog of 1911. A smiling little girl is eating a slice of bread spread with peanut butter. The ad text reads: "'Don't you love it?' All little girls and little boys love Beech-Nut Peanut Butter. Good for grownups [grown-ups] too. Sold by the Park & Tilford Stores. Made by the Beech-Nut Packing Company, Canajoharie, New York." Address: Extension Agronomist–Peanuts, Univ. of Georgia (with acknowledgment to B.B. Higgins, original author of this chapter).

1715. Proctor, Stoy E., Jr.; Proctor, Leilani. 1973. Unmeat: The case for vegetarianism. Nashville, Tennessee: Southern Publishing Assoc. *
• ***Summary:*** This booklet presents seven advantages of a vegetarian diet.

1716. Sonnenberg, Lydia; Zolber, Kathleen. 1973. The vegetarian diet: Food for us all. Chicago, Illinois: American Dietetic Assoc. 1 volume, loose-leaf. *
• ***Summary:*** This home study course contains a historical review of vegetarianism, a collection of articles from scientific literature. It discusses the principles and practice of a balanced vegetarian diet.

1717. U.S. Department of Agriculture. 1973. The annual report on activities carried out under the Public Law 480, 83d Congress, as amended, during the period January 1 through December 31, 1972. Washington, DC: U.S. Government Printing Office. See p. 103-10.
• ***Summary:*** Table 18 is titled "Title II, Public Law 480, total commodities shipped by program sponsor, fiscal year 1972." The main program sponsors and distributing agencies, listed alphabetically, are AJJDC (American-Jewish Joint Distribution Committee), CARE, CRS (Catholic Relief Service), CWS (Church World Service), LWR (Lutheran World Relief), SAWS (Seventh-day Adventist World Service), UNICEF, UNRWA (United Nations Relief and Works Agency), WRC (World Relief Commission). Each of these are Private Voluntary Organizations (PVO/PVOs), registered with USAID. The following foods containing soy protein were distributed: CSM (corn soya mix), WSB (wheat soya blend), and small amounts of soya flour. The vegetable oil which was shipped to many countries was soybean oil; it is not recorded here. The foods containing soy protein were sent in the following amounts (in thousands of pounds) to the following continents and countries: Africa (8,131 CSM and 5,311 WSB): Botswana (2,198 CSM), Burundi (99 CSM), Cameroon (220 CSM and 245 WSB), Central African Republic (153 CSM), Gabon (33 WSB), Gambia (271 CSM), Ghana (1,056 CSM and 150 WSB), Guinea (100 CSM), Liberia (243 CSM and 111 WSB), Malawi (132 CSM), Morocco (676 CSM and 54 WSB), Nigeria (867 CSM and 4,124 WSB), Rwanda (173 CSM), Senegal (300 CSM), Sierra Leone (1,510 CSM), Tanzania (96 CSM), Tunisia (4 CSM and 43 WSB), Upper Volta (33 CSM and 41 WSB), Zaire (510 WSB and 30 soya flour).

Near East-South Asia (348,766 CSM and 97,345 WSB): Afghanistan (699 CSM), Ceylon (1,462 WSB), Gaza [occupied by Israel since 1967] (1,622 CSM and 1,410 WSB), India (234,993 CSM and 27,006 WSB and 8,726 soya flour), Jordan (2,137 CSM), Jordan-West Bank [occupied by Israel since 1967] (758 CSM and 1,067 WSB), Lebanon (385 CSM), Nepal (55 WSB), Pakistan (1,197 CSM and 325 WSB), Syria (570 CSM), Turkey (275 WSB), NESA regional; emergency feeding of East Pakistani children by

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UNICEF (106,405 CSM and 65,745 WSB).

Note: This is the earliest document seen (Oct. 2010) concerning soybean products (CSM, WSB) in Bangladesh after it became an independent country. This document contains the earliest date seen for soybean products in Bangladesh (1972); soybeans as such have not yet been reported.

Far East [East Asia] (27,014 CSM and 4,121 WSB): China, Republic of [Taiwan] (15 CSM), Indonesia (6,791 CSM and 2,380 WSB), Korea (2,347 CSM), Laos (1,699 CSM and 1,741 WSB), Malaysia (102 CSM), Philippines (9,107 CSM), Vietnam (6,953 CSM).

Latin America (63,980 CSM and 31,274 WSB): Bolivia (2,197 CSM and 660 WSB), Brazil (25,171 CSM and 11,204 WSB), British Honduras [Belize] (507 CSM and 215 WSB), Chile (300 CSM and 2,812 WSB), Colombia (6,284 CSM and 4,608 WSB), Costa Rica (3,042 CSM), Dominica (2 CSM), Dominican Republic (8,118 CSM and 3,309 WSB), Ecuador (2,013 CSM and 1,722 WSB), El Salvador (1,195 CSM), Grenada (11 CSM), Guatemala (2,037 CSM and 962 WSB), Guyana (370 CSM and 474 WSB), Haiti (1,121 CSM), Honduras (716 CSM and 51 WSB), Jamaica (364 CSM and 198 WSB), Nicaragua (375 CSM and 760 WSB), Panama (409 CSM and 639 WSB), Paraguay (759 CSM), Peru (7,850 CSM and 3,806 WSB), St. Vincent (17 CSM), Surinam (2 CSM), Uruguay (950 CSM and 284 WSB).

Grand total by commodity: 447,891,000 lb of CSM and 138,051,000 lb of WSB. Agencies distributing the most CSM and WSB (in million lb): CARE 268, UNICEF 174, CRS 89.

Concerning "veg oil" (soybean oil) shipped under P.L. 480 Title II in fiscal year 1972: India received 196.069 million lb [88,029 metric tons] (p. 106).

Note: This is the earliest document seen (Aug. 2009) concerning soybean products (Corn-Soy Meal) in Botswana. This document contains the earliest date seen for soybean products in Botswana (1972); soybeans as such had not yet been reported by that date. Address: Washington, DC. Phone: 703-875-4901 (1991).

1718. Woodroof, Jasper Guy. 1973. Peanuts: Production, processing, products. 2nd ed. Westport, Connecticut: AVI Publishing Co., Inc. xi + 330 p. Illust. Index. 24 cm. [100+* ref]

• ***Summary:*** Contents: 1. Historical background. 2. World production and marketing of peanuts. 3. The culture of peanuts. 4. Harvesting, curing, and shelling. 5. Storing peanuts. 6. Composition and nutritive value of peanuts. 7. Peanut butter. 8. Salted peanuts. 9. Peanut confections. 10. Peanut oil. 11. Technological developments in peanut uses (incl. peanut milk, flour, protein, peanut cheese, peanut baby and invalid food, peanut paste for shortening, peanut butter ice cream). Appendices: U.S. standards for farmers' stock white Spanish peanuts, Virginia-type peanuts, and runner peanuts (unshelled or shelled), U.S. standards for grades of peanut butter, technical inspection procedures for peanut butter, peanut butter: definition and standard of identity.

Peanuts (*Arachis hypogaea*, of the Leguminosae family) are also called groundnut, earth-nut, monkey nut, goober, pinda, pinder, or Manilla nut. They are indigenous to South America, probably Brazil or Peru, where they were known as early as 950 B.C. They were taken from there to Africa by early explorers and missionaries. They were brought to North America from Africa by slave traders in the early colonial days and used as food for slaves while on shipboard. In America, peanuts were not extensively used until after the Civil War in 1865, and then for many years the crop was confined to Virginia and North Carolina. In about 1920 the ravages of the boll-weevil forced farmers in Georgia, Alabama, and Florida to substitute peanuts for cotton. In the early days peanuts were used almost entirely for fattening farm animals, especially pigs, turkeys, and chickens.

In 1899 a missionary, Archdeacon Thompson of the American Missionary Society, took quarts of peanuts in his luggage to China. Production of peanuts spread to every province of China and China is now the world's number two producer with approximately 2 million tons annually. India is by far the world's largest producer of peanuts, while the USA ranks fifth with 1 million tons. George Washington Carver made more than 300 food and industrial products from peanuts in Alabama before World War I. The American Museum of Peanut Butter History has been established in Chicago, Illinois; it covers the period from 1890 to 1925 [and is sponsored by Peter Pan Co.].

One of the first industrial organizations for the promotion of peanuts in America was the American Peanut Corp., founded by L.F. Bain in 1849 near Wakefield, Virginia. The next major company, Lummis and Co. in Norfolk, Virginia, was not founded until 1879, after the Civil War. The next four major companies, founded in 1890, 1892, and 1895, and 1900, were all founded in Virginia. Peanuts were the foundation of the swine industry in much of the Coastal Plain area of the Southeast. But peanuts were found to cause soft pork.

The spokesman for the industry since 1920 has been the *Peanut Journal and Nut World*, published in Suffolk, Virginia. The National Peanut Council was organized in 1940 in Pensacola, Florida, as a trade association for all branches of the industry.

Chapter 7, titled "Peanut Butter," contains a history of the subject: "Peanut butter is by far the most important product made from peanuts in the United States. Even though large quantities of peanuts are grown in other countries, practically none is consumed as peanuts. The history of peanut butter is obscure but dates from about 1890 when it was discovered that a very palatable paste or butter could be obtained by grinding peanuts. It soon became known as peanut butter, and presumably, was made from raw peanuts. A physician in St. Louis, Missouri, was reportedly the first

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to manufacture peanut butter commercially (Beattie 1936) [Note: Beattie 1936 makes no mention of any physician in St. Louis, Missouri in connection with peanut butter!] He recommended it for invalids because of its high nutritional value. It was said to be used in sanitariums elsewhere, especially at Battle Creek, Michigan, due to its high protein content, low carbohydrate content, and palatability. Due to the limited sale at first and lack of adequate equipment for manufacture, the price was too high for general use.

"Although roasted (parched) peanuts have been ground into a paste and mixed with honey and cocoa in South America for centuries, peanut butter as a North American food was apparently invented independently. The first product was shelled roasted peanuts chopped, ground, or beaten into a pulp in a cloth bag with salt added...

"About 1900 it was learned in the south that peanuts could be ground into a paste butter in the home. Soon it became a staple food and commercial production was greatly stimulated."

"The making of peanut butter was largely a local hit-or-miss operation until the Peanut Butter Manufacturers Association was organized about 1940. Until that time only 25% of edible peanuts were used in butter and little attention was given to varieties of peanuts, methods of roasting and blanching, grades of peanut butter, effect of particle size, means of preventing oil separation, improving speadability, preventing sticking to the roof of the mouth, extending the shelf-life, and formulas for using. By 1950, about half of all edible peanuts were used in butter, and by 1964 the proportion had risen to 63%."

As of 1962 about 53% of U.S. peanut butter was made from runner peanuts, 34% from Spanish peanuts, and 12% from Virginia peanuts.

Note: Talk with Jasper Guy Woodroof in Griffin, Georgia. 1993. Feb. 17. He does not know where he heard that a physician in St. Louis, Missouri, was the first to make peanut butter. Address: Prof. Emeritus of Food Science, Univ. of Georgia, Experiment, Georgia.

1719. Hardinge, Mervyn G.; Mann, George V. 1974. Raising infant on vegetarian diet. *J. of the American Medical Association* 227(1):88. Jan. 7. [3 ref]
• ***Summary:*** In a question and answer column the authors respond (separately) that lacto-ovo-vegetarian and lacto-vegetarian diets, if reasonably chosen and well managed, are adequate for infants and all other age groups. Mann, who is less enthusiastic about vegetarian diets than Hardinge, begins his statement: "I think it is now possible to raise a healthy child after weaning on a vegetarian diet, but to my knowledge this has not been done, nor, in my opinion, should it be tried."

"A sizeable group of vegans has located in south central Tennessee under the leadership of Stephen Gaskin. The group of 600 is raising the children by vegan standards. In time, this experience will demonstrate the feasibility of the question posed." Address: 1. Loma Linda Univ. School of Health, Loma Linda, California; 2. Vanderbilt Univ. School of Medicine, Nashville, Tennessee.

1720. *Adventist Heritage.* 1974. Serial/periodical. Loma Linda, California: Loma Linda University. Editors: Gary Land (Andrews Univ.), Ronald L. Numbers (Loma Linda Univ.), and Jonathan M. Butler (Union College). Vol. 1, No. 1. Jan. 1974.
• ***Summary:*** The Contents page of Vol. 1, No. 1 states that this is published in January and July by Adventist Heritage Inc., in cooperation with the Division of Religion, Loma Linda University. On the cover of the first issue is an illustration of William Miller, the leading preacher of the Advent movement in the 1830s and 1840s.

Jim Nix, now (10/92) archivist at Loma Linda Univ. Vernier-Radcliffe Library, used to be the managing editor of this periodical. As of Oct. 1992, Dorothy Minchin-Comm is the editor and Ron Graybill is the managing editor. The frequency is 2-3 times/year. Address: 4700 Pierce St., Riverside, California 92515. Phone: 714-785-2518.

1721. American Soybean Assoc. ed. 1974. Proceedings: World Soy Protein Conference. *J. of the American Oil Chemists' Society* 51(1):47A-216A. Jan. Held 11-14 Nov. 1973 in Munich, Germany. 28 cm. [566 ref]
• ***Summary:*** Contents: Session I: World protein markets. Session II: Soy protein products, their production, and properties. Session III: Legal and regulatory aspects of soy utilization in foods. Session IV: Utilization of soy proteins in foods. Session V: Utilization of soy protein in foods. Session VI: Nutritional aspects of soy protein foods. Session VII: Future developments and prospects. Round-tables papers. Registration list (directory of participants). Directory of exhibitors and press.

Berwin Tilson, president of the American Soybean Assoc., notes in the introduction (inside front cover): In Oct. 1972 "It was felt that the time was right to gather together top representatives from all areas affecting the soy foods industry... 1,100 representatives from 47 countries actually attended." This was a pioneering and very important conference. It was opened by the U.S. Secretary of Agriculture Earl L. Butz, and senator Hubert Humphrey delivered a memorable, inspirational address. Many distinguished scientists and politicians also presented papers.

Exhibitors: Purina Protein Europe (Brussels, Belgium). Archer Daniels Brussels S.A. (Belgium). Cargill Inc. (Minneapolis, Minnesota). McKee CTIP (Rome, Italy). Central Soya International Inc.–Chemurgy Division (Brussels, Belgium), Alfa Laval AB (Tumba, Sweden; soymilk equipment). Staley Europe (Amsterdam, Holland). A/S N. Foss Electric (Hilleroed, Denmark). Westfalia Separator AG (Oelde, West Germany). A/S Nirg Atomizer

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(Soeborg/Copenhagen, Denmark). Nabisco Inc.–Protein Foods Div. (Fairlawn, New Jersey). Miles GmbH (Frankfurt am Main, Germany). Lucas Meyer und Edelsoja GmbH (Hamburg, Germany). General Mills Inc. (Minneapolis, Minnesota). Address: Hudson, Iowa.

1722. Horan, Frank E. 1974. Soy protein products and their production. *J. of the American Oil Chemists' Society* 51(1):67A-73A. Jan. Proceedings, World Soy Protein Conference, Munich, Germany, Nov. 11-14, 1973. [12 ref]
• ***Summary:*** Contents: Abstract. Introduction. History of the soybean in the U.S. Economic impact. Soybean protein. Textured soy protein. References.

Table XII states that U.S. producers of edible soy protein products are: ADM, Cargill, Central Soya, Far-Mar-Co, General Mills, Griffith Labs, Lauhoff Grain Co., Miles Labs (Worthington), National Protein, A.E. Staley, Swift & Co. All make textured soy protein products except National Protein (which makes only grits and flours). Central Soya, Ralston Purina, and Staley make soy protein isolates. Central Soya, Far-Mar-Co, Griffith Labs, and Swift & Co. make soy protein concentrates. Address: Archer Daniels Midland Co., Decatur, Illinois.

1723. Numbers, Ronald L. 1974. Dr. Jackson's water cure: And its influence on Adventist health reform. *Adventist Heritage* 1(1):11-16, 58-59.
• ***Summary:*** Dr. Jackson is Dr. James Caleb Jackson (of whom a portrait appears). His water cure is "Our Home on the Hillside" in Dansville, New York. Both had a major impact on the thinking of Ellen G. White. Address: Loma Linda Univ.

1724. Rosenfield, Daniel; Hartman, Warren E. 1974. Spun-fiber textured products. *J. of the American Oil Chemists' Society* 51(1):91A-94A. Jan. Proceedings, World Soy Protein Conference, Munich, Germany, Nov. 11-14, 1973. [7 ref]
• ***Summary:*** Contents: Abstract. Introduction. Spun-fiber production (a diagram shows the Miles process for spinning soy isolate into fibers). Textured product production. Nutritional considerations. Concluding remarks. References. Address: 1. Miles Laboratories, Elkhart, Indiana 46514; 2. Worthington Foods, Miles Laboratories, Worthington, Ohio.

1725. Sterner, Mark M. 1974. Low-cost protein foods: Increasing their supply and acceptance in developing countries. *Cereal Science Today* 19(1):14-17. Jan. [2 ref]
• ***Summary:*** Contents: Introduction. Poverty and hunger. Population factors. Inexperienced leadership. Culture-oriented protein foods. Soy products. A total-development approach. New solutions needed. The tragedy of protein deficiency. Technical assistance and training.

World population is growing at about 1.5% each year while world agricultural production is increasing at the rate of about 2% annually. However, the heart of the problem of world protein supply is not what is happening on average or on the whole. "It is the fact that there are great differences in the consumption of proteins between countries, between socioeconomic groups within a country, and between family members in the home."

Today 64% of the world's population are "protein hungry." They do not consume enough protein. Sterner lived in Korea until 5 months ago and has seen the problem first hand. To his surprise, he was told by the administrator of a college in Sri Lanka, Ceylon, that the school's small soy-milk plant (put there by the father of soy milk, Dr. Harry Miller) is kept running at full capacity, when soybeans are available, to keep up with the demand of the college cafeteria. He explained that the students much prefer this unsophisticated form of soy milk to the dried soy milk (DSM) provided by CARE.

The article discusses the work of Meals for Millions and contains four photos related to that organization. Address: Exec. Director, Meals for Millions Foundation, Santa Monica, California.

1726. Jewel Food Stores. 1974. Janie reports: How to use soy protein products! (Ad). *Chicago Tribune*. Feb. 28. p. S_A23.
• ***Summary:*** Jane Armstrong, Jewel's home economist, begins: "In a recent column I discussed what soy protein foods are and why they are important. This week I'd like to tell you how to prepare and use them.

"There are two primary uses for textured vegetable protein: as extenders for ground meat and analogs, used as alternatives for meat, fish or poultry protein." "TVP products" include "Burger Plus, Proteinettes, Williamson, and Red Skillet Dinners."

"Meat alternatives are available in frozen forms (Morningstar Farms breakfast foods and Freezer Queen skillet dinners for example), dehydrated, and fresh forms."

You may be surprised to learn that "One acre of land produces 500 pounds of soybeans, but only 58 pounds of beef! So, you can see what future implications are with TVP... Quite a few TVP products are now available at Jewel, so why not try one this week?

A portrait photo shows Jane Armstrong. Address: 1955 North Ave., Melrose Park, Illinois.

1727. *Changing Times* (*The Kiplinger Magazine*). 1974. Now there's "meatless meat:" It cuts your food costs and may be healthier too. 28(2):53-54. Feb.
• ***Summary:*** Discusses textured vegetable proteins. "With the exception of the imitation bacon bits, such as Bac-Os from General Mills and Stripples from Worthington Foods, the textured vegetable proteins have not been available on most supermarket shelves. Now you can expect to see more of them...

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"The big breakthrough for textured vegetable proteins came in February 1971 when the U.S. Department of Agriculture approved their use in the national school lunch program. Soy proteins, fortified with vitamins and minerals, can replace up to 30% of the meat in patties, stews, poultry and fish dishes served for school lunches...

When meat prices soared, soy processing companies began to market a new class of nutritious, dehydrated meat extenders in two- to three-ounce "envelopes," similar to dry soup. They are often sold near the meat counter or with "other semiprepared dinner mixes, such as Hamburger Helper. The packets may contain natural soy crumbles or caramel-colored granules that blend well with beef. They also come unflavored, so you can add your own seasonings, or preseasoned..."

Note: This is the earliest English-language document seen (Aug. 2011) that uses the term "soy crumbles," probably to refer to small chunks of textured soy flour.

"Last summer, a midwestern food chain took a full-page newspaper ad to inform shoppers of the advantages of TVP, the trademark for Archer Daniels Midland's product...

"Late last year Cargill, Inc., a large grain company, entered the consumer market in the Southwest with Burger-Plus, a lightly seasoned textured soy protein. It test-marketed three-ounce packages at two for 49 cents. Each package of mix and water stretched a pound of ground beef to a pound and a half. Other recent market entries include Grand Union's seasoned and unseasoned 'meat' mixes, General Mills's Burger Builder and A.E. Staley's Burger Bonus. More firms plan to package soy products."

1728. Zell, Fran. 1974. New on the shelves: Brown, serve, and get 'em going early (Ad). *Chicago Tribune.* March 14. p. W_A4.
• ***Summary:*** "(These products have been taste-tested by members of the Tribune food staff). Consumers trying to cut down on cholesterol and saturated fat now can try three new Morningstar Farm [sic, Morningstar Farms] breakfast products made from vegetable protein derived from wheat, soy, and yeast, Brown and serve Breakfast Patties, Links, and Slices, contain no cholesterol or animal fat and at least as much protein as the comparable cooked meat."

The products are distributed by Miles Laboratories.

1729. Dullea, Georgia. 1974. You don't have to be a Seventh-Day Adventist to like their cooking. *New York Times.* March 25. p. 37.
• ***Summary:*** They are teaching vegetarian cooking classes, and they are good at it. One couple took the classes and have been meatless for five months. To satisfy their taste for meat, they are eating the "vegetable protein food the Adventists produce under the Loma Linda label. Four soy patties cost 50 cents compared to about $2 for the same amount of meat."

The world's 2 million Adventists are not all strict vegetarians; while such a diet is recommended by the church, it is not considered a test of faith. Most Adventists avoid coffee, tea, cola beverages, and strong spices. A recipe for eggless "Soy mayo" (using ½ cup soy milk powder) is given.

1730. **Product Name:** Loma Linda Non-Meat Balls (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1974 March.
New Product–Documentation: *Soybean Digest Blue Book.* 1974. p. 120. "and 'meat' balls."

1731. *Tennessee Valley Authority, Bulletin.* 1974. Soybean: Production, marketing and use. Y-69. 187 p. March. Foreword by Gerald G. Williams, Agricultural Development, Tennessee Valley Authority. Illust. No index. 28 cm. [265 ref]
• ***Summary:*** Contents: The soybean, status and trends. Soybean production. Harvesting soybeans. Storage and handling. Marketing and use. Strategies for reaching potentials.

This conference was sponsored by the Tennessee Valley Authority, American Soybean Association, National Soybean Crop Improvement Council, and land-grant universities of seven valley states. It represents a multi-institutional, multi-disciplinary approach to identifying and developing the potentials for soybeans in this region.

On page 117, titled "Marketing and Use," a full-page black-and-white photo shows various soy-related food products: Soy Town Roasted Soy Beans (Sea Salted), Wesson Pure Vegetable Oil, Kroger Bac'n Buds, Jell-o Whip'n Chill (Deluxe Dessert Mix), Nabisco Famous Cookie (Sampler, incl. Oreo, Lorna Doone, Cameo, etc.), Worthington Stripples, Butternut Candy Bar, Red Bird Imitation Vienna Sausage, Kroger's Pro Beef and Hydrated Textured Vegetable Protein Mix (keep refrigerated), Soft Parkay Margarine, Nestlé Crunch, Lipton Onion Soup and California Dip, Kraft Creamy Dressing, plus frankfurters and bread. Address: Muscle Shoals, Alabama.

1732. Nagelberg, Alvin. 1974. They'll eat (soy) shrimp, (soy) ham, (soy) filet: Boyd [sic, Boyer]. *Chicago Tribune.* April 14. p. A7.
• ***Summary:*** This is a brief biography of Robert Boyer [mistakenly called "Robert Boyd" throughout], age 64. He predicts that within five years housewives will buy shrimp, ham, and filet mignon made from soybean protein. More than 40 years ago, during the Great Depression, he was hired by Henry Ford to find industrial uses for farm crops. World War I interrupted the experiments. Boyer resumed work at a laboratory in Cincinnati, Ohio [Drackett Co.]. and in 1949 he applied for his patent, which was issued in 1951.

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Today Boyer is a part-time consultant to the Marshall division of Miles Laboratories (Worthington, Ohio); his patent for making edible protein fibers from soybeans expired in 1971. Yet he has done well. He is semi-retired, has a 57-foot cruiser, and condominiums in Florida and Columbus, Ohio.

Miles' first products have been targeted at the vegetarian and health foods markets. One of Miles' latest products is Morningstar Farms sausage, a frozen product made of soy protein, egg albumen, and wheat gluten. "The egg is a binder and the wheat makes it chewy."

1733. *Advent Review and Sabbath Herald.* 1974. Bulletin Board: Deaths. Dr. George A. Johnstone. 151(17):459. April 25.

• ***Summary:*** "Johnstone, George Anthony–born Oct. 13, 1895, Sioux Falls, South Dakota; died March 2, 1974 in Glendale, California. In 1915 he went to Hinsdale Sanitarium and Hospital to study nursing. In 1917 he married Theresa Arntzen. During World War I they joined the staff of the White Memorial Hospital, Los Angeles, California. He graduated from the College of Medical Evangelists in 1923 and took his internship at the White Memorial Hospital. He established a heart clinic for animals in Los Angeles and donated this to the College of Medical Evangelists. He and his brother-in-law developed a resuscitating machine, known as the E & J Resuscitator, extensively used in hospitals and fire departments. He founded the John Johnstone Hospital in North Dakota, naming it in honor of his father. In 1947 he bought the Research Hospital in Glendale, California, and named it for his friend and partner, Dr. Charles Gehrens. It was later renamed the Verdugo Hills Hospital. More recently he was a co-founder of the Anaheim Memorial Hospital in California. He also established a store, market, and bakery known as Foods for Life in Glendale, California. Survivors include his wife; a daughter, Lois Fischer; a son, William and grandchildren."

A portrait photo shows George Johnstone in 1923 at the time of his graduation from medical school. Kindly sent to Soyinfo Center by Janice Little, Del E. Webb Memorial Library, Loma Linda, California (Nov. 2010).

1734. Moore, R.N. 1974. Food company finds growth with the times. *Dispatch* (*Columbus, Ohio*). April 28.

• ***Summary:*** A brief history of the life and work of James L. Hagle, president of Worthington Foods Inc. since 1948. A photo shows Hagle. The company "has been bursting through its seams the past year or two, doubling its employment to 460... Last year's national meat boycott gave Worthington Foods and its essentially two main competitors a boost into national prominence and bulging sales. Miles Laboratories bought the company in 1970."

1735. *Loma Linda University Alumni Journal.* 1974. In memoriam: George A. Johnstone. March/April. p. 36.

• ***Summary:*** Johnstone, George Anthony–born Oct. 13, 1895, Sioux Falls, South Dakota; died March 2, 1974 in Glendale, California.

"Dr. Johnstone became interested in health foods and established a store, market and bakery known as 'Foods for Life,' in Glendale."

1736. Edwards, Larry. 1974. Soy extenders remain 'food of the future' as category sales dwindle. *Advertising Age.* July 29. p. 3, 46.

• ***Summary:*** Sales of textured soy protein products have dropped along with the price of ground beef. "The category, which sources say peaked at about $4,000,000, now reportedly has dipped to about $3,000,000, with most of the products gathering dust on retail shelves."

"Last year, in response to consumer disenchantment with skyrocketing meat prices, a flood of branded consumer meat extender entries hit the market. To date only Plusmeat from Central Soya's J. H. Filbert Co. has moved into broad distribution. Among other extender entries in limited test markets: Burger Bonus and Tuna bonus from A. E. Staley's consumer products group; Betty Crocker's Burger Builder from General Mills; Armour-Dial's Burger Savor; Ac'cent ground beef extender from Ac'cent International, and Progresso Foods' Extend'n Flavor."

"Miles' Worthington Foods unit, forerunner to its development of Morningstar Farms, already has over a 50% share of an estimated $12,000,000 vegetable protein market for religious groups such as Seventh Day Adventists.

"According to researchers at Frost & Sullivan, New York, market research company, the total vegetable protein market jumped to about $115,000,000 during 1973, but has since leveled off. Its size was put at $82,000,000 for 1972, and the company predicts it will climb to $1,500 million dollars by 1980."

Miles Laboratories has stayed away from positioning their Morningstar Farms products as "meat substitutes." Other products that continue to do well are Gooch Foods' TVP Red Skillet Dinners and General Mills; Bac*O's, one of the original consumer vegetable protein products.

"Miles' Worthington Foods unit, forerunner to its development of Morningstar Farms, already has over a 50% share of an estimated $12,000,000 vegetable protein market for religious groups such as Seventh Day Adventists.

According to researchers at Frost & Sullivan, New York, a market research firm, the total vegetable protein market jumped to about $115,000,000 during 1973, but has since leveled off. Its size was put at $82,000,000 for 1972, and the company predicts it will climb to $1,500 million by 1980.

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1737. Armstrong, Bruce K.; Davis, R.E.; Nicol, D.J.; van Merwyk, A.J.; Larwood, C.J. 1974. Hematological, vitamin B-12, and folate studies on Seventh-day Adventist vegetarians. *American J. of Clinical Nutrition* 27(7):712-18. July. [31 ref]

• ***Summary:*** Hematological, vitamin B-12, and folate levels were measured in 562 members of the Seventh-day Adventist Church, of whom 431 were vegetarians. Vegetarians had significantly higher folate levels and lower vitamin B-12 levels than non-vegetarians. Only one volunteer was found to have suffered from symptomatic dietary vitamin B-12 deficiency. Address: Depts. of Haematology and Diet Therapy and the Univ. Depts. of Medicine and Surgery, Royal Perth Hospital, Perth, Western Australia 6000, Australia.

1738. Iammartino, Nicholas R. 1974. Fabricated protein foods. *Chemical Engineering* 81(16):50-52, 54. Aug. 5. [2 ref]

• ***Summary:*** New sources of protein for human food are emerging as one way to relieve the growing protein crunch. Soy-based protein products are expected to maintain a lion's share of the expansion, with cottonseed a distant second. A spokesman for General Mills predicts that the market for textured vegetable proteins will double during the rest of the 1970s from a 1973 demand of 110 million lb (nearly all soy). Initial advances have been mostly in institutional "captive feeding" programs, such as school lunch and hospital feeding programs. Few household consumers have tried the product. A report titled "Engineering protein foods: What's happening" published by Business Communications Co. (Stamford, Connecticut; $400) predicts a less bullish but still hefty growth of 56% a year during 1973-1980. And a Cornell University [New York] study predicts that "vegetable analogs and extenders will constitute 10% of the U.S.'s total 'meat' diet by 1985.

The two main companies making "textured protein products based on spun soy fibers" are General Mills and Miles Laboratories, Inc.

One table on page 52 (from Frost & Sullivan's "The Fabricated Foods Market") shows estimated growth of the fabricated foods market ($ million) in 1972, 1976, and 1980 for 12 categories of human food. Vegetable protein products are expected to grow from $82 million in 1972, to $316.5 million in 1976, to $1,513.9 million in 1980.

Another table on page 52 (from Business Communications Co.) shows "Projected use of textured vegetable-protein, by market" (million lb) in 1975, 1980, 1985, 1990, and 2000. The markets are school lunch, public eating, federal institutions, and commercial & others. For each of these 5 years, the total is also divided into extruded type and spun type, in both pounds and dollar value. The totals and largest segments are as follows: In 1975–188 million lb of which 60% is school lunch. 62% extruded type by weight. Sales value is $111 million, of which 58% is from spun type. In 1980–1,807 million lb of which 69% is commercial & others. 59% extruded type by weight. Sales value is $1,093 million, of which 61% is from spun type. 1985–4,484 million lb of which 70% is commercial & others. In 1990–9,719 million lb of which 76% is commercial & others. 60% spun type by weight. Sales value is $6,801 million, of which 77% is from spun type. Year 2000–12,212 million lb of which 77% is commercial & others.

A sidebar titled "Single-cell protein may hold a long-term answer to the protein crisis" discusses several approaches: 1. Amoco Foods Co. (Chicago, Illinois) is building a plant in Hutchinson, Minnesota, expected to be completed next year. It will produce about 10 million lb/year of Torula yeast from a substrate of ethylene-derived ethanol. 2. Rank, Hovis, McDougall Ltd. (RHM, London) and Du Pont (Wilmington, Delaware) have a joint venture in the form of a 150 ton/year pilot plant that uses RHM's continuous-fermentation process to grow fungi on such substrates on such carbohydrates as beans, molasses, or cassava. The combine admits the product is a long way from being commercialized. Fungi-type protein "has a texture that makes for easy fabrication into meat analogs." 3. A team of Exxon Corp. (New York) and Nestlé (Vevey, Switzerland) has a pilot plant that is growing yeasts and bacteria on a petroleum substrate (that is neither gas oil nor paraffins); But will consumers eat "petroprotein"?

Also discusses proteins from cottonseed, rapeseed, sunflower seeds, alfalfa (leaf protein concentrate), fractionated whey, and fish protein concentrate.

Although leaf protein concentrate was proposed at least 30 years ago, the first plant has been running only since mid-1970. It makes 10 tons/day for animal feed and is operated by Batley-Janss Enterprises (Brawley, California).

In 1973 researchers at USDA's Western Regional Research Lab. in Albany, California, originated the alfalfa technique (*Chemical Engineering*, Jan. 22, 1973, p. 76-77). The quality of the concentrate is too poor for human consumption, mainly because of flavors and colors from the alfalfa chloroplasts. Now, however, USDA has two new processes that yield a bland, white concentrate. The first process removes the chloroplasts by coagulation and centrifuging, the second by ultrafiltration. Last summer leaf protein began to be produced commercially in Tamasi, Hungary, under the name Vepex.

Note: This is the earliest document seen (Aug. 1997) that mentions the work of Rank Hovis McDougall with fungal protein. Address: Assoc. editor.

1739. Dunham, Wayne. 1974. Filet of soybeans. *Chicago Tribune.* Aug. 28. p. C4.

• ***Summary:*** The "meatless meat dish" is about to become widely available in the United States. Through its ad agency, Tatham-Laird & Kudner, Miles Laboratories is about to start

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"nationwide marketing of breakfast links and patties made from vegetable proteins, such as soybeans, instead of meat. The products, under the Morningstar Farms brand name will be available in most major supermarkets."

1740. Hartman, Warren E. 1974. Engineering food texture. Paper presented at University of Guelph, Guelph, Canada. 26 p. Aug. 28-30. Unpublished manuscript. 28 cm. [13 ref] Address: Worthington Foods, Worthington, Ohio.

1741. Chiang, J.P.C.; Sternberg, M. 1974. Physical and chemical changes in spun soy protein fibers during storage. *Cereal Chemistry* 51(4):465-71. July/Aug. [9 ref] Address: Miles Laboratories, Inc., Marschall Div., Elkhart, Indiana 46514.

1742. Anti, A.W.; Blair, G.T. 1974. Worldwide applications of textured vegetable protein as meat replacements. In: Proceedings Fourth International Congress Food Science and Technology. Madrid, Spain: International Union of Food Science & Technology. 6 vols. See vol. 5, p. 190-97. Held 23-27 Sept. 1974 at Madrid, Spain.
• ***Summary:*** Textured soy protein products containing 50-60% protein have been successfully incorporated as lean meat replacements in a variety of meat products. Up to 45% of lean meat can be replaced using textured vegetable protein containing spun soy fibers. Address: Marschall Div., Miles Laboratories, Inc., Elkhart, Indiana 46514.

1743. Adolphson, L.C.; Horan, F.E. 1974. Textured vegetable protein products as meat extenders. *Cereal Science Today* 19(10):441-44, 446. Oct.
• ***Summary:*** "During the 1971-72 school year, about 23 million pounds of textured soy protein (hydrated) were used; in 1972-73 the amount was doubled; and during the past school year an estimate is that at least 50 million pounds (hydrated) were employed...

"In order for the commercial manufacturers to have a common goal in the development of novel protein systems, such as textured vegetable protein products, a number of industrial companies have banded together to form the Food Protein Council (Food Protein Council, Suite 1150, 1730 Pennsylvania Ave., N.W., Washington, D.C. 20006. George M. Perrin, Executive Secretary).

"The council consists of the following regular members: Archer Daniels Midland Co.; Cargill, Inc.; Central Soya Co., Inc.; Far-Mar-Co, Inc.; General Mills, Inc.; Grain Processing Corp.; Griffith Laboratories; Lauhoff Grain Co.; Miles Laboratories, Inc.; National Protein Corp.; Procter & Gamble Co.; Ralston Purina Co.; A.E. Staley Manufacturing Co.; and Swift Edible Oil Co."

A photo shows the two authors, with a brief biography of each. Address: Archer Daniels Midland Co., Decatur, Illinois.

1744. Brudnak, Joseph A. 1974. Emerging meat alternates. *Cereal Science Today* 19(10):447-48, 476. Oct.
• ***Summary:*** "There are basically two types of meat alternates–extenders and analogs, the latter sometimes being referred to as 'fabricated foods.'" In 1973 the latter market was approximately 20 million pounds, produced largely by 3 manufacturers: Miles Laboratories [Worthington Foods, Morningstar Farms], General Mills, and Loma Linda Foods. Address: Miles Laboratories, Marschall Div., Elkhart, Indiana 46514.

1745. Goossens, Alfred E. 1974. Protein foods–Flavors and off-flavors. *Food Engineering* 46(10):59-60. Oct.
• ***Summary:*** A tables shows "Off-flavors components in soybeans by functional group." There are 8 alcohols, 5 aldehydes, 5 ketones, 2 phenols, and one each amines, esters, acids, and sulfides. The real troublemakers in each group are marked with an asterisk. The off-flavors in soybeans may be divided into two groups: bitter off-flavors and grassy beany off flavors. Address: Director, Flavor Research, Miles Labs., Inc., Elkhart, Indiana.

1746. Peterson, Franklynn. 1974. The bean that's making meat obsolete. *Popular Mechanics* 142:84-87, 188. Oct.
• ***Summary:*** The subtitle continues: "Scientists are finding new ways to use the soybean, a staple for thousands of years, in creating new foods for a hungry world." A full-page flowchart shows how soybeans are processed to make a variety of end products. "Almost fully automated plants can process 200,000 bushels of soybeans a day. Every part of the bean is useful, even the hull, which goes into animal feed. Meat analogs are textured soy products made to look and taste like chicken or ham." A table, based on 1973 figures from Kansas State Univ., shows the comparative cost of a pound of protein from various sources: 50% [whole] soy flour is the least expensive at $0.14, followed by wheat germ $0.27, 70% protein [defatted] soy flour $0.30, wheat $0.38, isolated soy protein $0.40, milk solids $0.44, yeast $0.67, eggs $0.85, and beef $4.20. This a pound of protein from beef costs 30 times as much as a pound of protein from soy flour.

"Vegetarian members among the Seventh Day Adventists experimented with soybean foods as early as the 1930s, hatching at least two commercially successful companies in the process. To this day, one of them markets 50 meat look-alikes made from soybeans. The other company once invited Fidel Castro to lunch at a church school in Cuba. 'Best pork chops I ever ate,' said the Premier as he wiped his beard. But the soybean 'pork chops' had never even been close to a pig.

"Soybeans began to come into their own as an important food source in the United States after the 1969 White House Conference on Food, Nutrition and Health. Experts

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at that meeting concluded that over a third of the people in this affluent country were surviving on faulty diets. To help overcome the problem, scientists developed new food technologies to provide low-cost but highly nutritious foods for school-lunch programs, day-care centers, hospitals and other institutional feeding centers."

1747. Slater, Lloyd E. 1974. Engineered protein: Miles Labs sets fast course by Morningstar. *Food Engineering* 46(10):37. Oct.
• ***Summary:*** The company that has dominated the market for fizzling tablets with Alka Seltzer for the past 40 years recently introduced "Morningstar Farms 100% textured vegetable protein products, a proud offspring of Miles' Grocery Products Division." The flavor and appearance of breakfast links, patties, and slices were considered "first rate." Miles has special expertise in flavor development. The texture was not quite as good.

About a year ago the products were introduced in test markets in Chicago (Illinois), Florida, California, Arizona, and Wisconsin–with no price advantage over equivalent meat products. They have already become a number one dollar volume line in supermarket frozen breakfast sections. Last year General Mills was unsuccessful in the "debut of an analog sausage." Miles' Chicago ad agency TLK learned some valuable lessons, creating a "bucolic brand name and colorful old-fashioned package." Extensive commercials emphasize good tasting food with no cholesterol–rather than cuttnig-edge food science. A color photo shows three packages on a large, old-fashioned skillet and the logo with barn and rolling hills.

1748. Slater, Lloyd E. 1974. Engineered protein: Miles Labs sets fast course by Morningstar. *Food Engineering* 46(10):37. Oct.
• ***Summary:*** Last year Miles unsuccessfully debuted an analog sausage; it had a somewhat synthetic image. Now they have come back with a new line bearing the bucolic name "Morningstar Farms" in a colorful old-fashioned package. The writer tried it and loved it. A photo shows the packages of 3 Morningstar Farms products.

1749. Amchem Products, Inc. 1974. The soybean cookbook. Ambler, Pennsylvania: Amchem Products, Inc. 16 p. Nov. 21. 22 cm.
• ***Summary:*** "Acknowledgements: Most of the recipes contained in this booklet were prepared by: Miss Areva M. Abernathy, Univ. of Missouri; Univ. of Hawaii Extension Division; Miss. Dorothea Van Gundy Jones; Frances O. Van Duyne, Univ. of Illinois." Contents: The new food–Soybeans. History. Why use soybeans? Soybean varieties: Vegetable type and field variety. Soybeans are used in many forms: Green soybeans (served as a hot vegetable dish), freezing, canning. Soy flour and grits (14 recipes). Dried soybeans (9 recipes). Making and using soy milk (3 recipes). Grits (1 recipe). Soy sprouts (how to make + 5 recipes). Roasted soybeans (deep fat roasting or oven roasting; 2 recipes). Address: Ambler, Pennsylvania.

1750. Brand, David. 1974. The food crisis: New-food research isn't likely to ease poor nations' hunger. Technology is too complex, costly in many instances. *Wall Street Journal.* Dec. 18. p. 1, 21.
• ***Summary:*** Researchers are taking the basic building blocks, such as soy protein, and changing them into new shapes and textures. "So far, the researchers seem to have made the most progress in duplicating textures. General Mills' Country Cuts 'chicken' cubes and 'ham' cubes and Miles Laboratories' Morningstar Farms 'sausage' links and patties and 'ham' slices imitate the texture of the real meats with remarkable accuracy. But their flavor clearly is a problem." Address: Staff reporter.

1751. *SoyaScan Notes.* 1974. Chronology of soybeans, soyfoods and natural foods in the United States 1974 (Overview). Dec. 31. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** 1974 March. The first issue of *Vegetarian Times* published by Paul Obis in Chicago.

1974 April. Bob Gerner (of Westbrae) and William Shurtleff (guide) travel throughout Japan searching for quality sources of traditional miso and soy sauce. Right after the trip, Westbrae starts importing these products.

1974 Aug. 9. President Nixon, elected in 1968 and 1972, resigns after the Watergate scandal. Gerald Ford succeeds him as president. Butz continues as Secretary of Agriculture.

1974. Brazil passes West Germany to become the world's second largest soybean crusher, after the U.S.

1974 late. Miles Laboratories / Worthington introduces the Morningstar Farms line of meat analogs based on spun soy protein fiber. Sold nationally at U.S. supermarkets.

1974 late. The Farm in Summertown, Tennessee, publishes *Yay Soybeans!,* a 14-page booklet containing many innovative soyfoods recipes, such as "soy ice cream–ice bean," soy yogurt," "soy cheese," "soy cheesecake," "soy mayonnaise," and "soysage" (a meatless okara & soymilk sausage). Most of the dairylike products were made with fresh or cultured soymilk. The Farm now grows 150 acres of soybeans to feed its community of 800 people. It has just established Plenty, a non-profit corporation "To help share out the world's food, resources, materials, and knowledge equitably for the benefit of all."

1974. The Farm in Summertown, Tennessee, publishes *Hey Beatnik,* which contains the earliest know use of the term "Soy Dairy." The Farm's soy dairy now makes 60 gallons of soymilk a day at a total cost of $0.30 per gallon.

1974. *Tofu Recipes,* the first book on tofu in English, written and self-published by Grace Kikuchi in Ann Arbor,

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Michigan. Spiral bound and 47 pages long, it gives a recipe for homemade tofu and uses tofu largely with fish and meat.

1974 Nov. World Food Conference in Rome. Delegates from 130 UN member countries adopt an international strategy to overcome world hunger and malnutrition.

1974-1975? Eden Foods starts to import natural foods, including miso and shoyu, from Japan.

1752. Beek, L. van; Feron, V.J.; Groot, A.P. de. 1974. Nutritional effects of alkali-treated soyprotein in rats. *J. of Nutrition* 104(12):1630-36. Dec. [11 ref]

• ***Summary:*** Spun soy protein fibers, which are made by alkali treatment of soy protein, are increasingly used to make meatless meat alternatives. The "alkali-treated spun soy isolate" used in this study was provided by Worthington Foods and the research was supported, in part, by Miles Laboratories, owner of Worthington Foods. When this alkali-treated spun soy isolate was fed to rats at dietary levels of 5, 10, and 20%, the "results failed to reveal any adverse effects on general appearance, growth, feed efficiency, hematological indices, blood serum values, urine composition, kidney function, organ weights, and gross and microscopic pathology except for an increase in both the relative kidney weights and degree of nephrocalcinosis in females only. These renal changes were, however, shown to be related to the high dietary level of available phosphorus. Renal cytomegalia was not observed." Address: Central Inst. for Nutrition & Food Research TNO, Zeist, The Netherlands.

1753. Predicasts, Inc. 1974. World manufactured soybean foods. Special Study No. 108. Predicasts, Inc., 200 University Circle Research Center, 11001 Cedar Ave., Cleveland, OH 44106. vi + 93 p. Dec. 24. No index. 28 cm. Research Analyst: Frederick M. Ross.

• ***Summary:*** Contents: 1. Introduction. 2. Summary. 3. Economics of Soybean Foods: Soybeans, soy flour, meat extenders (based on extruded textured soy flour), synthetic meat (based on spun isolates). 4. Industry structure: General, $1,000 million food and feed giants (ADM, Cargill, Central Soya, General Mills/Takeda Chemical, Nabisco, Ralston Purina/Fuji Oil, and Esmark [Swift]), other major manufactured soy food companies (Unilever, General Host [New York], Miles Laboratories/Worthington & Kyowa Hakko Kogyo, A.E. Staley Mfg. Co., Stange [Chicago, Illinois], Chambers & Fargus [Humberside, England]), food industry structure. 5. Demand for manufactured soybean products: Demand for meat & substitutes, supply of natural meat, demand for meat substitutes, demand for soy flour. 6. North America: United States, Canada. 7. Latin America: General, Argentina, Brazil, Mexico, Other Latin America (Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay). 8. West Europe: General, France, West Germany, Italy, Spain, United Kingdom, Other West Europe. 9. East Europe: General, Hungary, Poland, USSR, Other East Europe. 10. Africa: General, Egypt, Nigeria, South Africa, Other Africa & Mideast. 11. Asia: General, China, India, Indonesia, Japan, Pakistan, Other Asia. 12. Oceania: Australia, New Zealand, Other Oceania.

Most sections contain numerous tables, mostly on meat and meat substitute consumption, and raw protein consumption, by country. Address: 200 University Circle Research Center, 11001 Cedar Ave., Cleveland, Ohio 44106. Phone: 216-795-3000.

1754. **Product Name:** Morningstar Farms Breakfast Strips (Meatless Bacon).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1974 December.
Ingredients: Egg whites, soybean and/or corn oil, modified corn starch, textured soy concentrate, wheat gluten, flavorings (natural and artificial flavors, hydrolyzed vegetable protein, monosodium glutamate, spice, yeast), glycerin, soy isolate, salt, sodium citrate, caramel color, propylene glycol, monocalcium phosphate, carrageenan, sodium tripolyphosphate, locust bean gum, guar gum, malic acid, sucrose, sodium sulfite, artificial color including yellow 6, niacinamide, disodium guanylate, disodium inosinate, iron (as ferrous sulfate), thiamine mononitrate B-1, pyridoxine hydrochloride B-6, vitamin B-12.
Wt/Vol., Packaging, Price: 18 strips per 5 oz paperboard box. Retails for $0.89 (1974/12).
How Stored: Frozen.
Nutrition: Serving of three strips: Calories 70, protein 4 gm, carbohydrate 2 gm, fat 5 gm.
New Product–Documentation: Spot (half page) in *Food Product Development.* 1974. Dec. p. 64. A black-and-white photo shows the front panel of the package. Above the product name is written: "Cholesterol free textured vegetable protein." Below the name: Artificial Bacon Flavor. In a box to the left: "No Animal Fat. Protein rich." This product is an addition to the line of "meat analogs" developed by Miles Laboratories to meet the needs of consumers who want products that are low in cholesterol and saturated fats. The ratio of polyunsaturated to saturated fats is 2.0. To serve, the frozen product is browned in polyunsaturated vegetable oil in a skillet.

Product with Label copyright 1978. Sent by Dr. Walter Wolf. Label is identical to that described in the 1974 ad above except, on front panel, in lower left, in black letters on a yellow background: "Shrinks less–Yields about as much as a pound of bacon cooked."

Ad. 1980. "No cholesterol. No kidding." Label reads: "Cholesterol Free. Artificial Sausage Flavor. Textured Vegetable Protein. No Animal Fat. Protein Rich."

Seventh-day Adventist Dietetic Assoc. 1990. *Diet*

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Manual, Including a Vegetarian Meal Plan. 7th ed. Appendix A.6-27.

Ad (full-page, color) with coupon in Vegetarian Times. 1993. July. p. 29. "A delicious way to cut down on meat without cutting down on your options." Shows new label designs for 4 Morningstar Farms meatless products.

Talk with Dick Leiss, Director of R&D for Worthington Foods. 1993. June 30. This product never contained spun soy protein fiber.

1755. **Product Name:** [GranoVita Pasta Asciutta: Bologna-style Spaghetti Sauce].
Foreign Name: GranoVita Pasta Chuta Bolognese {Nudelsauce}.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1974.
Ingredients: Tomato pulp, water, textured soya-protein, onions, grated cheese, soya-oil, salt, natural spices, corn-starch.
Wt/Vol., Packaging, Price: 200 gm can wholesales for DM 4; 400 gm for DM 6,40.
How Stored: Shelf stable.
Nutrition: Protein content: 10% protein.
New Product–Documentation: Full-page ad for 8 granoVita soy products in the book by Manfred Heide. 1977. *Vegetarische Ernährung: 193 Rezeptvorschläge und Speisepläne für ein Vierteljahr* [Vegetarian nutrition and food: 193 recipe suggestions and meal plans for a quarter of a year]. Stuttgart, West Germany: Paracelsus Verlag. This product is named "Pasta chuta Bolognese."

DE-VAU-GE leaflet. 1980? Rezepte aus der GranoVita Versuchskueche. Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p. Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products. Note: In Italian, *pasta asciutta* refers to "macaroni and cheese."

1756. Duda, Zbigniew. 1974. Vegetable protein meat extenders and analogs; with special emphasis on proteins of soybean origin. Rome, Italy: Food and Agriculture Div. of the United Nations. Animal Production and Health Div. vii + 89 p. No index. 27 cm. [214 ref]
• ***Summary:*** Contents: Author's preface. Acknowledgements. Foreword. Introduction. Raw materials: Soybeans, other raw materials. Definitions: Meat extenders, meat analogues. Protein rich products originating from soybeans: Soy flour and grits, food utilization of soybean flours and grits, soy protein concentrates, soy protein isolates, texturized soy protein. Technological and functional properties of vegetable protein. Market considerations. A random selection of T.V.P. extenders and analogues with their characteristics and uses: Miles Laboratories, Inc., Marschall Division, Elkhart, Indiana, USA, Vegetable protein food products (Temptein TM spun textured vegetable protein, vegetable protein meat analogues, bacon-like flavoured chips, dehydrated ham-like flavoured cubes, R pepperoni-like flavoured links, Pro-lean 45 TM, Maxten textured vegetable protein, Morningstar Farms–breakfast links, patties, slices), Swift food protein, General Mills, Inc.–textured vegetable protein foods, Worthington Foods, Inc.–textured vegetable protein foods, Archer Daniels Midland Co.–textured vegetable protein products, Purdy Steak Corp.–textured vegetable protein products, A.E. Staley Manufacturing Co.–textured and untextured vegetable protein products (200 series textured vegetable protein products, 400 series), Ralston Purina Company–textured soy protein products, Central Soya International Inc.–soy protein products, Nabisco, Inc. Protein Food Division–textured vegetable protein products, Lucas Meyer–soy protein products. Possible sources of meat substitutes other than soybeans: Protein from beans, from rapeseed, from sunflower seed, from cottonseed, from peanuts, other sources of proteins. General technological considerations. Projected consumption and market penetration. Cost considerations: The scale of production, the degree of processing, the price of raw materials. Conclusions. Selected Bibliography. Appendix I: USA soybean processors and products manufactured. Appendix II: Selected recipes using TVP for type A school lunches. Appendix III: Addresses of some companies making soy protein products. Appendix IV: Soybean utilization chart.

This book is compiled from a British viewpoint and cites many British journal articles, thus making it a nice complement to the American articles and bibliographies on this subject. Its bibliography is excellent. Address: Meat and Milk Service, Animal Production andf Health Div., FAO, Rome, Italy.

1757. **Product Name:** Granose Soya Bean Pâte (Gluten Free). Later renamed Soya Bean Paste.
Manufacturer's Name: Granose Foods Ltd. (Marketer). Made in Denmark by Nutana Helsekost.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1974.
Ingredients: Soya beans, onion, egg, textured soya protein, soya oil, yeast, salt, hydrolised vegetable protein, spices, monosodium glutamate.
Wt/Vol., Packaging, Price: 205 gm (7 oz) can.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. Label. 1980?, undated. 9.5 by 2 inches. Green, black, yellow, and white.

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Text only "Granose soya bean pate makes delicious sandwiches with mushrooms, tomato, cucumber, etc." Labels in Danish, Dutch, and Finnish.

Form filled out and Labels sent by Granose Foods Ltd. 1990. June 13. States that the product, made by Nutana, was introduced in 1974. It is now named Soya Bean Paste. Label. 1990. 9.5 by 2.25 inches. White, yellow, and black on green. Photo of a slice of bread spread with the paste garnished with a slice of tomato, avocado and a sprig of green. "Low calorie value. Gluten free. Ingredients: Textured soya protein, soya beans, water, onion, egg, soya bean oil, yeast extract, vegetable stock, leek extract. Directions for use: Soya Bean Paste is a delicious sandwich spread, which can be decorated with cucumber, tomato or mushroom."

1758. **Product Name:** Soyapro (Canned Texturised Vegetable Protein).
Manufacturer's Name: Granose Foods Ltd. (Marketer-Distributor). Made in Denmark by Nutana.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1974.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Clare Bryant. 1974. *Everyday Vegetarian and Food Reform Cooking.* p. 137. The following is included in a list of meat substitutes. "Soyapro: A tinned [canned] texturised vegetable protein. Many other brands of TVP will appear on the market in the years to come." Neither the name or address of the maker is included.

1759. **Product Name:** Loma Linda Meatless Entrees (Based on Spun Soy Protein Fiber) [Meatless Chicken Style, Meatless Roast Beef, or Meatless Turkey].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1974.
Ingredients: Roast Beef: Wheat gluten, soy protein isolate, water, corn oil, egg whites, artificial and natural (vegetable) flavors, corn starch, salt, dried yeast, caramel color, soy protein concentrate, dextrose, onion, guar gum, garlic, soy lecithin, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin), spice.
How Stored: Frozen.
New Product–Documentation: *Soybean Digest Blue Book.* 1977. p. 30. "New meatless chicken made with spun soy fiber." Recipe booklet, 1979, dated. Loma Linda probably purchased the spun soy protein fibers from General Mills. Sold frozen.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1760. Meun, Dieter H.C. 1974. Dietary foods. *SRI Long-range Planning Service Report* No. 515. 20 p. (Stanford Research Inst., Menlo Park, Calif.). *
Address: Industrial Economist, SRI.

1761. **Product Name:** Pro-Lean 45: A Textured Vegetable Protein Product.
Manufacturer's Name: Miles Laboratories, Inc. Marschall Div.

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Manufacturer's Address: Elkhart, Indiana. Made at 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1974.
Ingredients: Soy protein concentrate, spun isolated soy protein, isolated soy protein, sugar, salt, 1.93% hydrolyzed vegetable protein and caramel color. 0.1% titanium incorporated as food grade titanium dioxide in accordance with USDA regulations.
New Product–Documentation: Rosenfield & Hartman. 1974. *Journal of the American Oil Chemists' Society.* 51(1):91A-94A. Jan. "Spun-fiber textured products." The product label for "Pro-Lean 45: A Textured Vegetable Protein Product" is shown. It is manufactured at Worthington, Ohio.

Predicasts. 1974. World Manufactured Soybean Foods. p. 13. This is a meat extender.

Horan. 1974. Meat analogs. p. 380. Prolean-45 is a textured soy protein isolate containing spun soy protein fibers.

1762. **Product Name:** Textured Soy Flour (Extruded).
Manufacturer's Name: Miles Laboratories, Inc.
Manufacturer's Address: 1127 Myrtle St., Elkhart, IN 46514.
Date of Introduction: 1974.
New Product–Documentation: *Soybean Digest Blue Book.* 1974. p. 124.

1763. **Product Name:** Sanitarium Health Foods TVP Textured Vegetable Protein [Smoked Flavour, Roast Flavour Chunky Pieces, Roast Flavour Mince Style, Savoury Flavour, Southern Flavour, and Sweet & Sour Flavour], and Unflavoured T.V.P.
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1974.
Ingredients: Savoury: Soy flour, salt, dried yeast, vegetable oil, vegetable flavouring syrup.
Wt/Vol., Packaging, Price: 300 gm box. Later canned.
How Stored: Shelf stable.
Nutrition: Savoury: Protein 35.0%, moisture 6.5%, ash 11.0%, fibre 2.5%, carbohydrate 24.0%, fat 21.0%.
New Product–Documentation: Label. 1980, undated. Box. 13 by 9 inches. Full color. Photo shows TVP as is and in a skillet with rice. "The New Food Fantastic. Ideal for Casseroles, Stews, Burgers, Patties, Soups, Curries." Letter from Sanitarium Health Food Co. 1981. Leaflet. 1981? 6 panels. Red and brown. "The new food fantastic. Sanitarium TVP Textured Vegetable Protein... From Sanitarium... The people who believe food should not only taste good, it should be good for you." With 5 recipes. Leaflet. 1981. Full color, yellow background. "Sanitarium presents 30 exciting recipes with a difference from around the world... The difference is TVP. Textured Vegetable Protein." Soya Bluebook. 1982. p. 61. "Canned vegetable protein foods and textured vegetable protein." 1985. p. 86.

Letter from Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1974.

1764. **Product Name:** Sanitarium Health Foods Tender Bits (Vegetable Protein Bits).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1974.
Ingredients: Wheat gluten, sauce [incl. soy sauce], onion, flour, vegetable oil, water added.
Wt/Vol., Packaging, Price: 430 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1974. "Soy sauce is the first ingredient in the sauce."

1765. **Product Name:** Sanitarium Health Foods Casserole Mince (Minced Vegetable Protein).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1974.
Ingredients: Wheat gluten, flour, soya sauce, hydrolysed vegetable protein, sauce, water added.
How Stored: Shelf stable.
Nutrition: Per 110 gm (¼ can): Protein 16 gm.
New Product–Documentation: Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1974.

1766. **Product Name:** Somos (Textured Soy Flour, and Protein Stew Flavors), MaxTen (Textured Soy Flour), and Sossies.
Manufacturer's Name: Tiger Miles Protein Industries (Pty) Ltd. Subsidiary of Miles Laboratories Inc. and Tiger Oats & National Milling Co. Ltd.
Manufacturer's Address: Plant: Fedler St., Randfontein 1760, Transvaal, South Africa. Office: P.O. Box 575, Randfontein.
Date of Introduction: 1974.
New Product–Documentation: Horan. 1974. Meat analogs. p. 401. This product is made of textured soy flour (50% protein). The manufacturer is given as Tiger Oats Ltd., South Africa.

Anne and Gerald Machanik. 1974. *Nutritious Dishes that Replace Meats and Fishes.* South Africa: HAUM. Somos is used in a recipe on p. 61.

Soybean Digest Blue Book. 1976. p. 50.

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1767. **Product Name:** Alborada (Beef-Flavored Textured Soy Flour).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1974.
Wt/Vol., Packaging, Price: Paperboard box.
How Stored: Shelf stable.
New Product–Documentation: *Soybean Digest.* 1975. May. p. 8. "ASA [American Soybean Assoc.] promotes soy for nutrition." Alborada is beef-flavored TVP which is made by the Miles/Worthington group. Sold in an attractive paperboard box, it "has received very good acceptance by the public and is being sold in all the leading supermarkets. It is also sold in large quantities to institutions such as restaurants, hospitals, meal packaging plants and canned food producers." A photo shows the box.

H.L. Wang, et al. 1979. Soybeans as human food–Unprocessed and simply processed. p. 36. "Since 1973, other textured soy products have been independently manufactured and distributed in Mexico. For example, Miles/Worthington, Elkhart, Indiana, has produced a beef flavored TSP called ALBORADA..."

1768. **Product Name:** Morningstar Farms Breakfast Patties (Meatless Sausage).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1974.
Ingredients: Textured vegetable protein (wheat gluten, soy concentrate and isolate), egg whites, soybean and/or corn oil, partially hydrogenated soybean and cottonseed oil, sodium caseinate, flavorings (artificial flavors, salt, monosodium glutamate, spices, lactose, dextrose, etc.).
Wt/Vol., Packaging, Price: 1998: 6 patties in 8 oz paperboard box. Retails for $2.29 (1998/10, Concord, California).
How Stored: Frozen.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 174. The ingredients in "Breakfast Patties are (Morningstar Farms)" are "textured soy protein, vegetable oils (corn, and partially hydrogenated soybean and cottonseed) oats, egg albumen, natural and imitation flavors, spices, salt, emulsifier, corn starch, sodium phosphates, HVP, caramel color, niacin, iron, thiamin, vitamin B-6, riboflavin, vitamin B-12."

Ad. 1980. "No cholesterol. No kidding." Label reads: "Cholesterol Free. Artificial Sausage Flavor. Textured Vegetable Protein. No Animal Fat. Protein Rich." Product with Label. 1989. Sept. 7. Sold at Diablo Foods, a supermarket in Lafayette, California. Label is copyright 1987. The cholesterol-free sausage-like patties (8 oz., 6 patties) retail for $2.25.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

Ad (full-page, color) with coupon in Vegetarian Times. 1993. July. p. 29. "A delicious way to cut down on meat without cutting down on your options." Shows new label designs for 4 Morningstar Farms meatless products.

Talk with Dick Leiss, Director of R&D for Worthington Foods. 1993. June 30. This product originally contained spun soy protein fiber. But after several years it was reformulated; the fiber was removed and replaced by other textured vegetable proteins.

Product (Meatless Breakfast Patties) with Label (new design) purchased at Safeway supermarket in Lafayette, California. 1994. May 18. 7.75 by 5.5 by 1 inch. Gold, white, blue, and red on dark green. A color photo on the front panel shows 3 patties with part of a waffle above and 2 strawberries to the right. Price: $2.49. Frozen. Six patties. Ingredients are now: Textured vegetable protein (wheat gluten, soy protein concentrate and isolate), egg whites, corn oil, soy oil, partially hydrogenated cottonseed and soybean oil, sodium caseinate, modified food starch,... Soyfoods Center Taste Test. 1994. June 7. Good taste and texture. Easy to heat and serve.

Product (Breakfast Patties) with Label (new design) purchased at Safeway supermarket in Lafayette, California. 1995. Aug. 17. 7.75 by 5.5 by 1 inch. Orange, white, blue, gold, and red on green. A color photo on the front panel shows 2 patties on a white plate with diced fried potatoes. Price: $2.59. Frozen. Six patties. Ingredients, which have been changed, are now: Textured vegetable protein (wheat gluten, soy protein concentrate and isolate), egg whites, corn oil, sodium caseinate, modified food starch, soybean oil... On the back is Worthington's own green V symbol "Suitable for vegetarians."

Product with Label purchased at Trader Joe's in Concord, California. 1998. Oct. 30. Six patties weigh 8 oz. Retail price: $2.29.

Product with Label purchased at Trader Joe's in Lafayette, California. 2002. April 28. Six patties weigh 8 oz. Retail price: $2.49. New package design with large strawberry in lower right corner of front panel. "75% less fat than pork sausage."

1769. **Product Name:** Morningstar Farms Breakfast Links (Meatless Sausage).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1974.

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Ingredients: Jan. 1974: Textured vegetable protein (wheat, soy, yeast), water, vegetable oils (corn oil and partially hydrogenated soybean and cottonseed oils), oats, egg albumen, natural and imitation flavors and spices, salt, emulsifier (mono and diglycerides, glyceryl lacto esters of fatty acids), corn starch, sodium phosphates (tripolyphosphate, pyrophosphate, hexameta-phosphate, monophosphate), hydrolyzed vegetable protein, caramel color, niacin, iron (as ferrous sulfate), thiamine (vitamin B-1), pyridoxine (B-6), riboflavin (B-2), cyanocobalamin (B-12).

Wt/Vol., Packaging, Price: 8 oz (10 links).

How Stored: Frozen.

New Product–Documentation: Rosenfield & Hartman. 1974. *Journal of the American Oil Chemists' Society* 51(1):91A-94A. Jan. "Spun-fiber textured products." The

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ingredients in Breakfast Links are shown above.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 174. The ingredients in "Breakfast Links (Morningstar Farms)" are vegetable protein (wheat, soy, yeast), vegetable oil, oats, egg albumin, natural and imitation flavors, spices, salt, emulsifier, corn starch, sodium phosphates, HVP, caramel color, iron, thiamin, vitamin B-6, riboflavin, vitamin B-12.

Ad. 1980. "No cholesterol. No kidding." Label reads: "Cholesterol Free. Artificial Sausage Flavor. Textured Vegetable Protein. No Animal Fat. Protein Rich." Product with Label. 1989. Sept. 7. Sold at Diablo Foods, a supermarket in Lafayette, California. Package is copyright 1987. The cholesterol-free meatless sausages (8 oz., 10 links) retail for $2.25.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

Product with Label (new design) purchased at Lucky Foods supermarket in Lafayette, California. 1993. June. 7.5 by 4.25 by 0.75 inches. Paperboard box. Green, white, blue, gold, and red. "Morningstar Farms Meatless Breakfast Links. Artificial sausage flavor. No animal fat. Zero cholesterol. Microwaveable." Price: $2.35 for 8 oz. Frozen. Ingredients: Textured vegetable protein (wheat gluten, soy concentrate and isolate), egg whites, corn oil, sodium caseinate, natural and imitation flavors from non-meat sources, spices, salt, modified corn starch, sucrose, caramel color, vegetable gums (guar and carrageenan), onion powder, disodium guanylate, niacin, iron (as ferrous sulfate), vitamin B-1 (thiamine), vitamin B-6, vitamin B-2 (riboflavin), vitamin B-12.

Ad (full-page, color) with coupon in Vegetarian Times. 1993. July. p. 29. "A delicious way to cut down on meat without cutting down on your options." Shows new label designs for 4 Morningstar Farms meatless products.

Talk with Dick Leiss, Director of R&D for Worthington Foods. 1993. June 30. This product originally contained spun soy protein fiber. But after several years it was reformulated; the fiber was removed and replaced by other textured vegetable proteins.

Product (Meatless Breakfast Links) with Label (new design) purchased at Safeway supermarket in Lafayette, California. 1994. May 18. Price: $2.39. Frozen.

Product with Label (new design) purchased at Safeway supermarket in Lafayette, California. 1995. Aug. 1. Price: $2.19. Frozen.

Product with Label purchased at Trader Joe's in Lafayette, California. 2002. April 28. Ten links weigh 8 oz. Retail price: $2.89. New package design with strawberry near lower right corner of front panel. "78% less fat than pork sausage."

1770. **Product Name:** Morningstar Farms Breakfast Slices (Meatless Ham or Sausage Slices).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1974.
Ingredients: Jan. 1974: Textured soy protein, water, vegetable oils (partially hydrogenated soybean and cottonseed oil, corn oil), natural and imitation flavors and spices, egg albumen, lactose, salt, sodium caseinate, sugar, modified tapioca starch, sodium phosphates (tripolyphosphate, pyrophosphate, hexametaphosphate, mono-phosphate), hydrolyzed vegetable protein, carrageenan, niacin, U.S. certified colors, iron (as ferrous sulfate), thiamin (vitamin B-1), pyridoxine (vitamin B-6), riboflavin (B-2), cyanocobalamin (vitamin B-12).
New Product–Documentation: Rosenfield & Hartman. 1974. *Journal of the American Oil Chemists' Society* 51(1):91A-94A. Jan. "Spun-fiber textured products." The ingredients in Breakfast Links are shown above.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 174. The ingredients in "Breakfast Slices (Morningstar Farms)" are basically the same as they were in Jan. 1974.

Shurtleff & Aoyagi. 1983. History of Worthington Foods. p. 9.

Talk with Dick Leiss, Director of R&D for Worthington Foods. 1993. June 30. This product originally contained spun soy protein fiber. But after several years it was reformulated; the fiber was removed and replaced by other textured vegetable proteins. In 1979 it was reformulated again and its name was changed to Morningstar Farms Luncheon Slices.

1771. Cottrell, Edyth Young. 1974. Soybean magic. Loma Linda, California: PHMS. 17 p. 12 cm. Accompanied by a color slide show.
• ***Summary:*** A title and brief description of each of the 79 slides is given. Address: Research Nutritionist, Loma Linda Univ. School of Health, Loma Linda, California.

1772. Cottrell, Edyth Young. 1974. The oats, peas, beans & barley cookbook. Santa Barbara, California: Woodbridge Press. 271 p. Illust. Index. 24 cm.
• ***Summary:*** This very creative Seventh-day Adventist vegetarian cookbook, featuring nature's most economical foods, contains 450 recipes including many using soybeans and gluten (see p. 59-68), and many color photos. One acre of soybeans will supply 34 times as many calories, 49 times as much protein, and 33 times as many vitamins as beef produced on one acre. Soy-related recipes include: Garbanzo-soy-oat patties with Brazil nuts (p. 39). Soybeans–Prairie gold (Boiled soybeans, p. 51. Freezing soaked soybeans helps to shorten the cooking time. The use of soft or spring water in soaking and cooking also helps to reduce the cooking time. The author adds salt to soybeans after they

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have been boiled for at least 1 hour. Baked soybeans (p. 52). Soy-oat patties with tomato sauce (with whole soybeans, p. 53). Tofu (p. 54, curded with calcium lactate or calcium carbonate, then seasoned with Vegex or Savorex). Creamed curd cheese: May be used as cottage cheese (p. 55; made with tofu curds and soy sour cream). Scrambled tofu (p. 56). Rice with tofu–Chicken style (p. 56-57). Home-baked bread (with soy flour, p. 70-76). Modified pioneer bread (with soy flour, p. 81). Pioneer soy bread (p. 82). Soy-oat waffles (p. 109). Barley-soy waffles. Cornmeal-soy waffles. Millet-soy waffles (p. 111). Rice-soy waffles (p. 112). Soya French toast (p. 116). Cornmeal with soy grits (p. 117). Corn granola (with soy flour, p. 118). Good earth granola (with soy flour, p. 119).

One chapter, titled "Soybean Magic" (p. 121-26) contains the following soy-related recipes: Soybean concentrate: Replaces milk and eggs in many recipes (Note: This is fresh soybean puree, or gô, made with the hot water grind method). Soy milk and concentrated soy milk. Cream sauces. Soy whipped topping. Soy cream. Soy sour cream. Sweet cream custard sauce.

Whipped soy topping (with fortified soy milk powder, p. 141). Cabbage baked in 'soy sour cream' (p. 165). Cauliflower baked in soy cream (p. 167). Soy mayonnaise (with concentrated soy milk, p. 195). Savory yeast spread with soy milk, p. 196).

Pages 255-67 give a nutritional analysis of each of the recipes in this book. A photo on the rear cover shows Cottrell. A second edition was published in 1980 by Woodbridge. As of early 1993 some 157,000 copies of this book are in print. Address: Research Nutritionist, Loma Linda Univ. School of Health, Loma Linda, California.

1773. Gaustad, Edwin S. ed. 1974. The rise of Adventism: Religion and society in mid-nineteenth-century America. New York, NY: Harper & Row. xx + 329 p. Index. 24 cm. [500* ref]

• ***Summary:*** This book contains a number of important essays on the cultural roots of the Seventh-day Adventist movement plus the most complete bibliography on 19th century Adventism, by Vern Carner (Instructor in Church History, Loma Linda University, California). A chapter by J. Blake, titled "Health Reform," contains a good treatment of Sylvester Graham and America's first health reform movement.

1774. Kloss, Jethro. 1974. The Back to Eden cookbook. Santa Barbara, California: Lifeline Books. "Published in arrangement with Woodbridge Press Publishing Company." 158 p. With Promise Kloss Moffett and Doris Kloss Gardiner. Illust. by Daniel Guild. 22 cm.

• ***Summary:*** For the bittersweet story of how this book came to be published, see interview with Doris Kloss Gardiner (Nov. 1990).

Facing p. 7 are photos of Jethro Kloss, his daughter Promise Kloss Moffitt, his granddaughter Doris Kloss Gardiner, and his son, Eden Kloss.

The chapter titled "Soy milk, soy cheese, soy butter and cream" (p. 35-40) has this contents: Introduction. Soy milk (homemade from whole soybeans). Quick soy milk (from soy flour). How to curd soy milk (with citric acid to make a smooth cheese [tofu]). Soy buttermilk. Soy butter (from soy flour and soy oil). Soy cream (from rich soy milk and soy oil). Soy cream cheese ("Use unsweetened Soy Milk. Let it stand until it thickens {not sour}, put it on the stove and boil a minute or two..."). Soy cottage cheese. Soy cheese (from raw peanut butter, tomato puree and Soy Milk). Quick soy cheese (from soy flour). Original soy cheese (using whole soybeans, hot water grind in a liquefier; curded with the juice of 2 lemons). A substitute for egg yolk (made from water, soy flour and soy oil). Address: USA.

1775. Larson, Jeanne R.; McLin, Ruth. 1974. The vegetable protein and vegetarian cookbook. New York, NY: Arco Publishing Co. 216 p. Illust. Index. 24 cm. Reprinted in 1980.

• ***Summary:*** The authors may be Seventh-day Adventists since they make widespread use of "meatless meats" made by Loma Linda Food Co. and Worthington Foods, both Adventist-run companies. Pages 11-14 list these meatlike products in the following categories: 7 dry vegetable proteins to which liquid must be added, or which are used for seasonings: Granburger. Vitaburger. Meat loaf mix. Burger aid. Stripple zips. Baco-Bits. Gravy quik.

35 canned foods: Rediburger. Vegeburger. Chopletburger. Vegetarian burger. Madison burger. Non-meat balls. Prime burger. Vitaburger. Chili. Choplets. Cutlets. Skallops. "209." Vegesteaks. Dinner bits. Tender bits. Dinner cuts. Tastee cuts. Dinner rounds. Salisbury steak. Frysticks. Numete. Protose. Proteena. Nuteena. Vegechee. Vegelona. Wham. Beef slices. Chicken slices. Linketts. Little links. Big franks. Saucettes. Veja-links.

30 frozen foods (said to be by far the tastiest of the vegetarian meats): Beef slices, loaf, and cubes. Corned beef slices, loaf, and cubes. Smoked beef slices, loaf, and cubes. Beef pie. Chicken slices, roll, cubes. Chicken pie. Chickettes. Wham slices, roll, cubes. Prosage. Vegetarian fillets [fish alternatives]. Holiday roast. Salisbury steak. Stripples. Smoked turkey slices or loaf. Fri-pats. Soy-chee. Vegechee. Soycheeze. Lentils. Garbanzos. Boston style soybeans. Green soybeans [probably harvested dry rather than fresh]. Savorex. Tastex. Savita. Vegex. Chicken seasoning. Beef seasoning. Smokene. Baco-bits.

Soy-related recipes include: Soybean loaf (with cooked mashed soybeans, p. 39). Tofu loaf (p. 149; "Tofu can be obtained at Chinese food stores. If not, use canned soy cheese found in most health food stores"). Tender crisp vegetables (soybean sprouts, p. 197).

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1776. Parrett, Owen S. 1974. Diseases of food animals. Washington, DC: Review and Herald Publishing Assoc. 31 p. 21 cm. [10 ref]
• ***Summary:*** Contents: A closer look at flesh foods. Trichinosis and hogs. Other hog parasites. Undulant fever (brucellosis). Leukemia. Poultry diseases. Salmonellosis. Disease of fish. Why I don't eat meat. References. Address: Seventh-day Adventist physician.

1777. Seventh-day Adventist Dietetic Assoc. 1974. About nutrition. Revised ed. Nashville, Tennessee: Southern Publishing Assoc. 192 p. Index. 20 cm. 1st ed. 1971. [50 ref]
• ***Summary:*** A layman's guide to vegetarian nutritional principles, including food groups, menu planning, and nutritional needs of various age groups. Individual authors are listed as Alice G. Marsh, Dorothy Christensen, Rose G. Stoia, and Sylvia M. Fagal. Coordinator: Darlene R. Schmitz.

Chapter 1 introduces the "Four Food Groups" which resemble a simple preschool puzzle. They are: Fruits and vegetables, cereals & breads, protein foods, and milk products. Soy products (including soy beverages) and gluten (wheat protein) are included in the protein foods group. A surprisingly strong (apparently slightly defensive) anti-food-faddist message runs throughout this book. Chapter 16 is titled "Current quackery." Chapter 17, titled "Food fads and facts," gives 13 examples of commonly encountered fallacies with explanations of the facts.

1778. U.S. Department of Agriculture. 1974. The annual report on activities carried out under the Public Law 480, 83d Congress, as amended, during the period January 1 through December 31, 1973. Washington, DC: U.S. Government Printing Office. See p. 94-101.
• ***Summary:*** Table 18 is titled "Title II, Public Law 480–total commodities shipped by program sponsor, fiscal year 1973." The main program sponsors and distributing agencies, listed alphabetically, are AJJDC (American-Jewish Joint Distribution Committee), CARE, CRS (Catholic Relief Service), CWS (Church World Service), LWR (Lutheran World Relief), SAWS (Seventh-day Adventist World Service), UNICEF, UNRWA (United Nations Relief and Works Agency), and WRC (World Relief Commission). All of these are Private Voluntary Organizations (PVO/PVOs), registered with USAID. The following foods containing soy protein were distributed: CSM (corn soya mix), WSB (wheat soya blend), and small amounts of soya flour. The vegetable oil which was shipped to many countries was soybean oil; it is not recorded here. The foods containing soy protein were sent in the following amounts (in thousands of pounds) to the following continents and countries: Africa (24,340 CSM and 6,8857 WSB): Algeria (1 WSB), Botswana (1,398 CSM), Burundi (464 CSM), Cameroon (47 CSM), Central African Republic (67 CSM), Chad (1 CSM and 1 WSB), Congo (115 WSB), Dahomey (124 CSM), Ethiopia (395 CSM), Gabon (46 WSB), Gambia (211 CSM), Ghana (843 CSM and 1,272 WSB), Ivory Coast (546 WSB), Kenya (409 CSM and 400 WSB), Lesotho (299 WSB), Liberia (1,247 CSM and 487 WSB), Malagasy (365 CSM and 2 WSB), Malawi (210 CSM), Mali (230 CSM), Mauritania (235 CSM), Morocco (908 CSM and 890 WSB), Niger (289 CSM), Nigeria (1,197 CSM), Rwanda (82 CSM and 570 WSB), Senegal (643 CSM), Sierra Leone (2,309 CSM), Sudan (3,826 CSM), Swaziland (57 CSM), Tanzania (3,991 CSM and 5 WSB), Togo (1,083 CSM and 1,562 WSB), Tunisia (2,368 CSM and 485 WSB), Upper Volta (878 CSM and 14 WSB), Zaire (419 WSB and 190 WSB), Zambia (44 CSM).

Europe (27 CSM): Malta (27 CSM).

Near East-South Asia (269,188 CSM and 94,141 WSB): Afghanistan (1 CSM), Bangladesh (99794 CSM and 54,631 CSB), Egypt (3,593 CSM and 2 WSB), Gaza [occupied by Israel since 1967] (1,509 CSM and 3,564 WSB), India (156,216 CSM and 15,768 WSB and 775 soya flour), Iraq (997 CSM), Jordan (2,319 CSM and 536 WSB), Jordan-West Bank [occupied by Israel since 1967] (549 CSM and 1,186 WSB), Lebanon (227 CSM and 411 WSB), Nepal (1,000 CSM and 55 WSB), Pakistan (9,933 WSB), Sri Lanka (1,000 WSB and 50 soya flour), Syria (470 CSM and 473 WSB), Turkey (6,582 WSB), Yemen (People's Democratic Republic of Yemen, or South Yemen) (151 CSM), Yemen (Yemen Arab Republic) (2,513 CSM).

East Asia (41,450 CSM and 20,694 WSB): Fiji (2 CSM and 2 WSB), Indonesia (268 CSM and 12,981 WSB), Korea (1,997 CSM), Laos (2,378 CSM and 750 WSB), Macao (29 CSM), Malaysia (1,124 CSM and 65 WSB), Philippines (22,416 CSM), Singapore (10 WSB), Vietnam (13,236 CSM and 6,886 WSB).

Latin America (94,598 CSM and 42,404 WSB): Bolivia (1,534 CSM), Brazil (33,197 CSM and 5,676 WSB), British Honduras [Belize] (333 CSM and 110 WSB), Chile (548 CSM and 6,038 WSB), Colombia (13,043 CSM and 5,202 WSB), Costa Rica (2,792 CSM), Dominica (78 CSM), Dominican Republic (11,584 CSM and 3,486 WSB), Ecuador (2,253 CSM and 5,446 WSB), El Salvador (1,343 CSM and 2,466 WSB), Grenada (41 CSM), Guatemala (4,007 CSM and 1,090 WSB), Guyana (631 CSM), Haiti (1,581 CSM and 3,395 WSB), Honduras (1,297 CSM and 1,523 WSB), Jamaica (1,150 CSM and 657 WSB), Nicaragua (6,850 CSM and 4,126 WSB), Panama (853 CSM and 699 WSB), Paraguay (3,385 CSM), Peru (7,522 CSM and 1,993 WSB), St. Lucia (81 CSM), St. Vincent (51 CSM), Trinidad and Tobago (2 CSM and 1 WSB), Uruguay (442 CSM and 496 WSB).

Grand total: 429,603,000 lb of CSM and 164,124,000 lb of WSB. Agencies distributing the most CSM and WSB (in million lb): CARE 204, UNICEF 163, CRS 151.

Concerning "veg oil" (soybean oil) shipped under P.L. 480 Title II in fiscal year 1973: India received 61.881 million

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lb [28,069 metric tons] (p. 97).

Note: This is the earliest document seen (Aug. 2009) concerning soybean products (soy flour, CSM, or WSB) in Chad, Mauritania, and Niger. This document contains the earliest date seen for soybean products (cereal-soy blends) in Chad, Mauritania, and Niger (1973); soybeans as such had not yet been reported by that date. Address: Washington, DC. Phone: 703-875-4901 (1991).

1779. Woolsey, Raymond H. 1974. Meat on the menu: Who needs it? Washington, DC: Review and Herald Publishing Assoc. 80 p. No index. 18 cm. [131 ref]
• ***Summary:*** Contents: Introduction. Let reason rule. What's to eat. What is meat? Hitchhikers in the kitchen. Where are the inspectors?... And alphabet soup. The cholesterol connection. Vegetable sources of protein. Going vegetarian. References. Recommended recipe books.

An abridged, 59-page edition was issued by the same publisher in 1988.

1780. American Soybean Assoc. 1974? Soybeans: From America's fertile soils the worlds versatile protein resource. Hudson, Iowa. 16 p. Undated. No page numbers. All color.
• ***Summary:*** On a page titled "Utilization," color photos show many soy products including: Milnot (can), Worthington Soyameat (can), Nabisco Sociables (paperboard box), Candied Pernuts: Toasted Soybeans (paperboard box), Bac*Os (glass jar), Crisco (shortening; can), Hain Soy Oil (glass jar), Dream Whip: Whipped Topping Mix (paperboard box), Hamburger Helper (paperboard box), Worthington Veja-Links (can), RG Lecithin (jar), Yoshihara Oil Mill, Ltd. Golden Soybean Salad Oil (can, 2 sizes), and 3 brands of bottled soymilk made in Korea. Another page shows Soyor bottled soy oil. The addresses of American Soybean Association offices in Hudson, Iowa (USA), Tokyo (Japan), Taipei (Taiwan), Brussels (Belgium), Hamburg (West Germany), Vienna (Austria), and Mexico City (Mexico) are given. Address: Hudson, Iowa.

1781. **Product Name:** Loma Linda Meatless Chicken Style or Beef Style (Based on Spun Soy Protein Fiber).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1974?
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Loma Linda probably purchased the spun soy protein fibers from General Mills. Sold in both canned and frozen forms.

1782. Pearce, Jean. 1975. Jean Pearce's How to get things done in Japan. Vol. 1. Tokyo: Japan Times Ltd. [iv] + 245 p. Jan. Index. 19 cm. [Eng]
• ***Summary:*** This book is composed of reprints of the popular and informative articles, answering questions from readers on a wide variety of subjects, that Jean Pearce wrote in her column in *The Japan Times* from 1 Jan. 1972 to 27 July 1974; they appear in this book in chronological order.

From 16 Oct. 1973 (p. 76): "Health foods" are now widely available in Japan, but familiar products are not always to be found. You can, however, find many soybean products, including natural soy sauce, and natural miso. "Try Nihon Kenko Shizenshoku in Shinbashi [Tokyo], phone 573-4181, or Shizenshoku Center in Shibuya, 461-7988. Both have restaurants that serve natural foods only."

Note: On pages 77-78 is a good history of Calpis.

From 8 Jan. 1974 (p. 118-19): "Health food remains a subject of interest... The basic Japanese diet, with a little discretion in the use of salt, is a health faddist's delight. Also on natural foods, a shop (Ishii Shoten, 1-2-7 Nishikata, Bunkyo-ku [Tokyo], phone 811-2457 in Japanese), that still makes by traditional methods roasted soybeans from mid-December through June, far superior, I'm told, to any of the imported varieties... 'A nice low-cal snack, and a good hors d'oeuvre...' They come with or without salt."

From 5 Feb. 1974 (p. 134): "A woman wants to learn how to make tofu. I have a recipe but I don't think I'll give it again. It is very difficult to do and the end result is more often failure than success. However, anyone can buy instant tofu at most Japanese food stores. It's easy to make, will be better than trying to do it yourself, and is inexpensive, ¥80 the last time I bought it but it has no doubt gone up. It makes two squares. The nigari she asks about is bittern, necessary for thickening [curding, coagulating]. Tofu is now available in many foreign countries. If you don't know where to look, call anyplace listed under Buddhist in the classified directory. Ask where they buy theirs."

From 12 March 1974 (p. 154-55): "Tofu lovers, united! There are lots of them and their sympathy was with the woman who was denied a do-it-yourself recipe in this very column. So kinder hearts provide the following.

"Two collectors [Shurtleff and Aoyagi] are compiling a book of tofu recipes, which includes a number for making tofu, using various solidifiers and soybean products. I'll let you know when it's published.

"A book, *Tofu Recipes*, was published by a tofu enthusiast after a year's visit to Japan. It is her first literary endeavor, a labor of love which will be understood by anyone who is a tofu devotee. Grace Kikuchi tells you how to make it and how to use it, relying on childhood memories and modern innovations. I'll be in the kitchen when I finish this column. You can be equally inspired if you send your order to Grace Kikuchi, 260 Sumac Lane, Ann Arbor, Michigan, U.S.A. Enclose $2.00. Somehow."

From 7 May 1974 (p. 184-85): "There is a new health food [natural food] restaurant in Tokyo, Hakumon ("White Gate"), just across from the Chuo University exit to the Shin Ochanomizu Station on the Chiyoda subway line, phone

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291-9762. French owner Jimmy Dejeammes... I'd like to go back daily for the tofu that they make. Try the mochi made of brown rice and prepared in a variety of ways... All bread is baked there; high nutritional value... Among the beverages is Soyalac, made of soybean milk." It is made and distributed here by Saniku Shokuhin, the Seventh Day Adventist health food company. Neuroca, a Swiss coffee substitute, is also available at Hakumon. Phone before you go. Hakumon may be moving soon. Address: The Japan Times, Tokyo, Japan.

1783. Tabuchi, Ichiro. 1975. Nijû seiki no mana: Majikku beenzu no deban; Daizu-nyû no eikyô narabini chiryô kôka ni kansuru hôkoku. II. ["The manna of the 20th century." Magic beans' turn to go on stage: Report on the nutritional and therapeutic effects of soymilk]. *Shokuhin Kaihatsu* (*Up-to-Date Food Processing*) 10(2):27-31. Feb. [3 ref. Jap]
• ***Summary:*** Contents: Introduction. About the soymilk and Soyalac program. (Soyalac is made by San-iku Foods in Japan.) Nutritional and healing effects of formulated soymilk (*chôsei daizunyû*). Summary of clinical experiments with premature infants who were fed soymilk and then had body measurements taken, as reported by Dr. W.B. Omans et al. in the 1963 *Journal of Pediatrics* (62:98). Experiments on raising infants on soymilk at the Shanghai Hospital (*Eisei Byôin*) in China. Report on dairy milk allergies and their cures. Follow-up research on users of Soyalac. Experiments on the effects of soymilk on the growth of elementary and high school students. Conclusion.

Note: This is the earliest Japanese-language document seen (Aug. 2013) that uses the word *daizunyû* ("soybean milk") or the term *chôsei daizunyû* ("formulated soybean milk") to refer to soymilk. Address: San-iku Foods, Japan.

1784. *Anchorage Daily News* (*Alaska*). 1975. Sukiyaki from soybeans. March 24.
• ***Summary:*** Dorothea Van Gundy Jones, age 72, is teaching a four-night vegetarian cooking class beginning today from 7-9 p.m. at Anchorage National Gas Co. Three large photos show Dorothea cooking.

1785. **Product Name:** Cedar Lake Vegeburger (Meatless).
Manufacturer's Name: Cedar Lake Foods.
Manufacturer's Address: Box 116, Cedar Lake, MI 48812. Phone: 517-427-5590.
Date of Introduction: 1975 March.
Ingredients: Wheat gluten, water, soy flour, oatmeal, corn, yeast, salt, hydrolyzed vegetable protein, onion, celery salt.
Wt/Vol., Packaging, Price: 19 oz can
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Label printed 19 March 1975.

Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 22. Cedar Lakes. "Vegeburger" (19 oz).

Cedar Lake Foods wholesale price list. 1976. March 15.

1786. **Product Name:** Cedar Lake Vegetarian Mix for Sloppy Joes.
Manufacturer's Name: Cedar Lake Foods.
Manufacturer's Address: Box 116, Cedar Lake, MI 48812. Phone: 517-427-5590.
Date of Introduction: 1975 March.
Ingredients: Wheat protein, water, tomato paste, textured soy protein, corn meal, oatmeal, rehydrated celery, rehydrated green and red bell peppers, food yeast, soy sauce, salt, hydrolyzed vegetable protein.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Label printed 19 March 1975. Cedar Lake Foods wholesale price list. 1976. March 15.

1787. Miller, Harry W. 1975. Re: On soymilk, tofu, and their production. Letter to William Shurtleff, c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan, April 30. 2 p. Typed, with signature on aerogram.
• ***Summary:*** "Yesterday Apr. 28 your letter arrived and it was so helpful and interesting. I am answering your enquiries as best I can. The first is the hot and the cold grind. Soybeans are finding their way in so many types of foods these days and I think you will find depending on their place in the foods we will find varying procedures. On account of costs economy must be considered. Our research tells us that grinding with Stone Buhrs and disintegration with blenders equal same water soluble amount of solids. On a large scale Grinders are cheaper than disintegrators but [for] small production blenders are better.

"Also our findings keeping the temperature under 150 degrees Fahr. of the slurry before filtering gives us approximately the same yield as [if] brought to 212 degrees [boiling]. So when we make soy milk the higher temperature to filtering brings out of the fiber more of the bean taste. This is a question debatable, I know.

"When making ToFu we bring the slurry just up to boiling and our directions is wrong on saying the water extract is treated same for tofu as for soy milk. We know that long boiling or high pressure for at least 7 to 8 minutes at 100 Centigrade is needed to rid the bean of trypsin inhibiter or perhaps gas former. But not for the tofu. The figure of adding 556 grams cerelose or corn syrup to 16 lbs or 7½ kilos soy extract for milk is rather high, more than 7%. Though 7% is about the standard for carbohydrate in Mother's Milk. And we are inclined to follow the formula of human milk rather than Cows Milk for mankind. In our regular milk formula we aim to add 6% carbohydrate, as carbohydrates of soybeans are questionable.

"Providing you get the soy flavor out in processing. I agree that soymilk is good with less corn syrup. The sheet I

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sent you is the first run off and it needs some corrections and the sugar content should be lowered 1¼%. I have tried to calculate what the total solids are in your finished soy milk. Your water dilution may be less than ours. Out of 5 pounds of soybeans we make 50 pounds of soy milk, slightly over 6 gallons. To this has been added 3 pounds cerelose, 3O grams salt, 1 pound of corn oil. The resulting milk tests 13% solids.

"You make reference to our cutting the curd in 2 inch squares. It is general practise in cheese makers in this country to cut the curd by that, as the curd begins to form you run a sharp-edged stick, or in cheese plants a stainless steel long knife passing three the slit area is curd, so that the curd gathers together between the cuttings, and they know when best to separate and place in cheese pressing boxes. This may not be necessary in soy curd but it seems to be a guide to us when to place and or transfer to the cheese pressing box.

"We surely have something to learn [about] how to make so much Tofu out of a pound of soy beans. Your beans may be a little heavier in protein as we find the large beans we get yield more protein, but not that difference. We have reached 3 pounds but that depends on when we stop dewatering the curd, but any curd more than 3 pounds out of 1 pound of soy beans is hard to handle. But on Tofu we have much to learn, however on Soymilk and building up of maximum yield of total water soluble solids as also taste wise, that is getting rid of the beany flavor, we have definitely made progress and I think moved ahead of any that we have heard of. As for mouth feel, possibly more concentrated formula may be acceptable. The ratio of ingredients we take to the human milk formula and not cows milk made to rear a calf, a hairy animal and rapid grower. I did not have time this evening to review you chapter 10 on soy milk, as I am writing this at home and it is filed at my office with Loma Linda Foods. We have had experience in the above named coagulants, tried them all except sea water and sea salt. We mostly prefer Calcium sulphate and Glucono delta Lactone for convenience.

"I know that the Japanese are very meticulous in making the soy curd, and the people of using same. To translate their methods in writing, you have done very well, but still I can assure you that experience is needed in this field. Soy milk and Tofu the world as for western nations has yet to learn to use. Thanks for your letter and your points well taken and I remain, very sincerely yours, Harry Miller.

"Bill, I have written this letter at the end of a very busy day with many interruptions, so it is so poorly typed I almost decline to mail it but it does explain to you what we are doing. I assure you that soy foods are very hard to put over in U.S.A. but people are learning, they are very sensitive to soy flour and Tofu also soy Milk well made has a field for the future. HWM."

Note: Dr. Miller was age 95 years, 9 months and 28 days when he wrote this letter by himself, using a manual typewriter. He was born on 2 July 1879 in Ohio. Address: M.D., 11384 Norwood Ave., Riverside, California 92505.

1788. *Sunset* (*Menlo Park, California*). 1975. It's a year to grow soybeans. 154:244-45. April.
• ***Summary:*** Describes how to grow soybeans in a vegetable garden and how to use them as cooked green soybeans, as cooked dried soybeans, as sprouts, or roasted like peanuts. "For more complicated soybean uses like making soy milk or tofu, you might look at *The Soybean Cookbook* by Dorothea Van Gundy Jones (Arco Publishing, New York, 1974; $1.45).

"How to grow them: In the past, short or cool growing seasons in some areas made growing soybeans difficult. Now two varieties that can produce in shorter growing seasons are available. 'Early Green Bush' matures in about 85 days; you can order from Stokes Seeds, Box 548, Buffalo, New York 14240. 'Fiskeby V' is supposed to mature even faster, even in cool climates; order from Thompson and Morgan, Box 24, Somerdale, New Jersey 08083. In areas with long, hot summers, you can use 'Kanrich' or other slower but more widely available varieties."

1789. *Soybean Digest.* 1975. ASA promotes soy for nutrition. May. p. 8-9.
• ***Summary:*** American Soybean Assoc. market development activities from the Mexico City regional office helped production of soy protein products from less than 2 tons daily in 1971 to over 35 tons daily at present. Proteida resulted from the first government effort to introduce texturized soy protein (TSP) into meat products. The factory to produce Proteida was inaugurated by Mexico's President Echeverria in Sept. 1973. Initially only a few hundred pounds of meatballs and a pre-cooked patty called "Milanesa" were produced. "This patty requires no refrigeration and was developed by the National Nutrition Institute. Now this product is being sold in the government CONASUPO stores at a rate of approximately 110,000 lb/day at a very low price in low income areas. At a 25% TSP level this amounts to 27,500 lbs. of TSP daily." Proteida is produced by the Mexican government packinghouse.

Alborada is beef-flavored TVP which is made by the Miles/Worthington group. Sold in an attractive paperboard box, it "has received very good acceptance by the public and is being sold in all the leading supermarkets. It is also sold in large quantities to institutions such as restaurants, hospitals, meal packaging plants and canned food producers.

"Another TSP product, Protoleg, is the oldest product on the market. Its producer, Industrial de Alimentos, is now the largest manufacturer of soy protein products [in Mexico] and cannot keep up with the demand. It is the leader in Mexico with tasty and economically priced soy products that appeal to Mexican appetites.

"The largest volume of sales is soy flour for baking. The tortilla industry consumes some 60% of the total. The

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remaining 40% is about evenly divided between TSP and beverage or milklike products. The largest bakery in Mexico, Bimbo, plans to start producing a soy based milk substitute, containing sweet whey powder. The product will consume 5 million pounds of soy flour annually...

"Last December ASA's Mexico City office contracted for the services of an experienced home economist-nutritionist to give lectures, write articles and inform the public in general of the many benefits and advantages of soy protein. Mrs. Ruth S. Orellana has over 25 years experience in Mexico in human nutrition and diets and is doing an excellent job of promoting soy. ASA will soon publish a recipe booklet for soy based traditional dishes for Mexico and all Latin America. Mrs. Orellana will be travelling throughout the entire territory to spread the news about soy nutrition." A photo shows paperboard packages of the following products: Alborada, Protoleg, Rikiroz, Estrella Blanca, Soyacyt.

Note: This is the earliest English-language document seen (Aug. 2013) that uses the term "milklike products" (or "milklike product") in connection with soymilk.

1790. Miller, Harry W. 1975. Re: On soymilk, tofu, and their production. Letter to William Shurtleff, c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan, June 4. 2 p. Typed, with signature on aerogram.

• ***Summary:*** "Your much appreciated letter has been neglected along with considerable other correspondence. Two reasons we have been on a very crowded program of Research and that I have been away for a time. I do thank you for your notes on some of the items that we have written you.

"First point about the Cooking of soy milk. We are agreed on use of blender for home minimizing of soy bean particle size, though we do have a small Mexican mill use to grind soaked corn and works well but is hand driven and time consuming, can use for making peanut butter as well costs around US $15.00, hard to buy in U.S.A. The double boiler works quite well with brine in outer chamber and commercial salt is cheap here, but I also agree that by constant stirring, boiling can be carried on safely. The Chinese have an ideal system of steam jet cooking in which the lower chamber of a welded together double boiler in which steam is generated in the bottom pan and led by a pipe to the bottom of the cooking chamber so that you get no scorching and active boiling by the release of live steam into the milk of the upper pan. Its simple and takes the place of the steam boiler, except its adapted for milk and To fu making.

"Regards the richness of soymilk, we find the Americans like that thin soymilk best. Possibly its because the soy flavor is more diluted. The rule here in formulation is to make a gallon of Soy Milk out of one pound soybeans.

"As Soy milk keeps well for a week under refrigeration (40 degrees Fahr.) so the house wife likes to grind cook and prepare a weeks supply of soymilk for the family. But as yet the home method of making soymilk is just in the beginning and not many do it.

"You refer to the high percentage of cerelose used here in soymilk as compared with acceptance in Japan. Let me explain our position about the formulation of Soy Milk. The ratio of fat, protein and carbohydrate differs greatly as between cows milk, mare milk, pigs milk, water buffalo milk, human Milk and other animals. These proportions are reflected in the rate of growth, the question of a large hair coating as in the cow and sheep, the energy requirement as for energy nature does not choose to use Protein for combustion to work, its function is to repair muscles or care for protein loss in secretions and body regulators such as the ductless glands, Thyroid, adrenals etc., etc. for wach [?] animals growth an analysis should be the guide, for the first year of growth supplied by milk is a good guide. Human milk formula is fat 3.5%, protein 1.7 percent, Carbohydrate 6 to 7%. For an adult after growth 35 to 50 grams seems adequate Protein. Therefore we lean strongly to a standard formula for Soy Milk should be fat 3 to 3.5%, Protein 2 to 2.4%, Carbohydrate 6%. In a one to seven or eight dilution the soybean will yield almost 3% protein, a half the needed fat and so we add 2% fat in the form of liquid vegetable oil and as for carbohydrate edible carbohydrate is rated very low possibly not more than 1% so we add 5% sugar and prefer the cereal sugars with low sweetening effect such as corn syrup.

"Such a milk as I have just described and what we are making and aiming at can be used in cooking, baking as also for general beverage purposes.

"Now just a final word on Tofu, and we have much to learn to get 8 [?] pounds of marketable Tofu out of one pound of soybeans. Since To fu is exposed to heat after its made as milk is not, thus we pressure cook milk 10 minutes and Tofu just brought to boiling point and then curdled. In Tofu Making here when the curd jells, by raking a paddle a few times thru same seems to hasten the curd preparation to be transferred to the pressing box. It need not be two inches 3 or 4 inches divisions. What you have written on soymilk and Tofu is most interesting. Regret delays. with best wishes, very sincerely, Harry W. Miller.

"We have much to learn and am now working on making a loaf Cheese. We have made some progress and believe that we shall solve the problem in time." Address: M.D., 11384 Norwood Ave., Riverside, California 92505.

1791. *Food Processing* (*Chicago*). 1975. 38 new food plants. June. p. 32.

• ***Summary:*** A small photo shows a textured vegetable protein plant being constructed by Miles Laboratories at Schaumburg, Illinois. Size: 75,000 square feet. For making, freezing, packaging, and storing the Morningstar Farms line.

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Engineering, procurement, and construction by Arthur G. McKee & Co. Completed in Oct. 1974.

1792. Kohlman, R.F. 1975. Brazil: Soy proteins in Brazil. *J. of the American Oil Chemists' Society* 52(6):349A-350A. June.
• ***Summary:*** For more than 5 years soy protein isolates and concentrates have been made in Brazil by S.A. Moinhos Rio Grandenses–SAMRIG, at the rate of 1,000 tons per year. In Nov. 1974 the Brazilian subsidiary of Miles Laboratories and SAMRIG formed a joint venture named ALIPRO (Alimentos Proteicos Ltda.) The new company will focus on making and marketing textured protein foods and food ingredients.

1793. *Food Processing* (*Chicago*). 1975. Protein update: Guides to protein products and companies. Aug. p. 28, 33-34, 36, 38, 40-41, 44, 48, 50.
• ***Summary:*** Discusses soy protein products made by: ADM, Baltimore Spice, Cargill, Carnation Co., Central Soya Co., Custom Food Products Inc., DMI Inc., Far-Mar-Co., General Mills, Grain Processing Corp., Griffith Laboratories, Industrial Grain Products Ltd., Lauhoff Grain Co., Miles Laboratories, Nabisco, National Protein Corp., Paniplus Co., Ralcon Foods, Ralston Purina, Staley (A.E.) Co. (Protein Div.), Swift & Co.

Note: A table (p. 25) shows what soy proteins are available from what companies. Address: Assoc. Editor.

1794. *Consumer Reports.* 1975. A low-fat imitation of pork sausage. 40(9):525. Sept.
• ***Summary:*** About Morningstar Farms Breakfast Links, which are sold frozen and contain wheat gluten, soy, yeast, vegetable oils, egg albumen, sugar etc. The biggest selling point is their low fat content, however oil must be used when preparing the links. They were found to be a poor imitation of real links–"crumbly in texture and beanlike under a heavy mask of spices."

1795. Food Systems Branch and Research Branch, Agriculture Canada; Grain Marketing Office. Industry, Trade and Commerce. 1975. U.S. Food Protein Council (Document part). In: Plant Proteins in Canada: Utilization for Human Food. 1975. Canada. iii+ 163 p. See p. 50. Sept. 28 cm. [1 ref]
• ***Summary:*** The three objectives of the Council are listed. "Members of the Council include: Archer Daniels Midland, Cargill, Central Soya, Far-Mar-Co., General Mills, Griffith Laboratories, Lauhoff Grain, Miles Laboratories, National Protein, Ralston Purina, A.E. Staley, Swift, Honeymead Products, Riceland Foods, Pfizer, and Nestlé."

Source: Grain Marketing Office, Trade Commissioner Service of I.T. & C. [Department of Industry, Trade and Commerce]. Address: Canada.

1796. Food Systems Branch and Research Branch, Agriculture Canada; Grain Marketing Office. Industry, Trade and Commerce. 1975. British vegetable protein producers and distributors (Document part). In: Plant Proteins in Canada: Utilization for Human Food. 1975. Canada. iii+ 163 p. See p. 51. Sept. 28 cm. [1 ref]
• ***Summary:*** The following British companies (all but 1 of the 17 listed) make or distribute soya protein products: 1. British Soya Products Ltd., Ware, Herts. 2. Rank, Hovis McDougall Agricultural Industries Ltd., London. 3. Messrs. Courtaulds, Manchester. 5. Spillers Ltd., Liverpool. 6. Chambers & Fargus Ltd., Hull. 7. Christian Salvensen Ltd., Grimsby. 8. British Arkady Ltd., Manchester. 9. Soya Foods Ltd., Barking, Essex. 10. Amsal Ltd., London. 11. Bush Boake Allen Ltd., London. 12. Oppenheimer Casing Co. (UK) Ltd., Edinburgh. 13. Griffith Laboratories (UK) Ltd., Summercotes, Derby. 14. Miles Laboratories, Bridgend, Glamorgan. 15. Croda Premier Ltd., Hull. 16 Crosse & Blackwell Ltd., Croydon. 17. Unilever Raw Materials Ltd., London.

Source: Grain Marketing Office, Trade Commissioner Service of I.T. & C. [Department of Industry, Trade and Commerce]. Address: Canada.

1797. Worthington Foods, Inc. Div. of Miles Laboratories, Inc. 1975. When you drop the meat from your diet, we make sure you don't drop the protein (Ad). *Mother Earth News* No. 35. Sept. p. 117. And No. 39. May 1976, p. 59.
• ***Summary:*** "A vegetarian diet can be a very a healthful diet. But you must take care to provide yourself enough protein to adequately replace what was lost in eliminating meat. Worthington Foods makes tasty, meatless dishes from nutrition-rich soy and wheat protein. And in a variety that makes your vegetarian diet not just healthful, but interesting.

"Whatever your reasons for choosing a vegetarian diet, Worthington will help to make it healthful.

"Worthington products are available in your local health food or specialty food store."

This ad also appeared in *Vegetarian Times* (May/June 1979, p. 13). Address: Worthington, Ohio 43085.

1798. *Quick Frozen Foods.* 1975. $100-million market by 1980 is foreseen for frozen soy extenders and analogues: Textured soy protein. 38:24-26. Oct.
• ***Summary:*** The market is growing for textured soy protein products that can "stand in" for more expensive meat, poultry and seafood in frozen usage. The trend is toward analogues that extend animal protein to the point of replacing it as the main component in new products entering the field. After industry consultation this magazine estimates that by 1980 these extenders and analogues combined will range from a low of $60 million to a high of $200 million in frozen food use.

Products discussed include: Central Soya Co.'s

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Response (textured soy protein concentrate). Ardex 700, one of the "TVP" [sic, soy protein concentrate] products from ADM. Nabisco's VMR line with its beef, chicken, and seafood extenders. General Mills' Bontrae "no-meat meats" (beef, chicken and ham products spun from soy protein isolate) and no-tuna tuna. Most Bontrae products are sold frozen to food service people for better flavor. Mott's Soyloin entree line available from the Foodservice Division of Duffy-Mott Company, Inc., New York, NY. "These frozen, pre-cooked products include soy-analogues resembling traditional Sloppy Joe, Chili Con Carne, Chili Hot Dog Sauce with Meat, Sliced Meat Loaf in Tomato Sauce, Salisbury Steak in Gravy or in Sweet 'N' Sour Sauce, Meat Balls with or without Spaghetti Sauce."

"In the retail field, complete lines of vegetable protein analogues of animal foods are exemplified by the products of Worthington Foods, Worthington, Ohio... and the Joshua Foods Division of Food Producers, Inc., Minneapolis, Minnesota, among others... Twenty-eight of the [Worthington] items are frozen, with sales amounting to almost half of the company's total. The frozen products are predominantly spun from high-protein isolates. Their primary advantage is their well-wrought texture, and they also have shipping and storing advantages.

"The Joshua Foods products include meatless 'sausage' pizza, meatless 'meat' casseroles with noodles and macaroni, meatless lasagna, stew and barbecue cubes. All are shipped frozen. The Joshua Foods Division is in partnership with the Israeli developer of the special structurization process the company utilizes. The firm first produced its basic Joshua Filet, simulating beef, in 1973, and offered it to hospitals and other institutions. Retail product development followed success in the institutional market in the same year–initially with ground beef extender."

"General Mills is producing retail frozen soy products under the 'Betty Crocker' label in addition to 'Bontrae.' First introduced were Betty Crocker Country Cuts–textured soy protein with a flavor like ham, and Country Cuts with a flavor like chicken. The precut chunks may be thawed and served in salads or added directly from the freezer and heated with various hot dishes.

"Two new Betty Crocker products, in three varieties each, are currently undergoing testing in the Fort Wayne and Tucson marketing areas–a croquette entree in ham, chicken and seafood flavors (with the seafood variety containing some real cod) and ham, chicken and barbecue beef meat sticks that blend real animal protein with vegetable protein in a potato crust. Each 11½-ounce box of Meat Sticks contains 12 sticks."

1799. Shurtleff, William. 1975. Chronology of early tofu and miso classes in California and Hawaii: 25 Oct. 1975 to 14 Feb. 1976. Lafayette, California. 1 p. Unpublished manuscript.

• ***Summary:*** Each class started with a talk about soybeans, soyfoods protein, world hunger, and meatless/vegetarian diets. Then a series of about 25 color slides demonstrated how to make tofu at home. Other slides showed favorite tofu recipes and how tofu was made in a traditional Japanese shop.

1975 Oct. 25–We do our first real "Tofu Class" at Westbrae Natural Foods in Berkeley, California, arranged by Bob Gerner and Liz Horowitz. Thrilling to have an audience of about 14 interested people. On Oct. 30 at Westbrae 16 people attend, and on Nov. 8, 18 people.

November tofu classes: Nov. 14th–Rainbow Grocery (arranged by Bill Crolius), 23rd–Esalen Institute in Big Sur (John Russel).

December tofu classes. 2nd–We do a big tofu class in living room of 790 Los Palos Dr. with lots of publicity from a big newspaper article on our work; 47 attend. 4th–Acalanes (Sandy Hills, 89 attend), 6th Westbrae (Bob Gerner), 7th–San Francisco Vegetarian Society (Dixie Mahy, 67 attend), 8th–Seventh-day Adventist Pacific Union College (Mary Eighme, 48 attend), 11th–Dawn Horse Bookstore in S.F. (Moe).

1975 Dec. 12–*Book of Tofu* in hand. Since we started it on 22 Oct. 1972, it had taken just about three years to write.

Dec. 13–Sept. 1976–I hand deliver *The Book of Tofu* to many bookstores and food shops that wish to sell it, typically selling 4–50 per stop at 40% discount: Communion Vegetarian Restaurant #2, Nutrition in a Nutshell, Open Sesame, Lafayette Natural Foods, San Francisco Vegetarian Society, Kinokuniya Bookstore, Rising Sun (440 Judah St. in San Francisco), Diablo Oriental Foods, San Jose Tofu Co., Soko Hardware, Effie Chow & East West Academy, Ted Nordquist (1536 Versailles Ave., Alameda, CA 94501), The Wok Shop (804 Grant Ave., SF), Westbrae Natural Foods, etc. By 24 July 1976, I had distributed 266 copies.

December tofu classes after we have our book: 13th & 14th–Jacques Delangre (Paradise, CA), 16th–East West Academy (Effie Chow), 17th–Westbrae, 18th–San Francisco Zen Center (Ed Brown), 19th–Fairfax (M. Squire).

Tofu classes/lectures in January 1976 in Northern California: 5th–Westbrae, 7th–St. Andrew's Church in Walnut Creek (Dorothy Headley), 8th–Kepler's Bookstore (Jeffrey Shurtleff & Hank Maiden) 12th–Odiyan, where I see David Mastrandrea after many years, 14th–Berkeley Co-op Natural Food Center at 1414 University Ave. (Susan Kishi, with Ted Nordquist and Janet Fehring [Ahava] helping to make tofu dip; 105 attended), 15th–San Francisco Medical School and East West Academy of Healing Arts (Effie Chow), 17th–Persimmon (Peter Godfrey), 20th–United Energy Co-op (Sri Ramon).

Jan. 16-18–Visit Bubba Free John at his community. Do and film a program on tofu.

Jan. 20-30?–Tofu trip to Los Angeles with mom and Akiko. Many tofu and miso classes. 22nd–East West

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Academy of Healing Arts (Effie Chow in a church), 24th–weird Los Angeles Vegetarian Society (Blanche Leonard, 150 people attend), 25th–East West Center (P. Retzsky), 27th–Dr. Harry Miller and Loma Linda Foods (70 attend), 29th–Ojai (Luke Gatto). We visit Frazier Farms, a huge natural foods supermarket in Escondido, then go to San Diego for an interview with *Well Being* magazine (David & Barbara Salat).

Feb. Tofu classes: 4th–Walnut Creek Co-op, 6th–Albany church (Nancy Dohur).

Feb. 10 to Oahu, Hawaii. Feb. 12th–tofu class for Seventh-day Adventist group (Naomi Yamashiro, 80 attend), 13th–Honolulu, Hawaii, Kyukendall Hall at Univ. of Hawaii at Manoa (David Lee "Kalm" Sukowske, 140 attend). Then Feb. 14 arrive in Japan. 30-minute KQED TV special on tofu we made shown in California after we left. Expected viewership is estimated at 45,000.

In summary, from October 1975 until February 1976 we did 35 tofu and miso programs in California and Hawaii plus numerous media appearances and interviews. 1,300 people attended these classes. We requested that an admission of no more than $1 per person be charged. Our honoraria, shared with the sponsors, totaled $600. We also sold 366 copies of our books.

Note 1. This is the earliest document seen (Dec. 2001) concerning a natural foods retail chain–Frazier Farms natural foods supermarket.

Note 2. This is the earliest document seen (Aug. 2013) concerning the work of Ted Nordquist with soyfoods. Address: 790 Los Palos Dr., Lafayette, CA 94549.

1800. Singer, Peter. 1975. Animal liberation: A new ethics for our treatment of animals. New York, NY: New York Review. Distributed by Random House. xix + 301 p. Oct. Illust. Index. 18 cm. Paperback edition published Sept. 1977 by Avon Discus. [200* ref]

• ***Summary:*** This book, a milestone in and "bible" of the animal rights movement worldwide, first popularized the concepts of animal rights and speciesism (pronounced SPEE-shees-iz-um, a term first used in 1973) as logical extensions of human rights and racism. It helped to make 1975 a year that saw explosive growth in the animal rights and vegetarian movements. Singer is an Australian academic.

The author, an Australian philosopher, argues for an end to oppression and exploitation of non-human animals, discusses animal experimentation and factory farming, and presents vegetarianism as an opportunity to take a political, economic, and moral stance in our daily lives.

Contents: Preface (It begins: "This book is about the tyranny of human over nonhuman animals. This tyranny has caused and today is still causing an amount of pain and suffering that can only be compared with that which resulted from the centuries of tyranny by white humans over black humans. The struggle against this tyranny is a struggle as important as any of the moral and social issues that have been fought over in recent years"). Acknowledgments. 1. All animals are equal... or why supporters of liberation for blacks and women should support animal liberation too. 2. Tools for research... or what the public doesn't know it is paying for. 3. Down on the factory farm... or what happened to your dinner when it was still an animal. 4. Becoming a vegetarian... or how to reduce animal suffering and human starvation at the same time. 5. Man's dominion... a short history of speciesism. 6. Speciesism today... defenses, rationalizations, and objections to animal liberation. Appendices: Cooking for liberated people (incl. Seventh-day Adventists, bread, peanut butter, tahini, miso, hummus, and Tartex, Chinese recipes, mung bean sprouts and tofu, Indian recipes, Middle Eastern recipes, flat Arabian bread, chickpeas and felafel, Italian recipes, macrobiotic recipes {incl. soy sauce, soybeans}, meat substitutes {incl. TVP, Granburger, Protoveg, Itona, Vitpro, Loma Linda meatless frankfurters, imitation bacon bits}, and milk substitutes–often made from soybeans), further reading, organizations.

Singer's book was not just a philosophical treatise. It was a call to action. Invoking the concept of speciesism, Singer deplored the historic attitude of humans toward non-humans as a "form of prejudice no less objectionable than racism or sexism," and urged that the liberation of animals become the next great cause after civil rights and the women's movement. Singer's popular book produced two important effects. First, it reintroduced to the anti-vivisectionist cause an intellectual basis, a philosophical orientation, and a moral focus. Second, it attracted to the animal rights cause a host of new activists who started many new organizations. The most active and visible of these has been PETA (People for the Ethical Treatment of Animals, in Washington, DC), which by 1988 was thought to have 200,000 dues paying members in the USA.

Singer maintains that: "to treat animals as resources and argue about when use is sustainable, is a classic example of economic rationalism running heedlessly over non-economic values. We should no more hand our wild animals over to the tender mercies of the market than we should hand our children over to the same market forces. Neither children nor wild animals are a 'product' or a 'resource' at all."

Note: This is the earliest document seen (Oct. 2009) that mentions Itona, a British maker of soymilk and meat alternatives. Address: Australia.

1801. **Product Name:** Cedar Lake Soynut Loaf (Meatless).
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1975 November.
Ingredients: Water, peanut butter, soy flour, wheat protein, tomato juice, peanut meal, salt, vegetable seasoning.
Wt/Vol., Packaging, Price: 19 oz can

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How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 22. Cedar Lakes. "Soynut Loaf."
Label.

1802. **Product Name:** Cedar Lake Chippetts / Chipettes (Meatless).
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1975 November.
Ingredients: Wheat protein, water, soy sauce, vegetable seasoning, salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 33. Cedar Lakes. "Chippetts" (19 oz).
Label. Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. "Chipettes–Meatless. Cedar Lake foods."

1803. **Product Name:** Cedar Lake Sloppy Joe (Meatless).
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1975 November.
Ingredients: Wheat protein, water, tomato sauce, vegetable seasoning, cornmeal, soy sauce, oatmeal, corn oil, salt, brown sugar.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 22. Cedar Lakes. "Sloppy Joe" (19 oz).
Label.

1804. **Product Name:** Cedar Lake Hostess Cuts (Meatless).
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1975 November.
Ingredients: Wheat protein, whole wheat flour, water, soy sauce, vegetable seasoning, salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 22. Cedar Lakes. "Hostess Cuts" (19 oz). Plus Label sent by Cedar Lake.
Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. First ingredient is written as "Wheat gluten."

1805. **Product Name:** Cedar Lake Vegetarian Chops.
Manufacturer's Name: Cedar Lake Foods.
Manufacturer's Address: Box 116, Cedar Lake, MI 48812. Phone: 517-427-5590.
Date of Introduction: 1975 November.
Ingredients: Wheat gluten, water, soy sauce, salt, hydrolyzed vegetable protein, onion, celery salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 22. Cedar Lakes. "Vege Chops" (19 oz).
Cedar Lake Foods wholesale price list. 1976. March 15. Label printed March 1976.

1806. Cedar Lakes. 1975. Products (Document part). In: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. '75. Ann Arbor, Michigan. 108 p. See p. 33
• ***Summary:*** Soynut Loaf (20 oz). Vegeburger, Vegetarian Chili Burger, Vegetarian Chops, Turkettes, Sloppy Joe, Tender Tip, Hostess Cuts, Ready Roast, Meatlike, Chippettes (19 oz each), Breakfast Links, Luncheon Loaf (14 oz each). Note the spelling "Cedar Lakes," rather than "Cedar Lake." It may be an abbreviation of Cedar Lake Foods. Address: [Cedar Lake, Michigan].

1807. Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. '75. Ann Arbor, Michigan. [vii] + 93 + 8 p. Index. Illust. 28 cm.
• ***Summary:*** This catalog, largely printed by a computer, contains many ads on unnumbered pages. Contents: Hi! Ordering and service information. Bulk: Whole grains, beans, seeds and nuts, dried fruit, nut butters, etc. Refrigerated and frozen ("Frozen meats {beef}–No DES, steroids, female hormones, antibiotics, or stimulants used in feeding; Chickens–No hormones & antibiotics. Ask for turkeys and hens during Thanksgiving." "Frozen soy products: soy milk and tofu soybean curd"). Books. Packaged (by company and product category). Index by product. Index by manufacturer.
"We are happy to announce that Midwest and Mountain High are now one entity... We go into the fall and winter seasons with a fall and winter catalog, delivery schedule, and computer system." For new developments, watch the monthly newsletter and sale sheets. "Your Friends at Midwest."
Includes the following ads (the number is that of the facing page). Wheat Stalk Soya Burger (Cotati, California, p. 17). Arrowhead Mills (p. 27). Dr. Bronner's Magic Soap (p. 32). Chico-San (p. 35). Erewhon (p. 41, incl. "Trail Mix,

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Niks"). Fearn Soya Foods (p. 42; shows a package of Fearn Soy/o Buckwheat Pancake Mix). Flavor Tree–Pernut soy beans (p. 42). Hain (p. 49, "Cold pressed safflower oil," mayonnaise, and margarine). Health Main (p. 54; soy is not mentioned–only natural potato chips and yogurt dressing & dip). Infinity Herbal Products Ltd. (p. 56). Malt-O-Meal–Soy Town (dry roasted soy beans, p. 60). NF Factors (Lafayette, Calif., p. 67. A photo shows a can of Protesoy). Pure & Simple (p. 72, 795 West Hedding St., San Jose, California 95126; mainly fruits, fruit juices, fruit butters, vinegars). Sovex (p. 83-84. "The fastest selling natural cereal line on the market... Here's the one that started it all, the original Crunchy Granola"). Viobin (wheat germ oil, p. 85F, 89). Tiger's Milk Products (p. 86).

Companies whose products are listed with ads include: Back to Nature (granola, p. 28). Country Natural (granola, p. 36). El Molino (p. 38-39; incl. Cara Coa Crunch Bar, Carob Fruit & Nut Bar, Carob Mint Candy, Chia Seeds, Flaxseed–Whole, Pumpkin seeds, Soybeans–whole, Soya flour, Soya grits, Carob Coated Soybeans). Ener-G-Foods–Jolly Joan (incl. Instant Soy Milk Powder, Wheat & Soy P&W [Pancake & Waffle] Mix {regular and low salt}, p. 39). Flavor Tree (Pernola cereal, Pernut soy beans–salted, cinnamon, salt free, garlic, Pernut toasted soybeans–salted, salt free, garlic, onion). Wok sets in gift box, Quaker City grain grinder, Corona hand mill (p. 58). Lassen Foods (granola, p. 60, 60F). Mac Knives (p. 60). Orjene (p. 70-71). Parkelp–Ocean Labs (p. 71, incl. Sea Zun).

The Chico-San Inc. ½-page ad (facing p. 35) features four products; a photo of each is given and each is K-Parve: Rice Cake San-Wich (filled with sesame seeds and Yinnies Rice Syrup). Yinnies Rice Syrup (natural sweetener, made from rice and barley). Yinnies (traditional oriental confection, wrapped like individual candies). Rice Cakes in 4 varieties: Salted or Unsalted, Rice Cakes with Millet–Salted. Rice Cakes with Buckwheat–Salted. "Other Chico-San Products: Organically grown brown rice. Lima soy sauce, miso (soybean puree), rice malt vinegar, sesame butter, sesame oil, nigari, barley koji, tekka, sesame salt, sea salt, salt plums, kuzu, organic rice cream, organic rice flour, black soybeans, azuki beans, sea vegetables, mu tea, lotus root tea, twig tea, toothpowder, seaweed shampoo." Address: Ann Arbor, Michigan 48107. Phone: 313-769-8444 or in Area 313 1-800-552-6297.

1808. Phillips, Roland L. 1975. Role of life-style and dietary habits in risk of cancer among Seventh-day Adventists. *Cancer Research* 35:3513-22. Nov. [52* ref]
• ***Summary:*** "The Seventh-Day Adventist population abstains from smoking and drinking; about 50% follow a lacto-ovo-vegetarian diet [virtually all abstain from pork products]; and most avoid the use of coffee, tea, hot condiments and spices. Existing data on cancer mortality in Seventh-Day Adventists clearly document mortality rates that are 50 to 70% of general population rates for most cancer sites that are unrelated to smoking and drinking." Data collected here strongly suggest that the lacto-ovo-vegetarian diet practiced by Adventists protects against colon cancer, and that meat consumption, especially beef and lamb, increases relative risks of colon cancer. The results also show that vegetarians have a lower rate of breast cancer.

"Seventh-Day Adventists are an evangelical religious denomination with about 2.5 million members worldwide and about 500,000 members in North America. About 100,000 of these live in California." Address: Dep. of Biostatistics & Epidemiology, Loma Linda Univ. School of Health, Loma Linda, California 92354.

1809. Shubik, Philippe. 1975. Potential carcinogenicity of food additives and contaminants. *Cancer Research* 35(11):3475-80. Nov. [20 ref]
Address: Eppley Inst. for Research in Cancer, Univ. of Nebraska Medical Center, Omaha, Nebraska 68105.

1810. Wattenberg, Lee W. 1975. Effects of dietary constituents on the metabolism of chemical carcinogens. *Cancer Research* 35(11):3326-31. Nov. [58* ref]
• ***Summary:*** Seventh-day Adventists have a higher intake of flavones, which are strong inducers of enzyme systems responsible for detoxifying carcinogens such as benzo(a) pyrene and nitrosamines. Address: Dep. of Lab. Medicine and Pathology, Univ. of Minnesota School of Medicine, Minneapolis, MN 55455.

1811. Sternberg, M.; Kim, C.Y.; Schwende, F.J. 1975. Lysinoalanine: Presence in foods and food ingredients. *Science* 190(4218):992-94. Dec. 5. [13 ref]
• ***Summary:*** This unusual amino acid (LAL) has been implicated as a renal toxic factor in rats. It may be created when soy proteins are treated with alkali. "Although it has been reported to occur in both edible and nonfood proteins only after alkali treatment, it has now been identified in food proteins that had not been subjected to alkali. Lysinoalanine is generated in a variety of proteins when heated under nonalkaline conditions."

Table 1 (p. 993) gives the results of LAL analyses in home-cooked foods, food ingredients, and commercial food preparations (in micrograms of LAL per gram of protein). In home-cooked foods, the largest amounts are found in: (1) Egg white, pan fried 30 minutes at 150ºC 1,100. (2) Egg white boiled 30 minutes 370. In commercial food preparations: (1) Simulated cheese 1,070. (2) Evaporated milk 860. (3) Infant formula–milk 640. In food ingredients: (1) Whipping agent 50,000. Sodium caseinate 6,900. Egg white solids, dried 1,820. Hydrolyzed vegetable protein (a total of 18 commercial samples of different batches from five manufacturers) 40-500. Soya protein isolate (a total of 45 commercial samples from two manufacturers) 0-370.

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Table 2, titled "Formation of LAL in proteins by heating under nonalkaline conditions" (p. 994, varying concentration, temperature, time, and pH) shows: Bovine serum albumin 3,500. Casein 1,700. Lysozyme 1,000. Ovalbumin (150-570–increases with increasing pH). Soya globulin (120ºC for 16 hours) 40-130–as the pH rises from 2 to 6. Soya globulin (100ºC for 3 hours at pH 6.5) 130. Address: Miles Laboratories, Inc., Elkhart, Indiana 46514.

1812. Cohen, Francine. 1975. Peanuts: Man's best friend. *Herald of Health* 52(12):4-6. Dec.
• ***Summary:*** "Peanut butter has a history: The origin of peanut butter is somewhat obscure, but it appeared around 1890 and its 'discovery' has been credited to John Harvey Kellogg.

"This pleasantly palatable paste was used in sanitariums for patients because of its high protein and low carbohydrate content and easy digestibility. A St. Louis, Missouri, physician was the first to manufacture it commercially, and he recommended its use by invalids because of its high nutritional value.

"Another doctor recommended roasted peanuts for 'the corpulent, diabetics, and those with kidney diseases.' But for general use limited sales and high cost of grinding equipment kept the price too high."

1813. Shurtleff, William; Aoyagi, Akiko. 1975. The book of tofu: Food for mankind. Hayama-shi, Kanagawa-ken, Japan: Autumn Press. 336 p. Illust. by Akiko Aoyagi. Index. Dec. 28 cm. Rev. ed. 1977 Autumn Press, Brookline, MA. [53 ref]
• ***Summary:*** This pioneering work started the "tofu revolution" in America. Contents: Preface. Acknowledgments. Part I. Tofu: Food for mankind. 1. Protein East and West. 2. Tofu as a food: Introduction, rich in high quality protein (NPU, biological value, protein score, amino acid content), high protein complementarity (tofu contains an abundance of lysine, an essential amino acid that is deficient in many cereal grains; increase usable protein by combining tofu with wheat, rice, corn, etc.), easy to digest, an ideal diet food, low in saturated fats and free of cholesterol, rich in vitamins and minerals, a health-giving natural food, backbone of the meatless / vegetarian diet, free of chemical toxins, low in cost, easily made at home, quick & easy to use, versatile.

3. Getting started: Introduction, buying and storing tofu, basic ingredients (whole-wheat flour, miso {rice-, barley-, and soybean miso, special Japanese miso, Chinese chiang}, oil, brown rice, salt, shoyu {natural shoyu, shoyu, Chinese soy sauce, synthetic or chemical soy sauce}, sugar, vinegar, monosodium glutamate {MSG}), Japanese kitchen tools (each illustrated), preparatory techniques (salt rubbing, rinsing and pressing leeks and onions, soaking burdock root, reconstituting dried sea vegetables {dried hijiki, wakame, agar}, wheat gluten and kampyo [kanpyo], parboiling, cutting tofu and vegetables, using sesame seeds, toasting nori, preparing a steamer), basic recipes (soup stocks and broths {dashi}, basic shoyu dipping sauces {*tsuke-jiru*}, miso toppings {sweet simmered miso / *nerimiso*, miso sauté / *abura miso*, special miso toppings and dipping sauces, finger lickin' miso, and regular miso}, miso salad dressings, nut and seed butter toppings, spreads and dressings, basic sauces, rice, noodles and other basic preparations).

Our favorite tofu recipes (lists about 80 recipe names for each of the different types of tofu, plus soymilk, yuba, whole soybeans, gô, okara, and curds; very favorites that are also quick and easy to prepare are preceded by an asterisk).

Part II. Cooking with tofu: Recipes from East and West (500 recipes). 4. Soybeans: History of soybeans and "soybean foods," cooking with whole dry soybeans, roasted soybeans (*iri-mame*), fresh green soybeans (*edamame*, incl. a recipe for "Sweet emerald bean paste {*Jinda*}),*"* kinako (roasted full-fat soy flour, incl. Japanese health food treats such as *kinako amé, gokabo, kokusen, kankanbo,* and *abekawa mochi*), soybean sprouts (*daizu no moyashi*), natto ("sticky fermented whole soybeans," with "gossamer threads"), tempeh (fermented soybean cakes), Hamanatto and Daitokuji natto (raisin-like natto), modern western soybean foods (natural soy flour [full-fat], soy granules, defatted soy flour and grits, soy protein concentrates, soy protein isolates, spun protein fibers, textured vegetable protein {TVP}, soy oil products). 5. Gô (a thick white puree of well-soaked uncooked soybeans). 6. Okara or Unohana. 7. Curds and whey. 8. Tofu (includes history, and preparatory techniques: Parboiling, draining, pressing {towel and fridge method, slanting press method, sliced tofu method}, squeezing, scrambling, reshaping, crumbling, grinding, homemade tofu (basic, from powdered soymilk, fermentation method related to soymilk yogurt), tofu quick and easy {incl. Chilled tofu–Hiya-yakko}, tofu dressings, spreads, dips and hors d'oeuvre {incl. Creamy tofu dressings and dips, Tofu mayonnaise dressing, Tofu tartare sauce, Tofu cream cheese, Tofu sour cream, Tofu cottage cheese, Tofu guacamole}, tofu in salads {Western style and Japanese style salads incl. Shira-ae}, tofu with sandwiches and toast, tofu in soups {Western style and Japanese style soups, incl. miso soup}, tofu in sauces, tofu in breakfast egg dishes, tofu baked, tofu sautéed, stir-fried or topped with sauces {incl. Mabo-dofu [Ma Po doufu]}, deep-fried tofu, tofu with grains, tofu broiled {incl. Tofu dengaku}, tofu simmered in one-pot cookery and seasoned broths, tofu steamed, tofu desserts {incl. Tofu whipped cream or yogurt, Banana tofu milkshake, Tofu icing, Tofu ice cream, Tofu cheesecake, Tofu-peanut butter cookies}).

9. Deep-fried tofu: Thick agé or nama-agé (incl. *atsu-agé* meaning "thick deep-fried tofu," "three-cornered agé" {*sankaku-agé*} in Kyoto, agé cubes {*kaku-agé*}, "five-color agé" {*gomoku-agé*}), ganmo or ganmodoki (incl. *hiryozu / hirosu*, "Flying Dragon's Heads," "treasure balls," "Ganmo

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treasure balls"), agé or aburagé (incl. *kiji*, "agé pouches," "crisp agé", *kanso aburagé*, "agé puffs," "fried soybean cakes," "hollow agé cubes," "Smoked tofu," p. 189-91, 197).

Note 1. This is the earliest English-language document seen (April 2013) that contains the following terms related to deep-fried tofu (p. 180-90): "Thick agé," *nama-agé*, *atsu-agé*, *Hiryozu*, "Dragon," "Flying Dragon's Heads," "treasure balls," "five-color agé," *gomoku-agé*, "Ganmo treasure balls." "fresh or raw deep-fried tofu," "three-cornered agé," *sankaku-agé*, "agé cubes," *kaku-agé*, *kiji*. "agé pouches," "crisp agé," *kanso aburagé*, "agé puffs," "fried soybean cakes," or "hollow agé cubes."

10. Soymilk. 11. Kinugoshi ("*Kinu* means 'silk'; *kosu* means 'to strain'; well named, kinugoshi tofu has a texture so smooth that it seems to have been strained through silk." It is made from concentrated soymilk). 12. Grilled tofu (incl. sukiyaki). 13. Frozen and dried-frozen tofu. 14. Yuba (incl. many meat alternatives such as Yuba mock broiled eels, Buddha's chicken, Buddha's ham, sausage). 15. Tofu and yuba in China, Taiwan, and Korea (incl. Savory tofu {*wu-hsiang kan*}; see p. 258 for illustrations of many meat alternatives, incl. Buddha's fish, chicken, drumsticks, and duck, plus vegetarian liver and tripe, molded pig's head, and molded ham). One type of Korean soybean miso is called *kotsu jang* [sic, *kochu jang*]. When tofu is served with miso [Korean-style, *Tenjang*] as the dominant seasoning, and with rice, "it becomes the popular *Tenjang Chige Pekpem"* (p. 262). 16. Special tofu.

Note 2. This is the earliest (and only) English-language document seen (March 2009) that uses the word "Tenjang" to refer to Korean-style soybean jang (miso).

Part III–Japanese farmhouse tofu: Making tofu for more and more people. 17. The quest. 18. Making community tofu. 19. The traditional craftsman. 20. Making tofu in the traditional way.

Appendices: A. Tofu restaurants in Japan; many are vegetarian: In Tokyo: Sasa-no-yuki / Sasanoyuki, Goemon, Hisago, Sanko-in, Shinoda-zushi, Dengaku (south of Tokyo in Kamakura). In Kyoto: Nakamura-ro, Okutan, Takocho, Izusen, Junsei, Nishiki, Hakuun-an, Rengetsu, Sagano, Sorin-an. Tea ceremony cuisine (*Kaiseki ryori*), Zen temple cookery or Buddhist vegetarian cookery (*Shojin ryori*), Tea ceremony cookery from China (*Fucha ryori*), Wild gathered cookery (*Sansai ryori*). A directory of these and others, with addresses and phone numbers, is given (p. 312).

B. Tofu shops in the West (Directory of 43 shops in the USA, 3 in Europe, and 3-7 in Latin America {Mexico City, Rio de Janeiro and Sao Paolo, Brazil}). C. People and institutions connected with tofu. D. Table of equivalents. Bibliography. Glossary. Index. About the authors (autobiographical sketches; a photo shows Shurtleff and Aoyagi, and gives their address as New-Age Foods Study Center, 278-28 Higashi Oizumi, Nerima-ku, Tokyo, Japan 177). Sending tofu in the four directions.

Pudding recipes include: Rice pudding with gô and apple (p. 76, incl. 2 cups soymilk). Tofu chawan-mushi (p. 147; Steamed egg-vegetable custard with tofu). Tofu fruit whips (p. 148). Tofu rice pudding (p. 150, incl. 1 cup soymilk). Tofu custard pudding (p. 152). Soymilk custard pudding (p. 208). Brown rice pudding (p. 208, with 2 cups soymilk). Soymilk chawan-mushi (p. 209). Chawan-mushi with yuba (p. 249).

Dessert recipes include: Tofu whipped cream or yogurt (p. 148; resembles a pudding or parfait). Tofu ice cream (p. 149, with chilled tofu, honey, vanilla extract and salt). Banana-tofu milkshake (p. 149). Tofu cream cheese dessert balls (p. 149). Tofu icing (for cake, p. 149). Tofu cheesecake (p. 150). Tofu-pineapple sherbet (p. 151). Also: Soymilk yogurt (cultured, p. 205). Healthy banana milkshake (p. 206). On p. 160 is a recipe for "Mock tuna salad with deep fried tofu."

Note 3. This is the earliest English-language document seen (Sept. 2013) that uses the term "Tofu ice cream" to refer to soy ice cream or that contains a recipe for "Tofu ice cream."

Note 4. This is the earliest English-language document seen (April 2013) that uses the term "Tofu Cheesecake" and the first to give a recipe for a tofu cheesecake.

Note 5. This is the earliest English-language document seen (Oct. 2013) that uses the term "Tofu sour cream" (p. 109) or that contains a recipe for "Tofu sour cream."

Note 6. This is the earliest English-language document seen (April 2013) that uses the term "tofu milkshake" or that gives a recipe for a shake made with tofu.

Note 7. This is the earliest English-language document seen (Jan. 2012) that uses the term "sticky fermented" to refer to natto.

Note 8. This is the 2nd earliest English-language document seen (April 2013) that uses the term "dried-frozen tofu."

Note 9. This is the earliest English-language document seen (April 2013) that describes preparatory techniques for tofu (p. 96-98).

Note 10. This is the earliest English-language document seen (April 2013) that contains the term "smoked tofu."

Note 11. This is also the earliest English-language document seen (April 2013) that uses the term "kinugoshi tofu" to refer to silken tofu.

Note 12. As of March 2007, the various English-language editions of this book have sold more than 616,000 copies.

Note 13. This is the earliest English-language document seen (Aug. 2011) that contains the term "Modern Western soybean foods" (see p. 69), a term that Shurtleff would soon (by 1983) replace by the more accurate "Modern soy protein products."

Note 14. This is the earliest published English-language document seen (Jan. 2012) that contains the term "creamy

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tofu dressings" (or "dressing").

Note 15. This is the earliest English-language document seen (Sept. 2012) that contains the term "Soymilk yogurt."

Note 16. This is the earliest document seen (Oct. 2012) that contains an adequate or detailed description of how to make yuba at home.

Note 17. This is the earliest English-language document seen (June 2013) that contains the term "whole dry soybeans."

Note 18. This is the earliest published English-language document seen (Oct. 2013) that contains the term "Tofu whipped cream" (regardless of capitalization). This term appears on pages 113, 148 (with recipe), 149, 153, and 179. Address: c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.

1814. Shurtleff, William; Aoyagi, Akiko. 1975. The book of tofu: Food for mankind (Illustrations–line drawings). Hayama-shi, Kanagawa-ken, Japan: Autumn Press. 336 p. Illust. by Akiko Aoyagi. Index. Dec. 28 cm. Rev. ed. 1977 Autumn Press, Brookline, MA. [53 ref]

• ***Summary:*** Continued: Illustrations (line drawings, both numbered and unnumbered) show: A hearth in a traditional Japanese farmhouse with tofu dengaku roasting around a bed of coals in a sunken open-hearth fireplace. An old Japanese plum tree blossoming in winter. Three pieces of skewered tofu dengaku with a sansho leaf atop each in a special serving box. A sprig of sansho with berries. Stylized top of a soybean plant in a circle. Fig. (4) Tofu products available in the West (tofu, dofu, kinugoshi, thick agé triangles, cubes, and cake, agé and agé puffs, hollow agé cubes, soymilk, tofu pudding, doufu-ru {white and red}, ganmo {patties, small balls, and treasure balls}, grilled tofu, dried-frozen tofu, instant powdered tofu, okara, dried yuba, soymilk curds, pressed tofu, savory tofu). A wooden cutting board and Japanese broad-bladed vegetable knife (*nagiri-bôcho*) with vegetables and tofu on a woven bamboo tray.

Note 1. This is the earliest English-language document seen (April 2013) that uses the term "treasure balls" to refer to Chinese-style tofu mixed with various finely-chopped vegetables, rolled into balls, and deep-fried tofu. (8) A wooden keg of red miso and a plastic bag of barley miso. (9) Shoyu in a metal can, wooden keg, glass bottle, and table-top dispenser. Traditional Japanese kitchen tools: *Miso-koshi* (woven bamboo strainer used in making miso soup). cutting board, Japanese vegetable knife, wooden spatula, bamboo rice paddle (*shamoji*) and spoon, woven bamboo colander or tray (*zaru*), suribachi, Japanese grater (*oroshi-gané*), *sudaré* (bamboo mat), pressing sack for tofu or soymilk, serrated tofu-slicing knife, tawashi scrub-brush (made of natural palm fiber), wok with draining rack and wooden lid, stir-frying ladle and spatula, long cooking-chopsticks, mesh skimmer, deep-frying thermometer, Chinese bamboo steamer (*seiro*), charcoal brazier (*konro, shichirin*), broiling screen. Covered pot steamer. Small lidded pottery pot. More kitchen tools (p. 50-51). (10) A soybean measuring box (*isshô-bako*). (11) The soybean plant. Two views of a soybean seed with seed coat, hilum, and hypocotyl labeled. A bag full of soybeans. Roasted soybeans in a woven bamboo tray (*zaru*). Edamamé in the pods. Three shapes of kinako treats. Soybean sprouts. Natto on a bamboo mat (*sudare*). Natto wrapped in rice straw as it ferments. A hand holding chopsticks that lift natto up from a bowl of natto–connected by gossamer threads. Tempeh (round and square pieces). Wrapping a small packet of inoculated soybeans to make tempeh. (15) Two Japanese women in traditional clothing using hand-turned grinding stones (quern) to grind soaked soybeans when making tofu. (16) Push-pull grinding stones. (17) Motor-driven grinding stones. (18) Water-powered millstones. (19) Wind-powered millstones. (20) Unohana. (21) A tofu maker sitting on a traditional lever press that presses soymilk from the okara in a pressing sack on a rack. A heavy iron skillet. (22) Folding okara omelet pouches. Okara doughnuts. (23) A bamboo colander. (24) A tofu maker weighting a colander with a brick so that whey will collect in it. (25) Ladling whey from curds; it foams! (27) A horse drinking whey from a wooden vat. Soymilk curds in a bamboo mat. (28) Ladling curds for Awayuki. (29) Fresh tofu in a plastic tub. (30) A tofu maker placing a weight on pressing lids as tofu is pressed in settling boxes (forming boxes). Transferring tofu-filled settling box to sink. Cutting a block of tofu into cakes under water. Eggplant halves in a yin-yang dance. Preparatory techniques used with tofu (slanting press, sliced tofu, squeezing, scrambling, reshaping, crumbling). (32) Utensils for making tofu at home. (33) Three designs for a homemade settling container. (34) Preparing homemade tofu (a-l). (35) Removing tofu from a farmhouse-style settling container (forming box). (36) Chilled tofu. Iceberg chilled tofu. A hot, moist, white towelette (*o-shibori*) is used to wipe the face and hands before (or occasionally after) a meal. Tofu salads in three Japanese pottery dishes. Japanese soups in three types of containers. (37) Chrysanthemum tofu. (38) Tofu poached egg. Tofu-stuffed green peppers. A wok. (39) Filling a wok with oil. (40) Testing oil temperature in a wok. (41) Deep-frying tofu tempura–and (42) Serving it in a shallow bamboo basket. (43) Making *Kaki-agé.* (44) *Dengaku Hoshi* (from *Tofu Hyaku Chin*). (45) Skewered Tofu dengaku. Preparing Tofu dengaku in old Japan (from Hokusai's sketchbooks). (46) A variety of skewers. (47) Chinese firepots. (48) A Simmering Tofu wooden serving container heated by coals from within. (49) Miso oden. (50) Tofu wrapped in rice straw. (51) Nanzenji wrapped tofu. (52) Gisei-dofu. (53) Serving freshly deep-fried agé. (54) The deep-frying area of a traditional tofu shop. (55) Deep-frying tools. (56) Wooden bamboo tray with raised sides. Chinese cleaver. (57) Nori-wrapped sushi with agé (making and serving; six drawings). Eating noodles from old Japan (from Hokusai's sketchbook). (58) Preparing homemade noodles.

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(59) The Oden man on a winter's eve. A pottery bowl of Oden. Kombu rolls. (60) Making konnyaku twists. (61) Nishime in a multi-layered lacquerware box. (61) Pressing tofu for thick agé in a tofu shop. (62) Deep-frying tofu for thick agé. (63) A tofu maker with deep-fried thick agé triangles on screen trays.

Note 2. This is the earliest English-language document seen (May 2012) that contains the terms "deep-fried thick agé triangles" (p. 181) or "hollow agé cubes" (p. 23).

(64) Stuffing thick agé. (65) Thick agé stuffed with onions. (66) Pressing tofu for ganmo. (67) Adding seeds and vegetables. (68) Deep-frying ganmo. (69) A farmhouse open-hearth fireplace with nabe kettle. (70) Preparing homemade ganmo. Ganmo balls in a draining tray. Ganmo cheeseburger. (71) Cutting tofu to make agé slices (*kiji*). (72) Deep frying agé. (73) Opening agé into pouches. Agé treasure pouches.

Note 3. This is the earliest English-language document seen (April 2013) that contains the term "treasure pouches" or the term "Agé treasure pouches" They refer to a Kyoto-style delicacy made with deep-fried tofu pouches.

(74) Agé pouches sealed with foodpicks. Inari shrine with Shinto torii. (75) Kampyo-tied pouches [kanpyo]. (76) Making rolled agé hors d'oeuvre. (77) Tofu maker ladling gô (fresh soy puree) into a cauldron. (78) Stirring down the gô. Pressing soymilk from okara with a hand-turned screw press. (79) Serving fresh soymilk in a tofu shop. Six Japanese commercial soymilk products. Little girl at The Farm (Summertown, Tennessee) seated on a small chair drinking a cup of soymilk. Chinese breakfast soymilk soup with deep-fried crullers (*Siento-chiang* with *yu-chiao tsao pi*). (80) Takigawa-dofu. (81) Tofu maker pouring the soymilk for kinugoshi tofu. (82) Adding solidifier. (83) Trimming kinugoshi from sides of box. (84) Modern lactone kinugoshi (with GDL). (85) Modern kinugoshi factory. (86) Sasa-no-Yuki's Gisei-dofu container. (87) Kinugoshi with ankake sauce. The entrance way to a traditional Japanese restaurant featuring tofu. Traditional metal skewer for making grilled tofu. (88) Traditional tofu maker grilling tofu over a charcoal brazier (*hibachi*). Grilling tofu in a traditional open hearth. (89) An early method of elaborate grilling. Pieces of tofu on different types of skewers. Farmhouse sukiyaki with grilled tofu. (90) Tying frozen tofu with rice straw. (91) Drying farmhouse frozen tofu. (92) Pressing frozen tofu at home. (93) Deep-fried frozen tofu with cheese. (94) Making deep-fried frozen tofu sandwiches (*Hakata-agé*). (95) Frozen tofu wrapped in kombu. (96) Steaming table in a yuba shop. Ten different types / shapes of yuba. (97) Lifting yuba away from soymilk. (98) Yuba sashimi. (99) Yuba envelopes. (100) Deep-fried yuba dengaku. (101) Folding yuba into bundles. Trimming half-dried yuba from a skewer. (102-113) Tofu and yuba in Taiwan, China, and Korea (see separate record). Sesame tofu in pottery bowl. (114) Traditional farmhouse tofu, tied into a package with rice straw rope. (115) Shirakawa-go farmhouses with water-powered rice-dehusker in foreground. (116) Making seawater tofu at Suwanose. Mortar and pestle for pounding mochi. Making community tofu: Western metal hand mill, hand-turned stone mill apparatus, faces of upper and lower stones, colander and cloth, two shapes of cooking pots, Japanese farmhouse earthen cooking stove, cooking pot set on cut-off oil drum, ladle, two wooden paddles, pressing rack, pressing okara, lever press, pressing sack, wooden settling [forming] container with cloths. (117) Making nigari with salt in bamboo colander, a traditional "salt boat" for refining salt of nigari. (119) Country farmhouse tofu (5 illust.). (121) Morning shopping at a tofu shop. (122) Diagram of a tofu-shop floor plan. (123) Modern pressure with hydraulic press. (124) Modern centrifuge with 3 soymilk barrels. Thirty-one unnumbered illustrations showing every step in making and selling tofu in a traditional Japanese shop (p. 299-306). (125) Cutting tofu for Dengaku (from *Tofu Hyaku Chin*). (126) Ladies busy making dengaku (from *Tofu Hyaku Chin*). (127) Hearth at Nakamura-ro. (128) The garden at Okutan. Six types of Japanese sea vegetables: Hijiki, aonori, wakame, agar, nori, kombu. (129) Japanese vegetables (27 illustrations). Address: c/o Aoyagi, 278-28 Higashi Oizumi, Nerima-ku, Tokyo 177, Japan. Phone: (03) 925-4974.

1815. Shurtleff, William; Aoyagi, Akiko. 1975. Soymilk (Document part). In: W. Shurtleff and A. Aoyagi. 1975. The Book of Tofu. Hayama-shi, Kanagawa-ken, Japan: Autumn Press. 336 p. See p. 199-210. Chap. 10.

• ***Summary:*** Contents: Making soymilk in a Japanese tofu shop as part of the tofu-making process. Comparative analysis of the composition of soymilk, dairy milk, and mother's milk (human), each adjusted to the same percentage of water (88.6%) (with table). "Vegetable milks" prepared from other nuts (almonds, peanuts, walnuts, and coconut) and seeds (sunflower and sesame). Low cost of fresh soymilk, in East Asia and on The Farm (Summertown, Tennessee). Soymilk in Taiwan. History of Vitasoy and K.S. Lo. UNICF / FAO / WHO soymilk plant making Saridele dry soymilk in Indonesia. Smaller plants in Manila, Philippines, and Bangkok, Thailand. History of the work of Dr. Harry W. Miller in China (starting in 1936) and the USA (Soya Lac / Soyalac, 1939). Current status of soymilk sold as a beverage in Japan: Sold in tetrapak cartons or, in condensed form, in cans. Sold "in a variety of flavors (plain, honey, barley-malt, strawberry or chocolate) in virtually all natural and health food stores and at most supermarkets; some types are even dispensed from vending machines or delivered door to door." "Many Japanese tofu makers used to deliver a bottle of soymilk each morning to a large number of their regular customers, but the tradition has gradually declined with the increasing availability of commercial soymilk and the post-was trend toward drinking dairy milk." Address: Lafayette, California.

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1816. Boyd, Billy Ray. 1975. The vegetarian way, of China, Taiwan, Hong Kong, Thailand, Malaysia, Singapore, Indonesia, India, and Japan. San Francisco, California: Published by the author. 42 p. Unpublished manuscript. [5 ref]

• ***Summary:*** A country by country guide to vegetarian foods and eateries in Asia. Appendixes contain names and addresses of restaurants in Taiwan and Hong Kong, plus Seventh-day Adventists hospitals and clinics in East Asia. Address: San Francisco, California.

1817. **Product Name:** Loma Linda Turkey Deli Slices (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1975.
Ingredients: Water, corn oil, soy protein concentrate, soy protein isolate, wheat gluten, egg whites, potato flakes, salt, artificial and natural (vegetable) flavors, whole wheat flour, brown sugar, dried yeast, onion powder, spice, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: Paperboard box.
How Stored: Frozen.
Nutrition: Per 2 slices (2.0 oz–57 gm): Calories 160, protein 10 gm, carbohydrate 3 gm, fat 12 gm, cholesterol 0 mg, sodium 1350 mg, potassium 110 mg.
New Product–Documentation: Recipe booklet. 1979, dated.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1975, but this label is copyrighted 1985.

1818. **Product Name:** Loma Linda Bologna (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1975.
Ingredients: Wheat gluten, water, vegetable shortening, corn oil, soy protein concentrate, dried yeast, soy protein isolate, natural (vegetable) flavors, salt, egg whites, dextrose, corn starch, onion powder, garlic powder, vegetable mono- and diglycerides, soy lecithin, artificial flavors, whole wheat flour, caramel color, spices, artificial colors, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
How Stored: Frozen.
New Product–Documentation: Recipe booklet. 1979, dated. Loma Linda probably purchased the spun soy protein fibers from General Mills. Sold frozen. See also Vegelona.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1819. **Product Name:** Loma Linda Salami Deli Slices (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1975.
Ingredients: Wheat gluten, soy protein isolate, water, corn oil, egg whites, salt, dried yeast, natural (vegetable) flavors, corn starch, soy protein concentrate, dextrose, onion powder, artificial flavor, guar gum, caramel color, garlic powder, soy lecithin, spices, artificial colors, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 8 oz paperboard box.
How Stored: Frozen.
Nutrition: Per 2 slices (2.0 oz–57 gm): Calories 130, protein 13 gm, carbohydrate 2 gm, fat 7 gm, cholesterol 0 mg, sodium 640 mg, potassium 70 mg.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1975, but this label is copyrighted 1985.

1820. **Product Name:** Loma Linda Savory Meatballs (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1975.
Ingredients: Wheat gluten, soy protein isolate, water, corn oil, wheat flour, egg whites, soy protein concentrate, corn starch, soy flour, dried yeast, artificial flavors, dextrose, onion, oat flour, natural (vegetable) flavor, onion powder, salt, garlic powder, caramel color, guar gum, artificial colors, spice, vitamins (niacinamide, D-calcium pantothenate, thiamine monotrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 7 meatballs (2.5 oz–70 gm): Calories 190, protein 22 gm, carbohydrate 7 gm, fat 8 gm, cholesterol 0 mg, sodium 420 mg, potassium 170 mg.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1975.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1821. **Product Name:** [Soyalac {Soymilk} (Plain, or Cocoa)].
Foreign Name: Soiyarakku Sutoreeto, Kokoa Soiyarakku.
Manufacturer's Name: San-iku Foods.
Manufacturer's Address: 1-1 Nagaurataku, Sodegaura-machi, Kimizu-gun, Chiba-ken 299-02, Japan.

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Date of Introduction: 1975.
Wt/Vol., Packaging, Price: 250 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Both products purchased by William Shurtleff and Akiko Aoyagi in Japan. 1975-1976.

K. Tsuchiya. 1982. Dec. *Tonyu* [*Soymilk.* 2nd ed.]. p. 74. States that Soiyarakku Sutoreeto, and Kokoa Soiyarakku were introduced in 1975 by Saniku Fuuzu in a 425 gm can and distributed nationwide.

1822. **Product Name:** Non-Meat Balls (Or: Non-Meatballs).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1975.
Ingredients: In 1975: Soy protein concentrate, hydrogenated vegetable oils, modified tapioca starch, non-fat dry milk, isolated soy protein, dehydrated potato, dehydrated onions, artificial flavors, egg white solids, wheat flour, fats, sucrose, salt, HVP, garlic powder, oregano, caramel color, niacin, thiamin, iron, vitamin B-6, riboflavin, vitamin B-12.
Wt/Vol., Packaging, Price: 19 oz can. Retails for $2.79 (7/90, California).
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Non-meat Balls (Worthington)" [non-frozen] are given (see above, incl. soy protein concentrate and isolated soy protein).

Shurtleff & Aoyagi. 1983. History of Worthington Foods. p. 11.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. The ingredients are: Broth: Water, modified corn starch, hydrolyzed vegetable protein. Non-meatballs: Textured vegetable protein (wheat gluten, soy protein isolate and concentrate), partially hydrogenated soybean oil, skim milk, soybean and/or corn oil, egg whites, potatoes, flavorings (hydrolyzed vegetable protein, salt, yeast extract, monosodium glutamate, disodium guanylate, disodium inosinate), tapioca starch, onion, onion powder, garlic powder, spice, niacinimide [niacinamide], iron (as ferrous sulfate), vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12.

1823. **Product Name:** Non-Meat Balls (Frozen; Or: Non-Meatballs).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1975.
Ingredients: In 1975: Soy protein, Fibrotein [spun soy protein fiber], hydrogenated vegetable oils, nonfat dry milk, corn oil, egg white solids, wheat flour, artificial flavors, onion powder, sucrose, salt, HVP, MSG, garlic powder, oregano, caramel color.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Non-meat Balls, frozen (Worthington)" are given.

1824. **Product Name:** Sandwich Spread.
Manufacturer's Name: Worthington Foods, Inc. Div. of

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Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1975.
Ingredients: In 1975: Wheat protein [wheat gluten], corn oil, soy flour, dextrose, dehydrated onions, salt, corn syrup solids, soy protein, soy oil, yeast extract, MSG, dehydrated bell peppers, HVP, garlic powder, vegetable gum, celery and sage extracts, niacin, thiamin, iron, vitamin B-6, riboflavin, vitamin B-12.
Wt/Vol., Packaging, Price: Dehydrated in 10 oz Pure Pak paper carton (like milk). Retails for $2.70 (7/90, California).
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 177. The ingredients in "Sandwich Spread (Worthington)" are given.

1825. **Product Name:** Beef Style Soyameat.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1975.
Ingredients: In 1975: Fibrotein [spun soy protein fiber], corn oil, dried egg white, flour, yeast extract, starch, flavorings, corn syrup solids, salt, caramel color, onion powder, dextrose, nucleotides.
Wt/Vol., Packaging, Price: Canned.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 174. Lists the ingredients in "Beef Style soyameat."

1826. **Product Name:** Chicken Style (Meatless; Resembles White Meat).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1975.
Ingredients: In 1975: Fibrotein [spun soy protein fiber], corn oil, egg white solids, soy protein, salt, MSG, natural and artificial flavorings from vegetable sources, carrageenan, niacinamide, soy flour, thiamin mononitrate, iron, vitamin B-6, U.S. certified color, riboflavin, vitamin B-12.
How Stored: Frozen.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 174. The ingredients in "Chicken Style, frozen (Worthington)" are given.

1827. **Product Name:** Protose (Meatlike Product Made of Wheat Gluten with Soy Flour).
Manufacturer's Name: Worthington Foods.
Manufacturer's Address: Worthington, Ohio.
Date of Introduction: 1975.
New Product–Documentation: This product, introduced in 1900 by the Sanitas Nut Food Co. of Battle Creek, Michigan, was originally based on peanuts. Worthington Foods acquired this company, which had been renamed Battle Creek Foods, in 1960. By 1975 (as shown below), wheat gluten was the main ingredient, and soy flour had been added to formulation.

Seventh-day Adventist Dietetic Assoc. 1975. *Diet Manual, Utilizing a Vegetarian Diet Plan. 4th ed.* p. 176. The ingredients in "Protose (Battle Creek)" are "wheat protein [wheat gluten], peanuts, wheat and soy flour, corn oil, yeast extract, soy sauce, salt, HVP, niacinamide, thiamin, iron, vitamin B-6, riboflavin, vitamin B-12."

1828. Barkas, Janet. 1975. The vegetable passion: A history of the vegetarian state of mind. New York, NY: Charles Scribner's Sons. London: Routledge and Kegan Paul. xi + 224 p. Illust. Index. 22 cm. [400* ref]
• ***Summary:*** This is the earliest known book on the history of vegetarianism written in the United States since World War II. It contains much interesting information and leads for further research.

Contents: Author's note. 1. Roots: Evolutionary trends [and primitive diets], tilling the soil. 2. Land of the sacred cow: Hinduism, Jainism, Buddhism, King Asoka, vegetarianism develops in India, Mahatma Gandhi, Krishna Consciousness. 3. Orpheus ascending: Greek thinkers, Pythagorean serum, Roman sympathy, a return to Greece. 4. Judeo-Christian ethics: Jewish seeds, the Essenes, Christianity. 5. Da Vinci and the dietetic renaissance: Middle phases, Leonardo da Vinci, enthusiastic Cornaro, France. 6. British advocates: Forerunners (John and Charles Wesley, John Howard, James Oglethorpe in Georgia, Bible Christian Church, Dr. William Lambe, John Frank Newton, Percy Bysshe Shelley), modern organizers flourish (Joseph Brotherton, Anna Kingsford, Annie Besant), George Bernard Shaw, today (Malcolm Muggeridge, Brigid Brophy, Sir Stafford Cripps and Lady Cripps). 7. Wagner, Hitler, and Germany: Early converts (Gustav von Struve, Dr. Heinrich Lahmann, Eduard Baltzer), Richard Wagner, Adolf Hitler (long section; p. 105-131), the Puritan Fuehrer, Mealtime for Hitler, Albert Schweitzer. 8. Back–and forth–to nature (the USA): Benjamin Franklin experiments, early American vegetarianism (William Metcalfe, Sylvester Graham, Dr. William Alcott, the first American Vegetarian Convention in New York on 15 May 1850, *The American Vegetarian and Health Journal* begins publication in Nov. 1850 with William Metcalfe as editor, Horace Greeley), meatless communes (Bronson Alcott, Louisa May Alcott, and Fruitlands in Massachusetts; John Humphrey Noyes and the Oneida Community in upstate New York; John A. Collins and The Utopian community in Skaneateles, New York; the Harmonial Vegetarian Society in Benton County, Arkansas), Thoreau, The Seventh-day Adventists and Dr. John Harvey

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Kellogg, Upton Sinclair, vegetarians for president and the American Vegetarian Party (Dr. John Maxwell and Symon Gould; presidential and vice-presidential candidates were fielded in 1948, 1952, 1956, and 1960), modern times (Will Durant, Dick Gregory, Helen and Scott Nearing, the Vegetarian Feminists, the Mazdaznan movement, Herbert Sheldon and the Natural Hygienists, the American Vegan Society and Jay Dinshah). 9. Tolstoy and the Doukhobors: From hedonist to celibate, the Doukhobors (Russian Christians who became vegetarians in 1895 under Peter Verigen), the Doukhobors in Canada, Tolstoy's later years. 10. Nutritional controversies: Basic issues, protein, soybeans (p. 172-73, 175), vitamin B-12, what about a lactarian diet?, meat, plant hazards, economics, the Abkhasians in the Soviet Republic of Abkhasia [Abkhazia]. 11. Summing up. List of illustrations (mostly photos with a few illustrations). Selected sources. Acknowledgments.

The word "vegetarian" was not used until 1847. Gorillas are vegetarian but will eat meat in zoos. Rampithecus, the first primate, ate insects and small animals. Homo sapiens have existed for 100,000 years. 35,000 to 8,000 B.C. marks the beginning of the agricultural (neolithic) revolution, the first major human revolution. During the Vedic period, Hindus in India were not vegetarian; they ate cattle, fish, etc. Jainism and Buddhism converted India to vegetarianism, but vegetarianism was not a basic tenet of Buddhism as it was for Jainism. King Asoka, who reigned in Magadha, India, until 232 B.C., killed tens of thousands of opponents during his bloody rise to power. Then he became a born-again Buddhist. He induced priests who sacrificed animals to become strict vegetarians.

The vegetarian Orphic cults, which also advocated celibacy, laid the foundations for Pythagoras and Plato. The first western advocate of a meatless diet was Pythagoras, the "father of vegetarianism." He denounced beans. Socrates and Plato supported a vegetarian diet but there is little evidence that they practiced it. The Romans considered beans and onions to be foods that were too heavy for most people. Plutarch hailed vegetarianism, but was not one. Porphyry, Plotinus, and the Essenes were vegetarians. In Judaism, the law of Basar BeHabab says "do not eat meat and milk together." Orthodox Jews follow this. St. Francis of Assisi (1181-1226) ate no meat but condoned eating fish. Leonardo da Vinci was the first vegetarian in modern western civilization. He was a celibate bachelor who ate no honey. Rouseau was not a vegetarian but he wrote of and praised it.

The first organized vegetarian groups were in England. The British Vegetarian Society was founded in 1847. John Wesley (1703-1791), the English theologian, evangelist, and founder of Methodism was a vegetarian. In 1809 a vegetarian coalition was established in Manchester. Other early British vegetarians were Percy Bysshe Shelley (1792-1822, poet), William Lambe, John F. Newton, Anna Kingsford, Annie Besant, George Bernard Shaw (who also did not smoke or drink alcohol, coffee or tea). Other non-British European vegetarians include Richard Wagner, Albert Schweitzer, Leo Tolstoy and the Doukhobors, Romain Rolland. American vegetarians include Benjamin Franklin (mostly), Sylvester Graham, William Alcott, Bronson Alcott, Ellen G. White, John Harvey Kellogg, many Seventh-day Adventists, most Trappists. Thoreau practiced it for only a few years. Horace Greeley supported it. Upton Sinclair advocated it lifelong but only practiced it for 3 years.

Also discusses: Fruitlands, Oneida community, Abkhasians, Gandhi.

Concerning Oneida: Long before anyone ever heard of genetic engineering or sperm banks, social reformer J.H. Noyes put his ideas on stirpiculture (the breeding of special stocks or races) into practice by founding in 1847 the Oneida Community, wherein men and women were paired off to produce the best possible offspring.

The author graduated from Hofstra University in Hempstead, New York, and now teaches at the New School for Social Research in Manhattan, New York. Address: Manhattan, New York.

1829. Hur, Robin. 1975. Food reform: Our desperate need. Austin, Texas: Heidelberg Publishers. x + 260 p. 24 cm. [1500+ ref]

• ***Summary:*** One of earliest well-documented books on the advantages of a low-fat, low-protein, high-carbohydrate diet. Presents evidence linking chronic, degenerative diseases to a diet high in protein, fat, and meat. Advocates the SGA diet, a vegan diet based on sprouts (including spy sprouts, see p. 193), greens, and small amounts of algae. Although the book's major emphasis is nutrition, its last chapter discusses diet, resources and the environment–another first.

In chapter 4, titled "Aging," the author notes that scientists are paying a lot of attention to the Vilacabambans, Hunzas, and Abkhasians, because their life spans are far greater than those of Americans or Europeans. The diets of all three groups are very similar, bordering on vegetarianism. The Hunzas eat almost no animal products and consume meat only once a year. Also discusses the Seventh-day Adventists.

Talk with Robin Hur. 1990. Dec. 12. "I saw that the resource implications of diet–how what we ate affected the land and water–were much more important issues than the things other people were looking at at the time, namely protein." This is a rare book by a mathematician and Harvard graduate. The author wrote a second book just on diet and the environment but it was never published. One of its discoveries was the deforestation in the U.S. was rampant (62 million acres were cut to raise livestock) and the figures were being concealed by the U.S. forest service. In 1990 he was writing a book on diet and economics.

Note: This book heavily influenced Keith Akers' *A Vegetarian Sourcebook* (1983). Address: Austin, Texas.

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1830. Keys, Ancel; Keys, Margaret. 1975. How to eat well and stay well the Mediterranean way. Garden City, New York: Doubleday & Co. xvi + 488 p. Foreword by Jean Mayer, PhD, ScD., Prof. of Nutrition, Harvard Univ. School of Public Health. Index. 22 cm.

• ***Summary:*** Foreword: Ancel Keys, a very great scientist, revolutionized the science of nutrition. Before his work in the 1940s and 1950s, nutritionists studied nutritional "requirements" and were concerned with deficiency diseases. He refocused attention on diseases of excessive consumption of certain nutrients, especially fats. In his famous laboratory, located under the Stadium of the University of Minnesota, "he demonstrated the crucial role of the fat level of the diet in determining the risk of death from diseases of the heart and blood vessels. He went on to... show that saturated fats and cholesterol were the villains in this effect..." The concept of risk factor in cardiovascular disease originated with Keys.

Chapter 3, on "Diet and health," contains a wealth of interesting information on many subjects including Linus Pauling and vitamin C, vegetable oils and vitamin E ("a teaspoon of soybean oil provides as much vitamin E as most of the packages sold by the druggist"), Dr. John Ludkin of London and sugar as a cause of coronary heart disease (not true), salt, vegetarians ("recently careful studies on the health of Seventh Day Adventists have produced surprising evidence that there is some truth in the health claim"), autointoxication, aging, yogurt and Elie Metchnikoff ("Louis Pasteur's successor as director of the Pasteur Institute"), the milk-drinking Masai of East Africa (their bodies handle cholesterol quite differently from our own), "natural foods" (grown without chemical fertilizers or pesticides), DDT, lecithin (made commercially from soy beans), fad and "kook" diets unlimited (incl. Dr. Atkins "dietary revolution" and–even worse–"the 'Zen macrobiotic diet,' violently condemned by all who know anything about nutritional science, because it is likely to cause real trouble if actually adhered to").

The Mediterranean diet is found in Greece, Italy, southern France, and Spain. Characteristics include: Use of olive oil, wine in moderation for dinner, fruit for dessert, meats that contain less fat than their U.S. counterparts. Address: 1. Director, International Cooperative Study on Cardiovascular Epidemiology (in 7 countries), Univ. of Minnesota, Minneapolis and St. Paul, Minnesota.

1831. Kloss, Jethro. 1975. Back to Eden. Santa Barbara, California: Woodbridge Press. xx + 684 p. Illust. Index. 18 cm.

• ***Summary:*** After the copyright for the original 1939 edition of *Back to Eden* expired in 1967, the Kloss family, because of a complex set of circumstances, neglected to renew it. The book then went into the public domain. Woodbridge Press decided to publish it as a facsimile edition, but with pages xiii–xx of the front matter containing a new chapter titled "Jethro Kloss–the man and the legend" by Promise Kloss Moffett." It was billed on page 1 of that chapter as "An exclusive feature only in this Kloss family edition. An intimate, personal account by his daughter." This chapter contains four photos: (1) "Jethro Kloss in his early years of teaching and healing." (2) "Jethro Kloss with Amy, his second wife, in Minnesota with his daughter, Promise; her daughter, Mabel; and their first child, Lucille." (3) "Jethro Kloss operating men's hydrotherapy treatment room at Home Sanitarium." He is dressed in a sort of white togo; a patient is inside a large cylindrical chamber (resembling but larger than a 55-gallon drum with a horizontal axis) apparently filled with steam. (4) Labeling and packing cereal foods in Kloss' Tennessee manufacturing operation. On the cover of the paperback edition they put the famous Michelangelo scene from the Sistine chapel of God reaching out to touch Adam's extended finger, thus transmitting the gift of life. New text was added to the cover: "The complete text. A public domain edition. Not authorized by the Kloss family. The classic Back to Eden belongs to the public. There is 'provision in Nature for all the ills of man... and a remedy for every disease.' The secrets of Natural Healing made plain by the preeminent leader of the natural health movement. Herbs, foods, treatments. World's best-known health book!"

On the cover of the hardcover edition was written "The Kloss family heirloom edition. The classic guide to herbal medicine, natural foods, and home remedies. The copyright page stated: "Copyright 1972, 1973, 1974, 1975 by Promise Kloss Moffett, Eden Kloss, and Doris Gardiner.

On the title page was written: "With exclusive features only in this Kloss family edition. American herbs for pleasure and health: natural nutrition with recipes and instructions for living the Edenic life."

For the bitter-sweet story of how this book came to be published, see interview with Doris Kloss Gardiner (Nov. 1990).

1832. Labuza, Theodore P. 1975. The nutrition crisis: a reader. St. Paul, New York, Boston, Los Angeles, San Francisco: West Publishing Co. xiv + 512 p. Index. 25 cm.

• ***Summary:*** This book contains 43 chapters by various authors in seven parts. Many of the chapters are reprinted from previous publications. Contents: Preface. Acknowledgments. A. Nutritional standards for humans: the scientific crisis. B. Nutritional status of humans: the crisis. C. Nutrients in the diet: the controversy and crisis. D. The crisis surrounding certain foods and unusual dietary practices. E. The overweight crises. F. The nutrition crisis in heart disease and atherosclerosis. G. The food-people-energy crisis. Epilogue.

Chapter 27, titled "Zen macrobiotic diets," is by the Council on Foods and Nutrition. The believe that this diet, which "has been shown to cause irreversible damage to

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health and ultimately lead to death." should be condemned. In Chapter 28, "The vegetarian diet," by U.D. Register and L.M. Sonnenberg (Loma Linda University), soy products are discussed on pages 263-65.

Also discusses: Lactose intolerance (p. 59-64). Food of the future (p. 443-55). Address: Univ. of Minnesota.

1833. Noorbergen, Rene. 1975. Programmed to live: A scientific confirmation of health reform. Mountain View, California: Pacific Press Publishing Assoc. 159 p. No index. 18 cm. [158* footnotes]
• ***Summary:*** Contents: 1. Health care–The nation's vital problem. 2. Meat and fat–are they fit for consumption? 3. Sugar and alcohol–The fingers of death. 4. Cancer–Curse of the good life. 5. Nicotine and caffeine–The twin dangers. 6. Don't upset the body clock. 7. Forget the steak! Have an analog. 8. Embrace life–Don't be a statistic.

Quoting extensively from medical research and the writings of Ellen G. White, this book states the case for the Seventh-day Adventist diet and lifestyle, and against the unhealthy products listed above.

In 1904 only 67.7 deaths per 100,000 U.S. population were caused by cancer; today the figure has grown to 166.6–2.46 times as many. In 1904 heart disease caused 359.5 deaths per 100,000 population, but by 1972 it had jumped to 493.9–up 37%. Each hour in America, 144 heart attacks occur, and each year 600,000 people die of heart attacks. Thus more Americans die of heart attacks each year than died in all of World War II (400,000).

Before the Biblical deluge, God told humans to eat plants. But after the Flood, God granted Noah and his family permission to eat the flesh of the clean animals that had been preserved in the ark (Genesis 9:3) since every green thing had been destroyed by the food.

On the copyright page appreciation is expressed to Drs. Mervyn G. Hardinge, U.D. Register, and J.A. Scharffenberg.

1834. Rosenfield, Daniel. 1975. Protein considerations for fabricated foods. In: G.E. Inglett, ed. 1975. Fabricated Foods. Westport, CT: AVI Publishing Co. vii + 222 p. See p. 196-206. Chap. 15. [7 ref]
• ***Summary:*** Contents: Introduction. Protein food processing. Food labeling. Utilizable protein. Amino acid fortification. Nutritional implications. Acknowledgment. Address: Director, Nutrition Affairs, Miles Labs., Inc., Elkhart, Indiana 46514.

1835. Seventh-day Adventist Dietetic Assoc. 1975. Diet manual, utilizing a vegetarian diet plan. 4th ed. Loma Linda, California: Seventh-day Adventist Dietetic Assoc. *
• ***Summary:*** A comprehensive loose-leaf handbook for the planning, selection, and coordination of vegetarian diets.

1836. U.S. Department of Agriculture. 1975. The annual report on activities carried out under Public Law 480, 83d Congress, as amended, during the period July 1, 1973 through June 30, 1974. Washington, DC: U.S. Government Printing Office. See table 17.
• ***Summary:*** Table 17 is titled "Title II, Public Law 480–total commodities shipped by program sponsor, fiscal year 1974." The main program sponsors and distributing agencies, listed alphabetically, are AJJDC (American-Jewish Joint Distribution Committee), CARE, CRS (Catholic Relief Service), CWS (Church World Service), LWR (Lutheran World Relief), SAWS (Seventh-day Adventist World Service), UNICEF, UNRWA (United Nations Relief and Works Agency), and WRC (World Relief Commission). All of these are Private Voluntary Organizations (PVO/PVOs), registered with USAID. The following foods containing soy protein were distributed: CSM (corn soya mix), CSB (corn soya blend), WSB (wheat soya blend), and small amounts of soya flour. The vegetable oil which was shipped to many countries was soybean oil; it is not recorded here.

Foods containing soy protein were distributed to the following countries or areas:

Africa: Botswana, Burundi, Cameroon, Central African Republic, Chad, Congo–Belgian, Dahomey, Ethiopia, Gabon, Gambia, Ghana, Ivory Coast, Kenya, Lesotho, Liberia, Malagasy, Mali, Mauritania, Morocco, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, Somali Republic, Sudan, Swaziland, Tanzania, Togo, Rhodesia, Upper Volta, Zaire, Zambia.

Near East–South Asia: Bangladesh, British Solomon Islands, Egypt, Gaza, India (incl. soy flour), Gaza, Jordan–East, Jordan–West Bank, Nepal, Pakistan, Sri Lanka, Turkey, Yemen, Palestine Refugee Program.

East Asia: Cambodia, Indonesia, Korea, Laos, Malaysia, Philippines, Singapore, Vietnam.

Latin America: Antigua, Bolivia, Brazil, British Honduras, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, Paraguay, Peru, St. Kitts, St. Lucia, St. Vincent, Uruguay.

Concerning "veg oil" (soybean oil) shipped under P.L. 480 Title II in fiscal year 1974: India received 43.325 million lb [19,652 metric tons] (p. 84). Address: Washington, DC. Phone: 703-875-4901 (1991).

1837. VandeVere, Emmet K. comp. 1975. Windows: Readings in Seventh-day Adventist church history. Nashville, Tennessee: Southern Publishing Assoc. *
• ***Summary:*** An interesting compilation of early Adventist documents.

1838. Yuchi Pines Institute. 1975. "Blessed art thou, o land, when... thy princes eat... for strength, and not for drunkenness." Ecclesiastes 10:17. Seale, Alabama: Yuchi Pines Institute. 222 p. Undated. Illust. Index. 26 cm.

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• ***Summary:*** A natural foods and vegetarian cookbook, with considerable nutritional information. On spine: "Eat for strength." Chapter III, titled "Dairy product substitutes" (p. 43-59) contains numerous recipes that use soy as an ingredient. Soy-related recipes include: Soy bread (p. 15, with soy flour). Soy-bran crackers (p. 25, with soy flour, lecithin, whole wheat flour, and bran). Soy crackers (p. 27, with whole soaked soybeans and lecithin). Soy noodles (p. 28, with Soy Base–see p. 46). Soy waffles (p. 41, with whole soaked soybeans). Double strength soy milk for cream (p. 45–Save pulp [okara] to use in Soy Crackers. Use rich soy milk as a base for Mayonnaise or Sour Cream, as Soy milk, or as Soy yogurt). Sour cream (p. 45, made with soy milk). Madison milk (p. 46, with whole dry soybeans). Banana soy milk (p. 46). Soy base and milk with various flavors (p. 46). Soy sour cream (p. 47). Vegetarian cream (p. 47, with double strength soy milk). Sesame spread (p. 48, with soy base). Soy cottage cheese (p. 52, with soy grits). Scrambled tofu–Soy cheese (p. 53). Tofu (homemade, 3 methods, from soy flour or whole soybeans). Soy yogurt (p. 54, from soy milk). Simple soy butter (p. 55, with soy flour or dry soybeans). Food yeast butter (p. 55, with Soyannaise). Soy butter (p. 57, with soy flour, lightly browned). Margarine [non-hydrogenated] (p. 58, with coconut oil, oil, hot water, lecithin, lemon juice, and onion salt). Carrot pie (p. 69, with soy milk and soy flour). Banana cream toast (p. 72, with soy or nut milk). Carob drink (p. 74, with soy or nut milk). Bread pudding (p. 75, with Soy base). Soaked soybeans (p. 85, 210). Soynuts I and II (p. 85-86). Soy patties I and II (p. 86, with mashed soybeans and peanut butter). Soy loaf (p. 87, with soaked soybeans). Soy cheese balls (p. 88, with Soy cottage cheese or chopped Tofu). Soy soufflé (p. 88, with soaked soybeans). "Salmon loaf" (p. 90, with soy flour). Soy corn chowder (p. 105, with Soy milk or Basic Cream Sauce). Cucumber soup (p. 106, with Soy milk or Basic Cream Sauce). Fresh cream of corn soup (p. 107, with Soy or nut milk). Vichyssoise (p. 109, with Soy or nut milk). Corn chowder (p. 110, with Soy or nut milk). Rice and soybean loaf (p. 119, with cooked soybeans). Basic cream sauce (p. 127, with Soy base). Soyonnaise I-IV (p. 133-34, incl. with Soyagen or canned Soyalac).

Recipes containing peanuts or wheat gluten: Nut cheese (p. 54). Emulsified peanut butter (p. 55). Peanut butter balls (p. 65). Peanut butter loaf (p. 86). Peanut butter Creole (p. 89). Chinese pepper steak (p. 93, with gluten). Nuttose (p. 95, with nut butter). Gluten (p. 96). Peanut butter gravy (p. 126). Grandmother's gravy (p. 126, with peanut butter).

A table titled "Irritating substances" (p. 123) lists the name of the substance, the chemical, and the effect. The substances are: Black pepper, chili peppers, cayenne, horseradish, cloves, cinnamon, mustard seed, ginger, nutmeg, vinegar, baking soda, baking powder, salt (sodium chloride). On the facing page is a list of 25 "Safe herbs."

Note: A later edition of the book was copyrighted in 1979, then revised in 1983. The title was changed to "East for Strength" and the author was listed as Dr. Agatha Thrash. Yuchi Pines Institute (renamed Uchee Pines Inst. in the late 1980s or early 1990s) was founded in 1970 by Drs. Agatha and Calvin Thrash, who are both physicians and Seventh-day Adventists. As of April 1992 both are still living at Uchee Pines.

Talk with Dr. Agatha Thrash. 1999. June 4. This book was first published (with the above title) in 1975. They copyrighted it in 1979. Address: Route 1, Box 273, Seale, Alabama.

1839. Gallagher, James R. 1976. 'China Doctor' Harry Miller dies at 97 (News release). Washington, DC: Seventh-day Adventist Church. 4 p. Jan. 4.

• ***Summary:*** "Washington, D.C.–Harry Willis Miller, M.D., known to generations of Asians and Americans as the 'China Doctor,' died Saturday, January 1, in Riverside, California. He was 97.

"Dr. Miller reportedly suffered a massive heart attack on his way to Seventh-day Adventist morning church services.

"Famous in the Orient for his skill as a thyroid surgeon, Dr. Miller was also a pioneer in the field of nutrition. He developed the process of making soybean milk to feed malnourished Chinese children in areas where cow's milk was unavailable.

"Dr. Miller served as a physician to Chou En-lai, Madame Chiang Kai-shek, and once treated the Republic of China's first leader, Sun Yat-sen. During his first stay in mainland China he cured a Manchurian leader, Marshal Chang Hsueh-liang of the opium habit.

"His later years were devoted to research in vegetarian proteins and fund-raising for the establishment of 20 hospitals throughout the Far East. He returned from his work at the Hong Kong Adventist Hospital, which he helped found, just two years ago.

"Born in Ludlow Falls, Ohio, in 1879, Dr. Miller received his medical degree from American Medical Missionary College in 1902. The following year he was sent by the Seventh-day Adventist Church as one of its first missionaries to Central China. He went first to the small town of Hsintsai in Honan Province.

"Living in the shadow of the Boxer Rebellion, when many foreign missionaries were killed, Dr. Miller and his wife, Ethel, dressed as Chinese and gained the respect of rich and poor alike."

Ill health forced Dr. Miller to return to Washington, DC, where he remained until 1925. "The years 1925 to 1935 again saw Dr. Miller in mission service to China. He built Shanghai Sanitarium and Hospital, the first Adventist medical institution outside the United States, and the Wuhan Sanitarium and Hospital in Central China."

"The years of World War II found Dr. Miller in the United States once again, this time as medical director of the

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Mount Vernon Hospital in Ohio. While there, he founded the International Nutrition Laboratory, which carried out experiments on vegetarian protein products. The laboratory is now part of Loma Linda Foods, an Adventist-owned company.

"Dr. Miller returned to Shanghai in 1949, only to be evacuated in 1950 as the Communist revolution overflowed China."

During the 1950s Dr. Miller returned to research work in nutrition [related to his soy products] in both Ohio and California. He also worked as a surgeon and administrator in many countries worldwide. Then in 1960, at age 81, Miller was called to establish a hospital in Hong Kong. He remained in Hong Kong until 1974, practicing surgery and seeing patients in a weekly clinic. "By his own estimate, Dr. Miller performed 6,000 thyroid operations and 'about 30,000' operations during the span of his 70-year career in medicine." In 1997 he returned to Riverside, California where [at Loma Linda Foods] he actively continued his nutrition research until his death.

"Dr. Miller served on the American Relief Administration at the appointment of President Woodrow Wilson. Among his famous American patients were Alexander Graham Bell and William Jennings Bryan, as well as several senators and congressmen.

"A book by Dr. Raymond Moore, *China Doctor* (Harper & Row, 1961), is available on the life and career of Dr. Miller. In a 1974 letter, President Richard Nixon commended him by writing, 'You leave an admirable legacy of compassion and accomplishment.'

"Dr. Miller is survived by his wife, the former Mary Greer, and four children by a previous marriage.

"Funeral services are scheduled in Loma Linda, California, on Wednesday, January 5. Willis H. Hackett, chairman of the Board of Trustees of Loma Linda Food Company, and Charles Taylor, associate director of the Department of Education of the General Conference of Seventh-day Adventists, will represent the world headquarters of the Adventist Church."

1840. *USDA Farmer Cooperative Service. FCS Research Report.* 1976. Appendix–Companies producing and distributing soy products. No. 33. p. 53-82. Jan. Edible Soy Protein: Operational Aspects of Producing and Marketing. [60 ref]

• ***Summary:*** Part I. "Companies producing and/or distributing under private label brands of textured vegetable protein products that meet the requirements of FNS Notice 219." (Note: FNS is USDA's Food & Nutrition Service). Lists every known company making such products (as of Sept. 1974), with the company address and the full name of each product. The following companies and brands are listed; (D) = Distributors: Allen Foods (D) Lasco; Archer Daniels Midland Co. TVP; Biggers Bros. (D) Farmbest Promate; Cargill Inc. Textratein; Central Soya Co. Inc. Promosoy, Centex; Continental Coffee Co. (D) Continental; Continental Organization of Distributor Enterprises, Inc. (D) Code Fortified; Embassy Grocery Corp. (D) Lucky Boy Pro-Tenda; Far-Mar-Co, Inc. Ultra-Soy; Federated Foods, Inc. (D) Parade Promate; First Spice Mixing Co., Inc. (D) Texite; Frozen Food Forum, Inc. (D) Frosty Acres; Galanides, Inc. (D) Galanides; General Mills, Inc. Bontrae (Frozen Hydrated or Dehydrated); Griffith Laboratories Griffith's GL-219, Promate, GSVP, GSPC; B. Heller & Co. (D) Heller's; Hollymatic Corp. (D) Hollymatic; Institutional Wholesalers, Inc. (D) Saxony; Lauhoff Grain Co., Inc. Vita-Pro; Marshall Produce Co. (D) Marshall; Miles Laboratories Maxten, Temptein; Nabisco, Inc. VMR I or II; National Institutional Food Distributor Associates, Inc. (D) NIFDA Promate; National Protein Corp. Textrasoy; National School-Pak (D) Promate; Nugget Distributors, Inc. (D) Nugget Promate, Nugget Magi-Pro; Oppenheimer Casing Co. (D) Textured Oppenheimer Pro; Portland Wholesale Grocery Co. (D) Preferred Stock; Ralcon Foods SPF-200; Ralston Purina Co. SUPRO; S.E. Rykoff & Co. (D) S.E.R.; John Sexton & Co. (D) Sexton Protein Plus; A.E. Staley Mfg. Co. Food Service Div. Nutra-Mate; A.E. Staley Mfg. Co. Mira-Tex; Swift Edible Oil Co. Swift's Texgran, SFP-TA, Burger-Aide I; Sysco Corp. (D) Sysco and Sysco Promate.

New additions to the list: Custom Food Products, Inc. (D) CFP; Miles Labs. Pro-Lean; Industrial Grain Products Ltd. Perplus; General Spice, Inc. Sotex.

Part II (p. 70-81). "Companies producing and/or distributing under private label acceptable textured vegetable protein product mixes." Alberto-Culver Co. Milani; Bernard Food Industries, Inc. Tex-Pro; Biggers Brothers Inc. Farmbest; Continental Organization of Distributor Enterprises CODE; Federated Foods, Inc. Red & White or Parade; Kraft Foods. Kraft School Lunch Chili Mix & Textured Vegetable Protein. Kraft School Lunch Sloppy Joe Mix & Textured Vegetable Protein. Footnote: The textured vegetable protein component of the Kraft mixes is Promate #500-SL or Promate #100-SL manufactured by Griffith Labs. Lawry's Foods, Inc. Stretch; Milwaukee Seasoning Laboratories, Inc. MSL TVP, Flavormate; National Institutional Food Distributor Associates, Inc. NIFDA; National School Pak; North American Laboratory Co., Inc. Magic Menu; Nugget Distributors, Inc. Nugget; Sysco; Williams Foods, Inc. Williams Expand; The Golden Dipt Co. Golden Dipt/DCA.

Note: The above product mixes are used in the Type A school lunch. Typical mixes are for chili mix, meat loaf or meatballs, patty mix, pizza sauce, sloppy joe, spaghetti sauce, or taco filling. The name of the manufacturer of the textured soy protein ingredient is given for each. Address: Farmer Cooperative Service.

1841. Woollen, Anthony. 1976. The secret of solnuts. [A nut

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analogue from soybeans made by Solnuts BV of Tilburg]. *Food Manufacture* (*London*) 54(1):55, 57. Jan. [1 ref]
• ***Summary:*** This "nut analogue from soybeans has tremendous possibilities in bakery and confectionery products." The plant, very similar to one operating in the USA, was built in Tilberg under the supervision of Mr. Jim Becker and was originally scheduled to come on stream in August 1977. But initial teething troubles delayed the start and it was not until November 1978 that the plant began to produce Solnuts of the quantity required. Now, after an investment approaching £1M, the plant is producing about 1,600 tons/year. When designed capacity is eventually fully utilised, production is expected to be between 8,000 and 10,000 tons/year.

Jim Becker, an American, developed/invented a method of preparing and roasting soya beans. The company director is Mr. F. van der Marel. Several important contracts have been obtained to supply major food manufacturers in Holland, Germany, Switzerland, Austria, Spain, Greece and the UK, including in the last-named Kelloggs and Granose Foods. Holland and Germany are where the company's main markets are at present. The final composition of the product is: fat 19%, protein 47.4%; carbohydrate 3.7%, fibre 3.6%, ash 3.6%, and moisture 2%. The big advantage of Solnuts over any other soya product is their texture. The first Solnuts became available in the course of 1978.

1842. Yim, Susan. 1976. One man's bread, another man's tofu. *Star-Bulletin* (*Honolulu, Hawaii*). Feb. 12. p. D-1, D-2. [1 ref]
• ***Summary:*** About the work of William Shurtleff and Akiko Aoyagi. A photo shows the two holding their *Book of Tofu.* "Five thousand copies of the book came out in December [1975], and all were sold in a week. There will be a second printing soon." During Shurtleff's first year in Japan, in 1971, he lived in Kyoto on 30 cents a day. His key source of protein was tofu.

"They will present a lecture tonight at 7:00 at the Kailua Seventh-Day Adventist Church. They will speak again tomorrow night at 7 at the University of Hawaii's Kuykendall Hall." Address: Star-Bulletin writer.

1843. Shurtleff, Barbara R.; Hills, Sandy. 1976. Ledger of book sales and expenses, related to *The Book of Tofu.* 790 Los Palos Manor, Lafayette, CA 94549. 31 p. No index. 20 cm.
• ***Summary:*** Barbara ("Bobbie") Shurtleff started this ledger on 2 Feb. 1976 to keep track of the name, address, date of order, and amount received from sales of the newly published *Book of Tofu* by William ("Bill") Shurtleff (her eldest son) and Akiko Aoyagi. Pages 1-21 are in her very clear handwriting and cover sales through 20 July 1976. Some sales are to friends of the Shurtleff family, but most are to people interested in tofu, and many of these live in Hawaii where Bill and Akiko did two public programs about tofu in mid-February (Feb. 12th–tofu class for Seventh-day Adventist group hosted by Naomi Yamashiro, 80 attend; Feb. 13th–University of Hawaii's Kuykendall Hall, hosted by David Lee "Kalm" Sukowske, 140 attend).

Among the book buyers are: Feb. 12–Harry W. Miller [Loma Linda Foods], 11384 Norwood Ave., Riverside, California. Feb. 18–Nancy Arakaki, Kaneohe, Hawaii. Feb. 18–Naomi Yamashiro, Kailua, Hawaii. Feb. 26–Quong Hop & Co. March 3–San Francisco Vegetarian Society (Dixy Mahy, 10 books wholesale, $4.17 each = 40% discount). March 3–Lafayette Natural Foods (10 books wholesale). March 4–The Wok Shop, San Francisco (Albert Chan, 25 books wholesale). March 4–Rising Sun Natural Foods, 440 Judah St., San Francisco (6 books). March 8–East-West Academy, Effie Chow, 33 Ora Way, San Francisco (100 books wholesale). March 8–Dharma Publishing Bookstore, Nyingma Meditation Center, 5856 Doyle St., Emeryville (10 books wholesale). March 10–David Lee Sukowske, 1923 Keeaumoku St., Honolulu. March 30–Carmelite monastery, Kaneohe, Hawaii. April 23–Wo Chong Co., 101 16th Street, San Francisco. May 10–Kinokuniya Japan Center, 1581 Webster St., San Francisco. June 7–Ted Nordquist, 1536 Versailles Ave., Alameda (20 books, wholesale). June 11–Dr. Harry W. Miller (send 1 book to India). June 17–Winston Lo, Hong Kong Soya Bean Products Co. Ltd., 52-54 Hoi Yuen Rd., Kwun Tong, Kowloon, Hong Kong.

Pages 22 and 23 list itemized expenses from 28 Sept. 1976 to 21 Dec. 1976. Entries from Sept. 28 to Oct. 8 are in Bobbie's handwriting, whereas those from Oct. 9 to Dec. 21 were written by Sandy Hills. Bobbie died on 15 Oct. 1976 of cancer of the colon.

Pages 25-31 continue listing sales of *The Book of Tofu* from 29 Sept. 1976 to 19 Oct. 1976; they are similar in format to pages 1-21, with entries from Sept. 29 to Oct. 8 in Bobbie's handwriting. Subsequent entries were written by Noralee and Sandy Hills. The last 1½ pages of entries are undated.

The following is a brief chronology of events related to Bobbie, Bill, and Akiko during late 1975 and 1976.

1975 Sept. 15–Bill and Akiko return to California from Japan; they stay with Bobbie at 790 Los Palos Dr.

Oct. 25–They do their first real "Tofu Class" at Westbrae Natural Foods in Berkeley. About 14 people attend.

October 2-6–The three visit Ananda community then Lake Tahoe together. Nov. 23+ The three put on a tofu class at the Esalen Institute in Big Sur, spend the night at Esalen as guests of Michael Murphy, visit Emile Norman at his home in Big Sur, then drive to Los Angles and back.

Dec. 2–Bill and Akiko put on a big tofu class in Bobbie's home, followed by 6 other tofu classes in central California.

Dec. 10–They hold a family party and reunion at the family home to announce the publication of their *Book of*

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Tofu–which arrived two days later. Soon orders for books began to arrive.

1976 Feb. 10–Bill and Akiko return to Japan, via Hawaii, leaving Bobbie alone at 790 Los Palos. In Hawaii they did several tofu programs and asked Bobbie to take orders for books.

March 19-April 10–Bobbie takes a group trip to the Galapagos Islands (Ecuador), Bogota and Cali (Colombia), and the Andes.

May–Bobby has a large malignant tumor removed from her colon at Peralta Hospital in Oakland.

July–Bobbie and her friend Niki spend 10 days together at the Shurtleff honeymoon cabin at Lake Tahoe.

Sept. 29–Bill and Akiko leave on their Tofu & Miso America Tour. Bobbie attended their first class in San Rafael. As they said good-bye (for the last time) Bobbie said, "Have fun on the way." Address: Lafayette, California. Phone: 283-3161.

1844. Drachenberg, Frederick G.; Allred, Paul E. 1976. Method of making soy milk. *U.S. Patent* 3,941,890. March 2. 6 p. Application filed 23 Oct. 1974. [3 ref]
• ***Summary:*** Dehulled soybeans are first cooked in a microwave oven for a long enough period of time to destroy the trypsin inhibitor present in the beans, but not long enough to roast the beans. After being milled with water, suitable enzymes are added to the slurry to dissolve or partially reduce in size particles which would otherwise form sediment in the finished product. Address: 1. 11674 Valverde, Riverside, California, CA, 92505; 2. Box 373, Loma Linda, CA, 92354.

1845. Clayton, Hugh. 1976. Vegetable protein: A new ingredient in the British diet. *Times* (*London*). March 19. p. 19, cols. 4-8.
• ***Summary:*** "Students of propaganda will find an interesting field for study in the debate about the use of textured soya protein where only meat was used before. Farmers and butchers are pursuing a loud campaign against 'moc meat' [mock meat] and appear to be winning the argument."

Representatives of the National Farmers' Union (NFU) have "spoken darkly about the 'disquieting reports' about the long-term effects of using" textured vegetable protein (TVP). "The soya lobby is less vocal but no less influential." Since 30% TVP is now allowed as a meat extender, some of Britain's largest meat processors, such as Unilever and Spillers, now sell catering packs of TVP.

The retail market was harder to crack. Nestlé, the first to jump in, "used the prestigious and long-standing Crosse & Blackwell label as a vehicle for a meat extender." A table shows companies that followed Nestle's lead with tinned [canned] products: Cadbury Schweppes (Cadbury's Soya Choice, canned chunks in beef gravy, 15 oz for 30*p*. The product contains 6% by weight of beef fat). S. Daniels, a distributor of Danoxa hams, sausages, and tinned stew (Danoxa Kesp Curry, 15¼ oz for 30*p*. Based upon the Cortauld spun protein product Kesp). Spillers (Tyne, large stewed steak, 43½ *p.*). Unilever (Walls 15 oz stewed steak with gravy, 46 *p.*). RHM (Chesswood 15 oz curry with beef, 38*p.*). Allied Breweries (Appleford, 15 oz meatless steak, 36*p.*)

Two companies sell canned, precooked beans in sauce: Allied Breweries (Delicia 10 oz soya beans in tomato sauce, 24 *p.*). Heinz (Heinz 20 oz baked beans in tomato sauce, 19½ *p.*). Miles Laboratories, which markets TVP in Britain, sells an imitation bacon in the USA. Address: Agricultural correspondent.

1846. Juberg, Mort. 1976. 18 varieties of waffles and all nutritious. *North Pacific Union Conference Gleaner* (*Portland, Oregon*). April 19. p. 11.
• ***Summary:*** About Mrs. Edyth Young Cottrell of Clear Lake, Washington. For 30 years she taught home economics in the western Washington area. Then she changed occupations, and enrolling in Loma Linda University, "supposedly to take some refresher courses. She remained there for the next eight years as a research nutritionist in the school of Health." Now age 75, she has written *Oats, Peas, Beans & Barley Cookbook.* Many of her waffles are rich in protein, sometimes from peanuts or soybeans. She now resides at Rt. 3, Box 406, Sedro Woolley, WA 98284. A photo shows Edyth cooking.

1847. Churella, Helen R.; Yao, Benita Co; Thomson, William A.B. 1976. Soybean trypsin inhibitor activity of soy infant formulas and its nutritional significance for the rat. *J. of Agricultural and Food Chemistry* 24(2):393-97. March/April. [22 ref]
• ***Summary:*** The soybean trypsin inhibitor (SBTI) activity of five soy-based infant formulas was determined by a method specifically designed to test their relatively low levels of SBTI. All formulas, except one, contained 15% or less of the SBTI activity of a soy protein isolate source typically used in the manufacture of such formulas. Resterilizing two of these formulas did not significantly reduce residual SBTI activity.

Weanling rats were fed a variety of soy-based formulas ranging in processing from unprocessed to fully processed commercial products. "No pancreatic hypertrophy or hyperplasia was observed in any of the rats. Our results show that the level of SBTI in the soy infant formulas tested is low and of no nutritional significance for the rat."

The following commercial soy-based infant formulas were tested: Isomil (Ross Laboratories, Columbus, Ohio), ProSobee (Mead Johnson Lab., Evansville, Illinois), Neo-Mull-Soy and Mullsoy (Syntex Lab., Palo Alto, California), and Soyalac (Loma Linda Foods, Riverside, California). Trypsin inhibitor activity is expressed as trypsin units inhibited (TUI), and it was measured in trypsin units

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inhibited (TUI) per gram of protein. The soy protein isolate used to manufacture Isomil had an activity of 14.4. The activity of the five commercial products, each sold in concentrated form, ranged from 0.7 (for ProSobee) to 2.1 (for Mullsoy and Soyalac). The activity in ready-to-feed forms ranged from 1.6 to 8.1. Address: Ross Laboratories, Div. of Abbott Labs., Dep. of Product Development, Columbus, Ohio.

1848. Hartman, Warren E. 1976. Plant protein foods: From whence they came to where they are going? Paper presented at the American Chemical Society Symposium, "One Hundred Years of Agricultural and Food Chemistry–Challenges of Food Processing and Flavor: Past, Present, and Future." 20 p. April 7. Unpublished manuscript. [21 ref]
• ***Summary:*** Contains a detailed discussion of the work of Dr. John Harvey Kellogg, and other Seventh-day Adventist vegetarians, which greatly influenced Worthington. Their pragmatic approach led to the development of various meat analog products called "nutmeats." "Usually nuts were finely ground into a paste or nut butter and water was then added to produce an emulsion. To this emulsion was added flours, starches, cereals, or other ingredients. This white milk-like oil and water emulsion was then retorted or cooked to set up into a solid mass. This product could be diced or sliced for salads or used as a main entree. The texture of the resulting product depended mainly upon the degree of emulsification and the varying degree of particle sizes incorporated within the product.

Extracted wheat proteins or wheat gluten was also used as one of the basic raw materials for the early vegetarian protein products. The gluten or protein extraction process usually starts with a high protein hard wheat flour which is mixed with water to form a dough in a conventional dough mixer. This dough is repeatedly washed with water to remove the starch. The carbohydrate water is decantered off and the process repeated several times until the gluten reaches the desired protein content, typically around 72% protein on a dry basis. This dough-like elastic mass of gluten is cut into slices or cubes and cooked in boiling water where it expands and the protein simultaneously denatures, giving an expanded cellular chewy texture to the product. This product may be canned in a bouillon-type broth or may be ground through a chopper to simulate minced meat or hamburger. The wheat gluten also provided an elastic matrix for incorporation of nuts, grains, flours, legumes, and other vegetable material into a mass, when mixed vigorously at high speed with considerable shear for an extended length of time would yield a thin, string-like fibrous textured dough mass in which other materials could be incorporated. This product was also canned and cooked to produce a solid textured loaf-type product which served as a vegetarian entree, or was diced or ground for use in home recipes.

"Similar products are being manufactured today and wheat protein or wheat gluten is still an important basic raw material for its contribution to texture. The Worthington division of Miles Laboratories presently has a number of products based almost exclusively on wheat gluten which are peculiar, yet significantly textured protein products. Miles Laboratories also is becoming basic in the production of vital wheat gluten for utilization by industries throughout the world."

"Worthington Soyamel was the first soymilk-type beverage to be based on or formulated primarily from soy protein isolate." Also discusses spun soy protein fibers. Address: Worthington Foods, Worthington, Ohio.

1849. **Product Name:** [Soyalac {Soymilk} (Reduced Sugar, or No Added Sugar)].
Foreign Name: Soiyarakku (Gentô, Mukatô).
Manufacturer's Name: San-iku Foods.
Manufacturer's Address: 1-1 Nagaurataku, Sodegaura-machi, Kimizu-gun, Chiba-ken 299-02, Japan.
Date of Introduction: 1976 April.
Wt/Vol., Packaging, Price: 425 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Both products tasted by William Shurtleff in Hayama, Japan, at the home of Nahum and Beverly Stiskin while doing final proofreading and editing on *The Book of Miso.* 1976. May 19-23.

K. Tsuchiya. 1982. Dec. *Tonyu* [*Soymilk.* 2nd ed.]. p. 74. States that Soiyarakku Gentô was introduced in April 1976 and Soiyarakku Mukatô in June 1976. They are both now sold by Saniku Fuuzu in a 425 gm can and distributed nationwide.

1850. Garino, David P. 1976. Foreign demand for soy protein is seen tied more to economics than nutrition. *Wall Street Journal.* May 17. p. 28 (East). Or West Coast ed. p. 22.
• ***Summary:*** "Foreign countries are developing quite an appetite for soy protein." Although soy protein is being used in an ever increasing number of foods, its main use continues to be as a meat extender and substitute, largely for economic rather than nutritional reasons. It generally takes 2-2½ lb of feed to produce one lb of chicken (live weight), 3½-4 lb of feed for one lb of pork, and 4-5 pounds of feed for one pound of beef–all live weight. So when feed prices rise, as they have in recent years, meat production becomes more costly and soy protein extenders look more attractive. Sales of soy protein isolates climbed 60% last year, following a gain of about 40% in 1974 according to Ralston Purina. In 1976 sales of textured soy flour in Europe are growing at 15-20% a year. West Germany doesn't permit use of soy protein in meat.

The percentage of disposable income spent on food is 18% in the USA, 25% in Western Europe, more than 25% in Eastern Europe, and about 40% in developing countries. Address: Staff Reporter.

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1851. Gonzalez, Nicholas. 1976. Preventing cancer: You won't die of cancer if you never get it. And there are ways to reduce the risk. *Family Health* 8(5):30-33, 70, 72, 74. May.
• ***Summary:*** Lacto-ovo-vegetarian Seventh-day Adventists have lower cancer rates than the general population. Although heart disease is America's leading killer, we fear cancer the most. Last year 365,000 Americans died of cancer–1,000 every day. One out of every four Americans alive today will contract some form of cancer, and one out of four will die of it. But "cancer is largely a *preventable* disease, a disease of the way we live–a disease we can avoid. "'I think the most profound thing we've come to realize after years of cancer research,' explains Dr. Frank J. Rauscher, director of the National Cancer Institute, 'is that 90 percent or more of cancers are extrinsically induced. That means it's not your fate or mine to develop cancer simply because we're born people. Cancer occurs because of something we do–we eat certain foods, we drink, we smoke, we choose a certain way to live.' And the people who know most about cancer, the scientists and physicians who study and treat it, are emphasizing more and more not the search for a cure, but the need for prevention."

The fight against cancer began in earnest in 1937 when President Franklin Roosevelt signed the National Cancer Institute Act, creating the NCI with an initial budget of $700,000. In 1971 the fight escalated when President Nixon, in his State of the Union Message, announced plans for a greatly expanded war on cancer, with a greatly expanded budget. By 1975 NCI's budget was $691 million, and the total national research budget, including contributions from such private organizations as the American Cancer Society, and from state and local governments, was $900 million. But scientists believe that the public is misled in thinking that we will ever "conquer cancer" until individuals change the way they live. If we would eliminate cigarette smoking, at least 70,000 to 80,000 lives would be saved each year. Last year cigarette manufacturers spent over $250 million on advertising alone.

"Scientists now believe that the foods we eat may have an important influence–perhaps the most important–on cancer incidence around the world. For example, evidence indicates that the typical American diet, loaded with fat, sugar, and highly refined foods, is responsible for our high rates of intestinal and breast cancer. Our second and third biggest cancer killers respectively, they claim 50,000 and 30,000 lives a year."

1852. Klaw, Spencer. 1976. Pursuing health in the promised land: Clues to why your grandfather probably was, and your daughter probably is, an ovo-lacto vegetarian. *Horizon* 18(2):24-29. Spring.
• ***Summary:*** Americans are currently are pursuing the holy grail of perfect health with unprecedented intensity and passion. Gives a history of vegetarian and health food movements in the U.S., and tries to interpret the motivations of advocates of natural foods. Dr. William A. Alcott, the prominent Boston physician and prolific writer on hygiene, announced in 1850 at a vegetarian convention in New York that "a vegetable diet lies at the basis of all reform." Not long afterward Horace Greeley presided over a vegetarian feast whose honored guests included Amelia Jenks Bloomer and Susan B. Anthony.

William Alcott's cousin, Bronson Alcott, founded a short-lived utopian community named Fruitlands, which was run on strict vegetarian lines. Note: KQED-TV aired a program in early May 1992 on 19th century American utopian communities, titled "America Past" and produced by Jim Fleet. It had a 10-minute segment on Fruitlands, which was portrayed as a vegan community. The members ate only fruit and vegetables that looked to the sky/heavens (thus root vegetables were avoided), and they refused to use animals to plow their fields or as a source of wool. The women did most of the work. The community lasted for only about 6 months.

The English mystic Annie Besant wrote *Vegetarianism in the Light of Theosophy.* Sylvester Graham, a noted diet reformer and advocate of the use of whole grains, argued that the main thing wrong with meat was that it was bad for the eater. In the 1830's Graham hotels and boarding houses sprang up all over the East Coast from Boston to Philadelphia. The radicals of the day assembled over a cup of cold water and a slice of Graham bread to plan the future. In one such club Horace Greeley met and fell in love with his future wife. "Graham's views were enthusiastically ingested by Dr. John Harvey Kellogg, one of the founders of the breakfast food business. Dr. Kellogg also founded the Battle Creek Sanitarium [in Michigan], an enormously successful spa that earlier in this century attracted such oddly assorted notables as Johnny Weissmuller [Olympic gold medalist in swimming in 1924 and 1928] and Carrie Chapman Catt. Kellogg did not insist that his guests give up meat, but he did warn them that it was bad for their dispositions as well as their health. To make things easier for vegetarians, Kellogg invented some eighty grain and nut products, including a meat substitute called Protose, which was supposed to taste just like beefsteak, and one called Nuttose, which was supposed to taste like veal."

Other "health gurus" profiled include Emile Coué (1920s, mind over matter), Gayelord Hauser (1930s and 1940s, wonder foods), Carlton Fredericks (1950s, vitamins), Adelle Davis (1960s), Helen & Scott Nearing (1970s).

1853. Numbers, Ronald L. 1976. Prophetess of Health: Talk given at San Bernardino County Museum on May 29, 1976 (Website printout–part). www.ex-sda.com/experience_numbers.htm Printed 4 May 2004.
• ***Summary:*** Dr. Numbers has written: "The first serious and scholarly effort to see Ellen White's development as a

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'prophetess of health' in the full context of her social and spiritual milieu" (Edwin S. Gaustad, Univ. of California, Riverside).

Dr. Numbers now states in this talk: "I want to address myself to four questions: the (1) being, what was I really trying to say in this study? What do I see as the most important points? (2) What methodology have I used? (3) What were my motives? And (4) what has been my relationship with the Ellen G. White Estate.

Dr. Numbers taught the history of medicine to medical students at Loma Linda University. He wanted to "find out why a small group like the Seventh-day Adventists has become so committed to medical education and to health reform." He was equally interested "to discover the truth." Yet he was forbidden "to hold this meeting on the campus of an Adventist University." The history of his efforts to obtain documents from the Ellen G. White Estate, starting in the summer of 1972, is very interesting and revealing. He was discouraged from having an "outside" publisher publish his book. He was not allowed to browse documents in Ellen White's personal papers. "You must request a specific manuscript or letter. It is then brought to you if it is not restricted. You may read it, but you are not allowed to take notes." Most of the documents he requested were sent, but five were withheld because they involved "personal family matters."

One of the issues was vegetarianism. In 1908 [letter D-162-1908], "after a lapse of several decades Mrs. White once again enthusiastically embraced health reform and vegetarianism, and she suggested to the President of the General Conference [Elder A.G. Daniells] that Seventh-day Adventists now begin to circulate an anti-meat pledge analogous to the temperance pledge that had gone over so well in the church." He responded that this would be impractical, since it would undoubtedly split the church in two.

Dr. Numbers then summarizes the basic content of each document that Arthur White and the White Estate would not release. For example: "(1) a passage from a letter (L-6-1864) describing James Caleb Jackson's physical and phrenological examination of Edson and Willie White, the two sons of Ellen White." (4) An "account written by Ellen White on the 1870s in which she describes a vacation trip to the Rocky Mountains in which she and the members of her family dined on wild duck..."

Not "one of the documents not released was related to any revelation of personal sin in an individual's life, the Ellen G. White Estate's only publicly stated reason for withholding material. The concern was solely in protecting a certain image of Mrs. White carefully constructed by the White Estate over a period of many years." The "officials of the White Estate had repeatedly stated that the Trustees had no interest in restricting significant historical data..."

In Sept. 1974 Numbers sent Elder White (of the White Estate) a copy of his revised manuscript "asking him for corrections and criticisms. At the same time he sent a copy to the editors of Harper & Row, who had previously agreed to publish this volume when it was completed. There followed great conflict–which is described in detail. The trustees made extensive criticisms.

The talk is followed by questions from the audience and answers.

After Ellen White's vision on health in June 1863, she traveled about the country preaching on health reform. Repeatedly individual Seventh-day Adventists came to her and said, "My, your views are so similar to the writings of Dr. [Russell] Trall and Dr. [James Caleb] Jackson. Were you familiar with them?" The questions of "literary dependence" and citing sources are discussed at length. Dr. Numbers states he is sure that plagiarism, "the conscious borrowing of material from others without giving credit," was "not morally condoned in the 19th century."

1854. **Product Name:** [Breakfast Cereal].
Manufacturer's Name: Alimentos Colpac.
Manufacturer's Address: Apartado 407, Navojoa, Sonora, Mexico.
Date of Introduction: 1976 June.
New Product–Documentation: *Soybean Digest Blue Book.* 1976. p. 34. Also listed in 1980.

1855. Ruys, J.; Hickie, J.B. 1976. Serum cholesterol and triglyceride levels in Australian adolescent vegetarians. *British Medical Journal.* ii(6027):87. July 10. [5 ref] Address: 1. Scientific officer; 2. Prof. of medicine. Both: Medical Professorial Unit, Univ. of New South Wales, St. Vincent's Hospital, Sydney, Australia.

1856. Boyer, Robert A. 1976. Early history of the plant protein industry. *Cereal Foods World* 21(7):297-98. July.
• ***Summary:*** "Shortly after the turn of this century, there appeared on the American scene one of the first examples of a food product based on a processed plant protein. Dr. John Harvey Kellogg, in an effort to add more vegetable protein foods to the menu of his famed Battle Creek Sanitarium [in Michigan], developed a method for producing wheat gluten from ground wheat and converting it into an attractive entree resembling a cut of meat."

Yet long before, people of the Orient have obtained a major portion of their protein from bean curd or tofu. There follows a good history of modern soy protein development from 1930 to the present. In the "late 1950s, the first edible soy protein plant went on stream in Chicago [Illinois, where Central Soya made Promine]. This was followed a few years later at another edible plant in Louisville, Kentucky [owned by Ralston Purina Co.]. Soon products began appearing on the marketplace listing 'soy protein' or 'vegetable protein' in their ingredient lists... This triggered a rapid growth in

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the plant protein industry starting in the mid-1960s... To summarize, it can be said that the first 65 years were the hardest for this new industry, but after that the progress was irresistible. Nothing is as powerful as an idea whose time has come."

A portrait photo shows Boyer, who "attended the Edison Institute of Technology before serving as Manager of the Soybean and Chemurgic Laboratory, Ford Motor Co. from 1931 to 1943. He spent the next six years as Director of Research for Drackett Co. Boyer worked as a Protein Consultant for the next 13 years with such companies as Swift and Co., Unilever Ltd., Worthington Foods Inc., Nabisco, General Mills and Ralston Purina. In 1962 he joined Ralston Purina as Protein Scientist. He served in this capacity until his retirement in 1971, at which time he assumed his present position." Address: Protein Consultant, Miles Laboratories, Inc., Elkhart, Indiana, 46514.

1857. Rosenfield, Daniel. 1976. The changing climate for plant protein foods: 1965-1976. *Cereal Foods World* 21(7):302-03, 305-06, 338. July. [11 ref]
Address: Dir. of Nutrition Affairs, Dep. of Nutrition, Miles Laboratories, Inc., Elkhart, Indiana 46514.

1858. *Time.* 1976. Prophet or plagiarist? 108(5):43. Aug. 2. [1 ref]
• ***Summary:*** In 1847 in Topsham, Maine, Ellen Gould White, age 19, fell into a trance in the presence of friends and had a vision in which Jesus allowed her to see the tablets on which the Ten Commandments were written. "At the very center in a halo of light was the Fourth Commandment, requiring observance of the seventh day. This meant, an angel explained, that Saturday must be kept as the Christian Sabbath."

Following the Great Disappointment of 22 Oct. 1844 among the Millerites, some continued to believe that Christ's Second Advent was immanent. Among them was Ellen White, whose conviction grew out of several visions as vivid as the one about the Fourth Commandment.

"Ellen White is far less well known today than her contemporary Mary Baker Eddy, the founder of Christian Science. But the Adventists–who still expect the Second Coming to occur shortly–have grown into a remarkable denomination, with 2.5 million members in 185 countries, including 480,000 in the U.S. On average, Adventists contribute more to their church ($486 a year per capita) than do members of any other U.S. denomination. Worldwide, they operate an extensive system of 4,218 schools and 421 medical institutions."

Among White's 2,000 or so visions, many concerned diet. "Belief in White as divinely inspired, a tenet for Adventists since her death in 1915, is now under scrutiny. In *Prophetess of Health: A Study of Ellen G. White* (Harper & Row). University of Wisconsin Historian Ronald L. Numbers contends that many of White's supposedly unique revelations simply reflected contemporary views, and may sometimes have been plagiarized from the writings of 19th century health reformers and diet faddists. Numbers, 34, formerly taught at two Adventist colleges and is the son of a minister and grandson of a president of the sect."

Among those whose writings influenced White, says Numbers, were Sylvester Graham, and Dr. John Harvey Kellogg, "the most prominent Adventist of his time" and a famous physician. "Searching for palatable vegetarian foods, Kellogg invented both peanut butter and corn flakes. Though official Adventist historians say the records are ambiguous, Numbers states that Kellogg offered his church the patent rights to wheat flakes and corn flakes, which would have made it fabulously wealthy. But White rejected the idea as tying up too much time and talent in manufacturing mere temporal foods. Kellogg finally had to leave the church after he questioned the infallibility of White's visions.

"Adventist leaders consider Numbers' book and important challenge to the faith. In June their North American president, Neal C. Wilson, sent his pastors a letter warning against those who question whether White was 'a channel of God's supernatural revelation of Himself to his people.' The church then provided its ministers with a 23-page booklet of rebuttal against Numbers' book. The booklet reminds Adventists of Ellen White's prediction that 'the very last deception of Satan will be to make of none effect the testimony of the Spirit of God.' It goes on to suggest that 'the enemy of souls will use such a book to accomplish this very work.'"

Photos show Ellen G. White, Sylvester (Graham Crackers) Graham, and John (Corn Flakes) Kellogg.

1859. Anderson, Sylvia. 1976. Re: Tofu made from soy flour on The Farm in Summertown, Tennessee. Letter to William Shurtleff at New-Age Foods Study Center, Aug. 12. 2 p. Typed.
• ***Summary:*** Before Sylvia went to live on The Farm in Summertown, Tennessee, in June 1971, she had never heard of tofu. She first saw firm, pressed tofu in cakes about a year ago. The tofu they made on The Farm was a staple of her diet and one of her favorite foods. This was made from soy flour, and all the pulp [okara] was left in; it was squeezed to a roundish in cloth as the last step rather than being pressed into cakes. She suggests it be called "Tennessee Farm Tofu" or "Squeezed Tofu." It may be a new invention.

"Here's how it came to be: Stephen and his students gave up dairy (cow) products before or during the Caravan, and in the early days of The Farm folks were into commercial soy products like Soyagen and Soyamel (powdered soymilk, made by Worthington Foods) and Fearn's Soya Powders. The Farm store bought and distributed soy powder (Fearn's, I guess), from which we made cardboard tasting soymilk and chalky squeezed tofu

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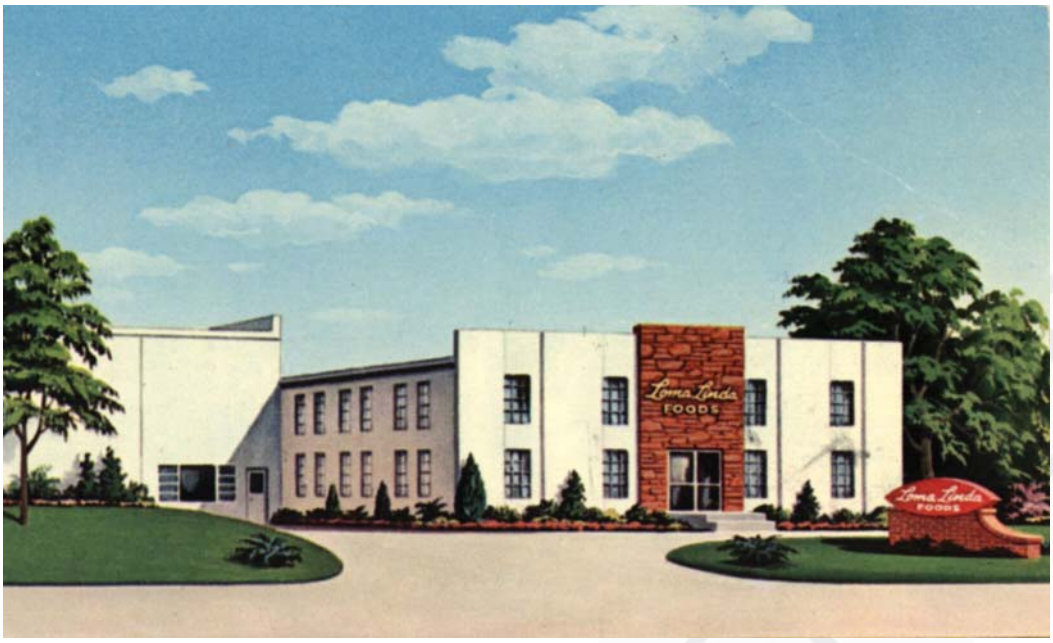

from directions in *Ten Talents* (by Frank and Rosalie Hurd, 1968), which was The Farm's cooking scripture of that era.

"As priorities began to get shuffled around and we started growing our own soybeans, soy flour ground in The Farm mill replaced the old soya powder, and as the soy dairy got together, folks stopped making [soy] milk at home, but they kept on making tofu at home, converting the old soy powder recipe to soy flour. At first we strained the pulp out of the milk before we solidified it, but that meant double straining, and you never could get all the very fine flour-pulp out anyhow, so somewhere along the way we tried it without straining out the flour and found that it made fine 'tofu'–by our standards, which were certainly far from those of a tofu master. But this kind of tofu has become a staple in the diet of several thousand people in America by now... And I'm teaching folks her in New Jersey how to make it as fast as I can... I've tried your homemade tofu method and its fun but a whole lot more energy-expensive than the method I'm used to, so I feel inclined to use it only for special occasions, and use the Tennessee Farm method for my every-day tofu cooking.

"So what I'm pushing here in New Jersey is this new American folk food... People here are digging it and wanting to know how to make it. I've been giving small demonstrations in people's homes quite a bit lately, and have at least three more scheduled this month. Two of these will be at Mormon church ladies' meetings. I didn't realize until recently, but the Mormons have a dietary teaching that goes: 'Yea, flesh also of beasts and of the fowls of the air, I, the Lord, have ordained for the use of man with thanksgiving; nevertheless they are to be used sparingly; And it is pleasing to me that they should not be used, only in times of winter, or of cold, or famine' (*Doctrine and Covenants*, SEct. 89:12-13). So the Mormon ladies in the area want to know how to feed their families soybeans!

"Here's a recent quote from Stephen: 'We *are* our brother's keeper. And our brother is the population of the planet.'" Address: 109 West Park Ave., Pleasantville, New Jersey 08232.

1860. Howes, Charles. 1976. Re: Please send me the price of The Book of Tofu, II... (Postcard). Postcard to Mr. William Shurtleff, Sept. 27. 1 p. With signature.
• ***Summary:*** "... Your address was given me by the Autumn Press." An illustration on a 3½ by 5½ inch color postcard shows a front view of the Loma Linda Foods factory in Mount Vernon, Ohio.

Note: This factory was built by Dr. Harry Miller and his sons, then transferred to Loma Linda Foods. Address: Loma Linda Foods, Eastern Division Factory, Box 388, Mount Vernon, Ohio 43050. Phone: -.

1861. Mayer, Jean. 1976. TVP: Can you tell the meat substitutes from the 'real' thing? (Only chickens, pigs and cows know for sure)! *Family Health* 8(9):40-41, 69. Sept.
• ***Summary:*** Discusses TVP and soy-based meat analogues, their history, how they are made, and reasons for eating them. These foods are an outgrowth of the "extenders" added to ground beef after the 1973 rise in meat prices. "Today, the canned and frozen-foods sections in many large supermarkets sport long rows of soy-based meat analogs (definition: something similar in function to, but differing in structure from, something else)–diced 'ham,' sliced 'bacon,' or 'chicken' or 'sausage' patties, 'cheese' bits, chili-con-TVP, and dried stuffing-like mixtures that can be shaped into 'meat' loaves or 'hamburgers' or used as extenders." The future for TVP looks bright. Some experts predict growth of 25-50% a year, "and its estimated that by 1985 extenders and

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analogues will comprise about 10 percent of the total meat consumed in the United States!"

But such foods are not new. For centuries, Chinese and Japanese have processed soybeans and wheat into products resembling meat and cheese. "Similarly, prototypes of many of today's vegetable-protein foods were developed at the turn of the century by Dr. John Harvey Kellogg for his Seventh-Day Adventist patients–all vegetarians–at the Adventist sanitarium in Battle Creek, Michigan... Determined to provide his patients with a nutritious, balanced and tasty vegetarian diet, he produced 'coffee' made from cereals, decaffeinated coffee and peanut butter. His first meat analogues, which he called 'nutmeats,' combined nut butters with water in an emulsion. Then flours, starches, and cereals with different textures and flavors were added to the line. These mixtures were cooked and served as entrées or diced and added to salads. Kellogg made the analogues by extracting gluten, the main protein of wheat, washing away the starch, and mixing the gluten at high speed with nuts, grains and beans. The result: a fibrous, stringy dough that could be cooked as a loaf, diced, and canned for making vegetable bouillon or ground like hamburger." Dr. Kellogg's peanut butter and breakfast cereals soon became popular across America. But the "meat substitutes" were sold only to a small, specialized clientele. A photo shows various meat analogues served on plates. Address: Prof. of Nutrition at Harvard Univ. from 1950 to 1976, is the new president of Tufts Univ. [Medford, Massachusetts].

1862. Phillips, R.L.; Kuzma, J.W. 1976. Estimating major nutrient intake from self-administered food frequency questionnaires (Abstract). *American J. of Epidemiology* 104(3):354-55. Sept.
Address: Loma Linda Univ., Loma Linda, California.

1863. Shurtleff, William; Aoyagi, Akiko. 1976. Tofu & Miso America Tour: 29 Sept. 1976 to 3 Feb. 1977 [Itinerary with two maps]. Lafayette, California: New-Age Foods Study Center. Unpublished manuscript.
• ***Summary:*** On 13 Sept. 1976 the authors bought a large, white 1975 Dodge Tradesman 300 van (used, with 40,000 miles on it). On one side Akiko painted in large, bold letters "Tofu and Miso America Tour 1976-77." Their *Book of Tofu* had been published in December 1975 and *Book of Miso* on 23 Sept. 1976. On Sept. 29 they packed the van full to the ceiling with their books on tofu and miso, plus Larry Needleman's tofu kits–and departed. In the van was an itinerary of hosts and places to which they had been invited and the route drawn on a large map of the USA.

This trip had four main purposes: (1) To introduce tofu and miso to America; (2) To introduce people to the many benefits of a meatless / vegetarian diet; (3) To encourage people to start soyfoods companies, especially tofu shops; and (4) To promote the authors' newly-published *Book of Tofu* and *Book of Miso.*

This itinerary includes the name and address of 64 people and organizations visited. Many of these were pioneers in the soyfoods and natural foods movements: Sept. 29–David and Kathleen Sandler, Robert Dolgin, Don Wilson, Farm Food Co. (San Rafael, California; we observed and recorded in detail how Don Wilson made tempeh and tempeh starter / inoculum, and how soymilk ice cream was made at Farm Food Co.). Oct. 1–Petaluma, California. Oct. 2–Josephine County Food Center, Grants Pass, Oregon. Oct. 3. Heliotrope Natural Foods (Salem, OR). Oct. 4–West Bank Cafe (Corvallis, OR). Oct. 5. Visit Linda Shurtleff (McMinville, OR). Visit *Rain Magazine* (Portland, Oregon). They do an interview which is published in their Nov. 1976 issue. Oct. 6. Blake Rankin and Janus Natural Foods (Seattle, Washington). Oct. 7. Janus. Oct. 8–Luke Lukoskie and Sylvia Nogaki of Island Spring (Vashon, Washington). Oct. 10–Jack Grady, a macrobiotic (Spokane, WA). Oct. 13–Univ. of Minnesota. Oct. 14–Georgie Yiannias of Wedge Food Co-op and Ananda Marga (Minneapolis, Minnesota). Our largest class with 300 people. Oct. 15–Barbara ("Bobbie") Reinhardt Shurtleff dies of colon cancer at Alta Bates Hospital, Berkeley, CA. Oct. 15. Famine Food Co-op (Winona, Minnesota). Oct. 16–Bonnie Maroney of The Wisconsin Farm (Ettrick, WI). Oct. 19–Visit George Strayer and Larry Krueger of the American Soybean Assoc. (Hudson, Iowa). Visit David and Ann Tucker (Iowa City, Iowa). Oct. 20. Outpost Natural Foods (Milwaukee, WI). Visit Bountiful Bean Co-op. Oct. 21. Visit Dr. Danji Fukushima and Kikkoman Foods (Walworth, Wisconsin). Oct. 22–Visit Drs. Hesseltine, Wang, Wolf, Mustakas, Cowan at Northern Regional Research Center (Peoria, Illinois). Oct. 23–Morning class on commercial production for Les Karplus and 5 people at Vegetarian Incorporated (Urbana, Illinois). Oct. 23-24. Side trip to visit ADM and Staley (Decatur, IL). Oct. 24–Les and Debbie Karplus of Vegetarian Inc. (Urbana, IL). Oct. 25–Visit Dr. L.S. Wei of the Univ. of Illinois Dept. of Food Science (Urbana, Illinois). Evening program for Karplus in Urbana. Oct. 26. Purdue University (Indiana). Oct. 27–Chris Steele (Lansing, Michigan). Oct. 28–Mike Potter and Louis Howie of Eden Foods (4601 Platt Rd., Ann Arbor, Michigan). Oct. 29–Calico Market (Erie, Pennsylvania). Oct. 30–Visit Greg Weaver and Jay Thompson of Rochester Zen Center (Rochester, New York; Later Northern Soy). Visit Genesee Co-op. Oct. 31–Alternative Health Education Center (Rochester).

Nov. 1–Visit Arnold Karmody at Empty Cloud (Canandaigua, New York). Meet Dr. Keith Steinkraus (Geneva, New York). Nov. 2–Visit with Dr. Steinkraus at New York Agric. Exp. Station (Geneva, NY). Lunch together with his wife, Maxine. Nov. 3–Tom MacDonald at Hannibal, New York. Nov. 4–Ira and Kathy Leviton of Corncreek Bakery (South Deerfield, Massachusetts). Visit Laughing Grasshopper tofu shop just before it begins operation. Nov.

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5–Fritz Hewitt of Common Ground Restaurant (Brattleboro, Vermont). Visit Tom Timmins of Llama, Toucan & Crow (Brattleboro). Nov. 6. Shep Erhard (Franklin, Maine). Nov. 7–Ann S. Johnson, assistant manager of dining halls, Univ. of Maine (Orono, ME). Nov. 8–Visit Marine Colloids (Rockland, Maine). Nov. 10–Drive to Boston, stay with Nahum & Beverly Stiskin (Brookline). Nov. 13–Tofu & Miso program in Boston. Visit Erewhon Natural Foods (33 Farnsworth St., Boston, Massachusetts), Martha Trundy, Jeffrey & Gretchen Broadbent. Nov. 14–Visit to shops in Boston's Chinatown. Michio and Aveline Kushi give a big party in our honor at their home at 62 Buckminster Rd., Brookline, then take us out to dinner at the Seventh Inn. Nov. 15–Tofu-making class at a home in Boston. Nov. 17–Visit offices of *East West Journal.* Sherman Goldman conducts long interview, later published in Jan. 1977 issue. Misomaking class at home of Ken Burns. Nov. 18–Visit Joel Wollner in Cape Cod. Nov. 19–Radio show then program for Joel. Nov. 20–Peter Smith at Quaker group in Pennsylvania. Nov. 22–Visit Woods Hole, Massachusetts to study sea vegetables. Evening program at New Bedford, MA. Nov. 23–Stay with Seung Sahn, Sa Nim at Providence, Rhode Island Zen Center. Meditate and show students how to make tofu. Evening at Insight Meditation Center, Barre, MA, a Vipassana center in a former Catholic seminary, co-founded in 1976 by Jack Kornfield, Joseph Goldstein and 3 others. We have dinner, meditate with the sangha, and hear Jack talk about Vipassana. Nov. 24 Sit morning zazen with master and students at Providence zendo. Nov. 25–Thanksgiving. Akiko and I stay alone in a house near Hartford, Connecticut and taste a good tofu pumpkin pie. I read about seaweeds. We take a long walk in the countryside. Nov. 26–Program for Erewhon Natural Foods in Hartford (stay with Maria Orefice, owner of Garden of Eating restaurant in Hartford). Article in *The Hartford Courant* (Dec. 1). Nov. 27–Long River Food Coop in Connecticut. Nov. 28–Stay with Susan and Kirk Gershuny of Snowflower (Tivoli, New York). They plan to make soy ice cream soon. Nov. 29–Drive in Deep snow to the New York Farm in Franklin, New York. Stay in a big house they built. Nov. 30–Carl Bethage of the East West Center in Gardiner, New York. Also did a radio program.

1976 Dec. 1–Visit Frances Moore Lappé at her upstairs office in Hudson-on-Hastings, New York. Then visit her large home on the hillside. Dec. 1-5–We missed a program for Annemarie Colbin in New York City (partly because we feared our van would be burglarized on the street) so we stayed Dec. 1-5 at the luxurious home of Leo S. Nikora (Niki; Bobbie's friend). I work on writing *The Book of Kudzu.* Dec. 6-7. Program for 40 people (Hosts: Nancy N. Bailey and Robert Rodale) at Rodale Press (Emmaus, Pennsylvania); I am surprised they serve white sugar on their dining tables. Dec. 8–Tim Snyder of Ecology Co-op in Philadelphia. Dec. 9–Stay at home of Sylvia Anderson in Pleasantville, New Jersey and do a program upstairs in a modern university. Study magnificent photos of Native Americans by Edward S. Curtis. Dec. 10–Visit Jay and Freya Dinshah of the North American Vegetarian Society (Malaga, New Jersey); their poor vegan child has bowed legs. Dec. 12–Cindy Blouse in Dallastown, Pennsylvania. Dec. 13–Visit Laurelbrook Foods, a natural foods distributor in Forest Hill, Maryland. We meet Rod and Margie Coates. Dec. 14–Big program hosted by Ella May Stoneburner and Seventh-day Adventists near Washington, DC. Dec. 15–Michael Rosoff (who ran the East West Center in Washington, DC) planned to host a class in a DC church. After we witness a robbery, we are afraid to leave our van on the street. So we do a scaled-down program in the home of Murray and Pam Snyder, which was the East West Center in Baltimore, Maryland. Visit Laurelbrook Foods Warehouse #2 in Durham / Chapel Hill. Dec. 16–Roanoke Food Co-op in Copper Hill, Virginia. Dec. 17-18–John Shuttleworth and Jim Morgans of *Mother Earth News* (Hendersonville, North Carolina). They do a long interview and take photos. Program at night. Note: An audio tape of Bill's talk at this program is filed with Soyfoods Center documents for 1976. Dec. 19–Chandler Barrett in Atlanta, Georgia.

Dec. 28 & 29–Workshop on tofu and miso at East West Foundation, Coconut Grove, Florida. Not on written schedule, but shown in two published articles. Handwritten trip notes show: "Dec. 27-29. Heartsong, Miami. Bob & Toni Heartsong, 6051 S.W. 46th Terrace, Miami, FL 33155. Was this also related to Mary Pung, who flew from Florida to attend one of the programs on our tour? At the time, she invited us to come to Florida–which was not on our planned route.

Note 1. This is the earliest document seen (April 2013) concerning the work of Ira Leviton or Tom Timmins with soy. One evening, before Shurtleff was scheduled to speak at Leviton's Corncreek Bakery, Leviton drove Shurtleff to see the Laughing Grasshopper Tofu Shop which was under construction on the second story of an old wooden building in the nearby town of Millers Falls, Massachusetts. Much of the equipment was made out of wood–including wooden curding vats and a wooden cider press. The company opened in Jan. 1977.

Note 2. This is the earliest document seen (April 2006) concerning Llama, Toucan & Crow in Brattleboro, Vermont.

Note 3. This is the earliest document seen (May 2006) concerning the forerunners of United Natural Foods, Inc. (INFI)–in the form of Llama, Toucan & Crow. Address: 790 Los Palos Manor, Lafayette, California 94549. Phone: 283-3161.

1864. Worthington Foods, Inc. Div. of Miles Laboratories, Inc. 1976. Why textured vegetable protein? The real facts about meat substitutes and how they contribute to balanced nutrition (Ad and booklet). *Mother Earth News* No. 41. Sept. p. 45. Also in No. 42. Nov. p. 57.

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• ***Summary:*** Shows peanuts in the shell, soybeans, and ears of wheat on a plank of wood. "Vegetable protein foods are made primarily from soybeans, wheat and peanuts... Worthington products average more than 16.5% of the U.S. Recommended Daily Allowance for protein in each serving... There are no animal derivatives of any type, no preservatives and no cholesterol. Ingredients are primarily from natural sources. Vegetable protein foods help make the transition to a non-meat diet quick and easy... Most Worthington products contain important minerals and vitamins (like B-12) that are sometimes lacking in vegetarian diets."

The booklet lists Worthington product names: 3 are dry, 18 are canned, and 25 are frozen. Address: Worthington, Ohio 43085.

1865. O'Donovan, C.J. 1976. Recent studies of lysinoalanine in alkali-treated proteins. *Food and Cosmetics Toxicology* 14(5):483-89. Oct. [25 ref]
Address: Miles Laboratories, Inc., Elkhart, Indiana 46514.

1866. Taylor, C.B.; Allen, E.S.; Mikkelson, B.; Kang-Jy, Ho. 1976. Serum cholesterol levels of Seventh-day Adventists. *Paroi Arterielle* 3(4):175-79. Oct. *
• ***Summary:*** Lacto-ovo-vegetarians had lower serum cholesterol levels than the general U.S. population; these levels showed no sex difference, but they increased with age and weight. Cholesterol levels in lacto-ovo-vegetarians were higher than those in strict vegetarians (vegans).

1867. Dahlke, Connie I. (Mrs.). 1976. Re: "Ten Talents" Cookbook. Letter to Mr. Wayne Darnell, Book Store Manager, Colorado Conference of SDA's, 2520 S. Downing, Denver, Colorado 80210, Nov. 5. 3 p. Typed, with signature (carbon copy).
• ***Summary:*** This a 21-point negative review of the well-known book; the reviewer has nothing good to say about it. Sample points are given below. The review begins: "Dear Mr. Darnell. "As per our recent conversation, I have reviewed the cookbook *A Good Cook, Ten Talents* by Frank and Rosalie Hurd. I have marked my comments in the copy I am sending you. However, I will summarize them here.

"1. Raw sugar and honey are consistently recommended, while brown and whit sugar (refined) are considered poison (p. 13). Nutritionally this is incorrect. Brown sugar has a very small advantage over honey which in turn has a very small advantage over white sugar. Raw sugar is not recommended because it is quite often contaminated."

"3. Raw foods are touted as being of much assistance in digestion due to the high enzyme concentration (pp. 213, 227). Such enzymes, it is claimed, help digest protein in the stomach (p. 227). The truth is, the body manufactures all enzymes needed for digestion. Raw foods have their place but not for the reasons claimed, nor in the amounts recommended. ("Ten Talents" recommends at least one-half to three-fourths of the diet should be from raw foods (pp. 33, 44)), and it says all nuts should be eaten raw (p. 213).

"4. Remedial properties of various herbs are listed which are not supportable with current scientific knowledge (pp. 170-175). No references are given."

"8. It is claimed that sunflower seeds, almonds and coconut are 'valuable sources' of Vitamin D (p. 20) when in fact they contain no vitamin D.

"9. Many false claims are made for Vitamin E (p. 21).

"10. Avocadoes are touted as being non-fattening and as having 'wonderful properties." (p. 260) They are also highly recommended as a wonderful first solid food for infants. (p. 53)."

"20. The medical profession is denounced as not consulting 'the manual that our Creator has given us" with the implication that physicians are not reliable sources of medical information (p. 26). (However, Hr. Hurd does not prove to be a reliable source of information himself.)

"21. Monstrous statements about the ingredients of ice cream (pp. 124-125) and objections to meat eating (p. 176) reveal emotionalism and poor judgment. Enough *good* reasons are available in these areas that there is no need to rely on questionable statements and unproven 'facts.'

"I could make additional comments, but I will refer you to the notations I have written in the book.–.

"I am sure that Mr. and Mrs. Hurd wrote this book with the best of intentions, however its merits are far outweighed by the gross misinformation that it contains. I therefore strongly recommend that this cookbook not be offered for sale by the Colorado Conference Office, nor by any other outlets [bookstores] authorized by the Seventh-day Adventist Church.

"Thank you for your consideration." Copies of this review were sent to:

"Mrs. Medford, Porter Memorial Hospital, Denver

"Ella Mae Stoneburner, Health Dept., Gen. Conf. of SDA's

"U.D. Register, Ph.D., Chairman, Dept. of Nutrition, Loma Linda

"Fonda Chaffee, Ph.D., Dept. of Home Economics, Andrews University

"Alice Marsh, Dept. of Home Economics, Andrews University

"Seventh-day Adventist Dietetic Association, Loma Linda

"Mr. and Mrs. Frank J. Hurd, Chisholm, Minnesota

Note 1. The Hurds quickly responded to this review by making many changes in their book before it was reprinted.

Note 2. Dr. Hurd is apparently not recognized as a doctor by the reviewer. Address: R.D., Chief Therapeutic Dietitian, Boulder Memorial Hospital, 311 Mapleton, Boulder, Colorado 80302.

1868. Carlson, J. 1976. New interest in soy milk. *Soybean*

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Digest. Nov. p. 23-25.

1869. Miller, Harry W. 1976. Re: Your good work in introducing foods from the soya bean. Letter with Christmas card to William Shurtleff at New-Age Foods Study Center, Dec. 21. 1 p. Typed with signature.
• ***Summary:*** "My Dear Mr. Shurtleff–Your name comes to mind very often on account of our close association in the interest of nutrition to the people in America, and I feel you have done a wonderful job in educating the people regarding the value of using foods from Soya Beans. I think now that I have secured three of your Tofu books, but they are all gone, loaned and not returned, so I am ordering another to have sent to my home address on this envelope. I would be glad to mail a check for the exact amount including Postage so if you will send me that by return postage I will send a check for the same at once as I need some data you have given in same.

"Dr. Tojima Yamagata, Minister of Forestry and Agriculture for Japan, paid me a visit about a month ago and has supplied me with some recent pamphlets from his Dept. on Soy Milk. I have wondered if at anytime you are planning a trip to the Los Angeles or Riverside area. The book store here at La Sierra usually handles your book but they are all sold out. Therefore I am hastening to order from you direct, and always glad to hear from you, Yours very sincerely, Harry W. Miller, M.D."

This is a poignant letter and card. On 26 July 1977 Dr. Miller's wife, Mary E. Miller, (now a widow) sends the money Dr. Miller owed for *The Book of Tofu* he ordered and adds: "Please forgive my husband for this long delay, he died on Jan. 1 of this year. He went into the hospital on Nov. 19 of last year and never recovered from a severe heart attack at the age of 97." Address: M.D., 11384 Norwood Ave., Riverside, California 92505.

1870. Phillipps, Stanley N. 1976. The HF [health food] industry has come of age. *Health Foods Retailing.* Dec. p. 70-78, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256-56.
• ***Summary:*** In this, the 40th anniversary issue of this publication, the author, a two-time president of the National Nutritional Foods Association (NNFA), reminisces about the history of the industry and the NNFA. He has been in the health food business for almost 56 years. In 1920 in Cincinnati, Ohio, he began selling the full line of 25 products from Battle Creek Sanitarium Foods. Hain Health Foods of California was one of his first suppliers. Figco was a big selling coffee substitute. Early lecturers who drew large audiences were Paul C. Bragg (1932), Gayelord Hauser (very high class), Edward McCollum, and Walter Hadson. A major industry change came at the end of the 1930s when new FDA laws prevented manufacturers or retailers from saying much about their products. The 1930s was the golden era, when people became aware of "the harmful effects of devitalized foods." The main product lines during the 1930s and 1940s were Paul Bragg's Live Vital Foods [sic, Live Food Products], Gayelord Hauser's Modern Products, American Dietaids (formerly Tam Products, Inc.), and Alberty Foods. *Better Nutrition* was a major health food magazine. Eugene Schiff was a pioneer who brought stores some of the first natural vitamins.

"The real booms in the industry came at many different times and I will mention a few of them. Gayelord Hauser's book, *Look Younger, Live Longer,* was one of the books that in 1950 did a terrific job on the five wonder foods, brewers yeast, blackstrap molasses, wheat germ, low-fat skim milk powder and yogurt. This book was the top seller on the non-fiction list for weeks and weeks, and it brought people into the health food stores for these and many other foods so that a real demand for products began to cause scarcities in these items. The business boom from this book was tremendous and it lasted for a long time...

Calories Don't Count, by Herman Taller, M.D., was another book that created an unbelievable demand for protein foods and low carbohydrate foods... Then came the Dextrose boom... The biggest boom and perhaps the most long lasting was the Adelle Davis books that brought people to the stores in droves seeking the natural vitamins and supplements.

"From her first book, written in story-book fashion, and called *You Can Get Well* in 1939, Adelle Davis became the queen of the health food movement.

"Hauser's books, Kordel's books, Bragg's books, Ancel Keys book, N.S. West, Mildred Lager, Dr. Wm. Howard Hay, and H. Curtis Wood, M.D., all wrote interesting and well studied books that brought lots of business to our stores across the nation. Linda Clark, Rachel Carson. Dr. Jarvis and many others have written books that bring customers to your door."

Concerning the history of the NNFA, in 1937 Anthony Berhalter had a consumer organization started called the American Health Food Association. Berhalter, a man of great foresight, operated a bakery and health food shop on North Clark Street in Chicago. He made fresh-fruit coffee cakes from whole wheat flour, which he procured from Elam Mills on Damen St. in Chicago. The Association's first convention was in the spring of 1937 in Chicago. About 150 people attended. Walter Hodson was one of the speakers. Companies that exhibited included Live Food Products [Paul Bragg], Alberty Products, American Dietaids (at that time known as Tam Products, Inc.), Battle Creek Scientific Foods, Chippewa Spring Water Co, Dietetic Food Co. of New York (Diamel), Elam Mills, Health Food Jobbers, H.W. Walker Company, Loeb Dietetic Foods, Modern Diet Products, Inc., Natural Health Products of New York, Nutty Brown Mills of Texas, Parkelp of California and Vegetable Juices Inc. of Chicago.

After the 1937 meeting a new organization was formed named the National Health Foods Association. Its first

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convention was in the summer of 1938 in Chicago, which then became its headquarters. The convention lasted 3 days and the 800 to 900 attendees listened to speakers like Paul Bragg and Edward McCollum. Thereafter conventions were held each year; retailers, manufacturers, and distributors all met. 1947 was a low point in the association's history, then Stanley Phillips stepped in and helped create a comeback. The 1948 meeting was in Coronado, California. In 1948 the Association was named the National Dietary Foods Assn. In 1964, with $30,000 in the treasury, the Association acquired its first full-time secretary. *Health Foods Retailing* magazine, published originally by Lelord Kordel and then by Jack Schwartz, became designated as the association's official publication. In 1966 Phillips resigned from the NDFA and helped start a new retailers organization, ADRA, which merged back into NDFA in 1970. The new organization was called the National Nutritional Foods Assoc. (NNFA). The 1975 convention at the MGM Grand Hotel in Las Vegas was a highlight of the NNFA in its heyday. Throughout its history, and especially in more recent decades, the industry's greatest adversary has been the U.S. Food and Drug Administration (FDA).

1871. Walker, Alexander R.P. 1976. Colon cancer and diet, with special reference to intakes of fat and fiber. *American J. of Clinical Nutrition* 29(12):1417-26. Dec. [74 ref]
• ***Summary:*** The author discusses colon cancer epidemiology in western populations (both past and present), immigrant populations, rural-urban populations in western and developing countries, and special populations. He concludes: "Colon cancer, rare in the past, and in developing populations, currently accounts for 2 to 4% of all deaths in Western populations. Evidence suggests the primary cause to be changes in diet... Evidence suggests that the following may have etiological importance: (1) the fall in intake of fiber-containing foods with its effects on bowel physiology, and (2) the decreased fiber but increased fat intakes, in their respective capacities to raise concentrations of fecal bile acids, sterols, and other noxious substances. For possible prophylaxis against colon cancer, recommendations for a lower fat intake, or a higher intake of fiber-containing foods (apart from fiber ingestion from bran) are extremely unlikely to be adopted. For future research, western populations with considerably lower than average mortality rates, e.g., Seventh Day Adventists, Mormons, the rural Finnish population, as well as developing populations, demand intensive study." Address: Human Biochemistry Research Unit, South African Inst. for Medical Research, P.O. Box 1038, Johannesburg, 2000, South Africa.

1872. **Product Name:** [Soy Flour, Textured Soy Flour {Extruded}, and Bread with Soy Additives].
Manufacturer's Name: Alimentos Colpac. Affiliate of Liga Mexico Pan-Americana Medio Educational A.C.
Manufacturer's Address: Apartado 407, Navojoa, Sonora, Mexico.
Date of Introduction: 1976.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: *Soybean Digest Blue Book.* 1976. p. 38 (meat analogs and misc.), 45, 50. The Liga Mexico Pan-Americana Medio Educacional A.C. is located at KM 13 Carratera Huatabampo, Apartado 502, Navojoa. Letter from Robert Folkenberg. 1983. Feb. 15. The company is presently producing about 10 tons/week of textured vegetable protein (textured soy flour). Talk with Gil Harrison of American Soybean Assoc. 1989. April 21. This is a Seventh-day Adventist company that is on the grounds of a college called Collegio de Pacifico (College of the Pacific). The company was set up to prepare vegetarian foods for the students, and then they went into business commercially. The food company is run by the students. They got the first laboratory model of the Wenger X-25 extruder in the early 1970s, and they still have. It was bought by Loma Linda from Wenger. They started out making a full-fat flour, which they ground to 100 mesh with an Alpine Contraplex mill. Then they started buying defatted soy flour from a local soybean crusher, and from that made the texturized products, both canned and dry: Weenies/hot dogs, canned soy milk, a cereal named Trisoy (an excellent wheat-soy like puffed wheat). They still make these products and going strong. About half of the products go into their own group of 11 Adventist schools around Mexico. College of the Pacific is the biggest of these.

1873. **Product Name:** [Canned Whole Soybeans].
Manufacturer's Name: Alimentos Colpac.
Manufacturer's Address: Apartado 407, Navojoa, Sonora, Mexico.
Date of Introduction: 1976.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: *Soybean Digest Blue Book.* 1976. p. 34. Last listed in 1982.

1874. Cedar Lake Foods. 1976. Wholesale price list. March 15. Box 116, Cedar Lake, MI 48812.
• ***Summary:*** The following products are listed: Chops, Vegeburger, Terkettes, Sloppy Joe, Soynut Loaf, Chili Burger, Chipetts, Tender Tips, Breakfast Links, and Hostess Cuts. Terkettes and Tender Tips (and perhaps some others) contain no soy. Address: Cedar Lake, Michigan. Phone: 517-427-5590.

1875. **Product Name:** [GranoVita Soyameat Balls; Renamed Soya Balls by 1983].
Foreign Name: GranoVita Sojafleisch-Kloesschen (Renamed Soja-Kloesschen by 1983).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.

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Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1976.
Ingredients: Soya protein, water, corn germ oil, egg protein, bread crumbs, spices, sea salt, wheat protein, wheat flakes, yeast, onions, potato starch.
Wt/Vol., Packaging, Price: 350 gm can wholesales for DM 6,4.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p. Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products.

1876. **Product Name:** [GranoVita Soy Goulash in Tomato Sauce].
Foreign Name: GranoVita Soja-Goulasch in Tomaten Sauce.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1976.
Ingredients: Non-hydrogenated vegetable fats, soya protein, carrots, celery, tomatoes, wheat flour, natural spices.
Wt/Vol., Packaging, Price: 425 gm can wholesales for DM 6.
How Stored: Shelf stable.
New Product–Documentation: Full-page ad for 8 granoVita soy products in the book by Manfred Heide. 1977. *Vegetarische Ernährung: 193 Rezeptvorschläge und Speisepläne für ein Vierteljahr* [Vegetarian nutrition and food: 193 recipe suggestions and meal plans for a quarter of a year]. Stuttgart, West Germany: Paracelsus Verlag.

DE-VAU-GE leaflets. 1980? Rezepte aus der GranoVita Versuchskueche. And Neue Rezepte mit Soja-Goulasch. Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p. Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products.

1877. **Product Name:** [GranoVita Soya Ragout {Meatless}].
Foreign Name: GranoVita Soja-Ragout fin.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1976.
Ingredients: 1983: Water, Soya-zart, mushrooms, wheat flour, cream, vegetable margarine, onions, spices.
Wt/Vol., Packaging, Price: 400 gm can. Retails for DM 7.35.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 100 gm.: Protein 9 gm, fat 10 gm, usable carbohydrates 4 gm, calories 142. 1 BE (Broteinheit, or diabetic exchange) = 300 gm.
New Product–Documentation: Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products.

Label sent by Anthony Marrese. 1990. Jan. 9 by 4 inches. Red, blue, and black letters on beige. A color photo on the front panel shows this dish served in an elegantly simple setting. "Contains no flesh. Alternative eating is meatless eating. It is modern and brings transformation and joy from new experiences in taste. Alternative eating is likewise healthful and nourishing. We recommend for your meatless menu, a fresh salad, and an after-meal walk. And so will your meatless days increase your well-being." Neuform certification symbol. Ingredients (1990): Water, Soja-zart (piquant soya meat), onions, Feiner Soja-Aufschnitt Delikat, vegetable margarine, wheat flour, onions, powdered cream, spices, corn starch, seasonings. A 400 gm can retails for DM4.56.

1878. Dever, K.J.; Voigt, A.L. 1976. Vegetable production methods at the Kabiufa Adventist High School gardens. In: K. Wilson and R.M. Bourke, eds. 1976. Papua New Guinea Food Crops Conference Proceedings. Port Moresby, PNG: Department of Primary Industry. 388 p. See p. 205-10. Held in 1975. [1 ref. Eng]*
• ***Summary:*** Soya beans were among the vegetables grown at Kabiufa. Cultivation practices are discussed. Address: Kabiufa, Papua New Guinea.

1879. **Product Name:** Granose Soyapro Wieners. Later renamed Soya Wieners.
Manufacturer's Name: Granose Foods Ltd. (Distributor). Made in Denmark by Nutana.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1976.
Ingredients: 1980: Soya protein, vegetable oil, egg albumin, oats, salt, glucose syrup, vegetable stabilizer.
Wt/Vol., Packaging, Price: 385 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Manufacturer's catalog. 1980. April. "Soya sausages. Serve as frankfurters. Can be broiled, grilled or fried."

Form filled out and Labels sent by Granose Foods Ltd. 1990. June 13. States that the product, made in Denmark by Nutana, was introduced in 1976. It is now named Soya Wieners. Can Label. 1990. 9.5 by 4 inches. Photo

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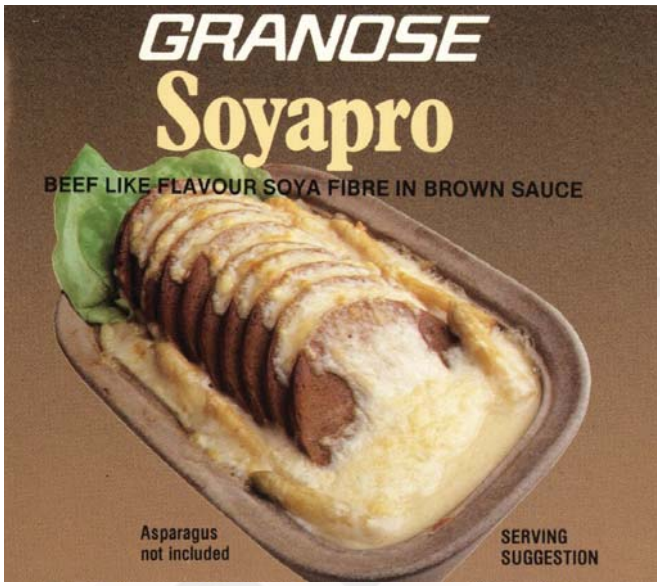
of the prepared dish, three wieners on a plate with rice and vegetables against a brown background. Vegetarian. Ingredients: Water, soya bean oil, egg white powder, textured soya protein, tomato puree, onions, soya protein isolate, salt dextrose, spices, soya sauce, oatmeal, guar gum (E412), sodium alginate (E401), hydrolized vegetable protein, smoke flavor. Serving suggestion: Heat or roast Soya Wieners and serve with spaghetti or mashed potatoes. Sliced Soya Wieners are delicious in salads. Ideal for lunch and dinner. Dietary analysis available on request.

1880. **Product Name:** Granose Soyapro {Canned Slices} [Beef Like, Chicken Like, or Ham Like].
Manufacturer's Name: Granose Foods Ltd. (Marketer-Distributor). Made in Denmark by Nutana.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1976.
Ingredients: 1980: Soya protein, vegetable oil, egg albumen, hydrolised vegetable protein, salt, flavourings.
Wt/Vol., Packaging, Price: 400 gm can.
How Stored: Shelf stable; refrigerate after opening.



New Product–Documentation: Manufacturer's catalog. 1980. April. "Slices of flavoured soya protein fibre canned in sauce. May be used hot or cold as slices or added in pieces to pies, casseroles, etc. Beef like flavour only contains in addition, wheat protein."

Form filled out and Labels sent by Granose Foods Ltd. 1990. June 13. States that the product was introduced in 1976. Made by Nutana. Subtitle is now, for example, "Chicken Like Flavour Soya Fibre in Brown Sauce." Can Label. 1990. 9.5 by 4 inches. Photo of the prepared dish on a plate with rice and vegetables against a brown background. "Ingredients: Water, textured soya protein, soya bean oil, egg white powder, starch, hydrolysed vegetable protein, yeast extract, vegetable stock, wheat flour, celery powder, salt, stabilizer. Serving suggestion: Cut into shreds and place in a stew of carrots and peas, sprinkle with parsley, serve with potatoes and a salad. Ideal for lunch and dinner."

1881. **Product Name:** Loma Linda Roast Beef Deli Slices (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1976.
Ingredients: Water, corn oil, soy protein concentrate, soy protein isolate, wheat gluten, egg whites, artificial flavors, potato flakes, salt, natural (vegetable) flavors, whole wheat flour, caramel color, dried yeast, onion powder, dextrose, oleoresin paprika, monosodium glutamate, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 8 oz paperboard box.
How Stored: Frozen.
Nutrition: Per 2 slices (2.0 oz–57 gm): Calories 150, protein 11 gm, carbohydrate 2 gm, fat 11 gm, cholesterol 0 mg, sodium 670 mg, potassium 120 mg.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1976, but this label is copyrighted 1985.

1882. **Product Name:** Loma Linda Chicken Deli Slices (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1976.
Ingredients: Vegetable proteins (soy protein concentrate, soy protein isolate, wheat gluten), water, corn oil, egg whites, potato flakes, artificial and natural (vegetable) flavors, salt, whole wheat flour, dried yeast, sugar, onion powder, spices, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 8 oz paperboard box.
How Stored: Frozen.
Nutrition: Per 2 slices (2.0 oz–57 gm): Calories 160, protein 10 gm, carbohydrate 1 gm, fat 13 gm, cholesterol 0 mg, sodium 330 mg, potassium 120 mg.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1976, but this label is copyrighted 1985.

1883. **Product Name:** Loma Linda Fried Chicken (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.

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Date of Introduction: 1976.
Ingredients: Soy protein isolate, water, corn oil, egg whites, potato flakes, wheat gluten, artificial and natural (vegetable) flavors, dried yeast, salt, dextrose, onion powder, spices, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 8 oz paperboard box.
How Stored: Frozen.
Nutrition: Per 1 piece (2.0 oz–57 gm): Calories 180, protein 13 gm, carbohydrate 2 gm, fat 14 gm, cholesterol 0 mg, sodium 510 mg, potassium 80 mg.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1976.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1884. MacNaughton, Nancy L. 1976. Site visit to Peña Blanca–Panamerican Health Services Soy Milk Factory. Tegucigalpa, Honduras. Unpublished report to the Ministry of Natural Resources. *
• ***Summary:*** This plant is managed and operated by Dr. Steven Youngberg, a Seventh-day Adventist.

1885. **Product Name:** [Maxten, and Temptein {Extruded Textured Soy Protein}; Pro-Lean].
Manufacturer's Name: Productos Nutricionales S.A. (Pronasa). Subsidiary of Miles Laboratory.
Manufacturer's Address: A Garcia y Flo. Juarez, Celaya, Guanajuato, Mexico. Offices at Lago Muritz 84-A, Mexico 17, DF.
Date of Introduction: 1976.
New Product–Documentation: *Soybean Digest Bluebook.* 1976. p. 38; 1977. p. 37. Talk with Gil Harrison of American Soybean Assoc. 1989. April 21. This company was run by Donald Reese, a graduate of Stanford University. He made defatted soy flour, and cereal-soy blends. General Mills was the first company to make a defatted soy flour in Mexico. They had had their own little cereal-soy mixing plant. Their first experiments were done with a soy beverage (made from defatted soy flour and flavor) served to government dam workers. They probably started in the late 1960s and were definitely there by 1971. When they couldn't make it go, Don Reese purchased all the machinery from General Mills. He wouldn't let Gil Harrison into his plant on Lago Muritz in 1971. He made cereal-soy blends and a soy beverage, both containing sesame. He ended up making all the infant formulas for Mead Johnson and others. The plant finally closed over a labor dispute. He is still is in Mexico but is no longer doing soy.

1886. **Product Name:** Sanitarium Health Foods Canned Vegetable Protein Sausages.
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1976.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: *Soybean Digest Blue Book.* 1976. p. 37.

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1887. Steinkraus, Keith H. 1976. Soybean milk processing and technology. *Applied Nutrition* (*Calcutta*) 4(2):49-62. Lecture delivered to the Indian Dietetic Association. [31 ref]
• ***Summary:*** An excellent review of the subject. Contents: Abstract. Introduction. Historical aspects of soybean milk processing and technology. Commercial success among soybean milks: Soyalac (made by Dr. Harry Miller and Loma Linda Food Co.), Infant formulas (incl. Sobee and Pro-Sobee [Mead Johnson], Mull-Soy [Borden], Isomil [Ross]), Saridele (in Indonesia), soft drink approach (Vitasoy made by Hong Kong Soya Bean Products Co. Ltd.; Vegemilk, Beanvit, and Vitabean made by Yeo Hiap Seng; Vitamilk made by Green Spot (Thailand) Ltd.; Philsoy in the Philippines), Taiwan Farmer's Cooperative soybean milks. Advances in soybean milk technology: Defatted soy process, residue (pulp) recovered from soybean milk manufacture, soybean milks simulating cow's milk, flavor problems, nutritional problems. Address: Dep. of Microbiology and Food Science, Cornell Univ.

1888. **Product Name:** Stakelets (Vegetarian Beefsteak).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1976.
Ingredients: Textured vegetable protein (soy concentrate and isolate, wheat gluten), soybean and/or corn oil, flavorings (artificial flavors, hydrolyzed vegetable protein, salt, spices and spice extractives, onion, garlic powder, paprika), egg white solids...
Wt/Vol., Packaging, Price: Four x 2.5 oz. stakelets in 10 oz paperboard box.
How Stored: Frozen.
New Product–Documentation: Label. 1976, undated. "A Soy Protein Entree / Artificial Beef Flavor. Sizzling Good Flavor. Completely Meatless. Heat and Serve." Frozen.

1889. **Product Name:** Chik Stiks (Vegetarian Chicken Drumsticks).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1976.
Ingredients: Textured vegetable protein (soy protein isolate and concentrate, wheat gluten), egg whites, soybean and/or corn oil, flavorings (hydrolyzed vegetable protein, onion, turmeric, extractives of spices, natural smoke flavor), partially hydrogenated soybean and cottonseed oil, potatoes, oat flour, sodium caseinate, modified tapioca starch, salt, yeast extract, carrageenan, sugar, niacinamide, etc.
Wt/Vol., Packaging, Price: 10 oz (283 gm) paperboard box.
How Stored: Frozen.
New Product–Documentation: Label. 1980, dated. "A Vegetable Protein Product. Completely Meatless. Deliciously Satisfying."

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1890. Blair, G.T. 1976. Considerations related to the acceptance of soy protein foods. In: L.D. Hill, ed. 1976. World Soybean Research [Conference I: Proceedings]. Danville, Illinois: Interstate Printers and Publishers, Inc. xvii + 1073 p. See p. 811-16. [7 ref]
• ***Summary:*** Contents: Introduction. Soy protein market. Industrial market. Foodservice market. Retail market. Summary. References. Address: Supervisor, Food Ingredients and Technology, Technical Services Dep., Marschall Div., Miles Laboratories, Elkhart, Indiana 46514.

1891. Inprint Caribbean Ltd. 1976. Soybean cookbook: A guide to more nutritional cooking. Port of Spain, Trinidad: Inprint Caribbean Ltd. 48 p.
• ***Summary:*** After discussing the nutritional value of soybeans, this cookbook gives recipes, mostly for using whole soybeans, but also for making and/or using full fatted soyflour, soymilk, okara, and soynuts. Early in 1976 the publisher was "approached by representatives of the Chaguaramas Agricultural Development Project to edit and publish a soybean cookbook for distribution in Trinidad and Tobago. The German partners in the project at Chaguaramas were about to hand over the project to the Trinidad and Tobago Government, after six years of a cooperative effort, and it was felt that such a publication would make the project, and soya, more widely known to the people of Trinidad and Tobago." The cookbook was the idea and dream of Dr. H. Seidel, one of the German agricultural experts on the project. Publication costs were supported by local companies who advertised in the book and some of whose food products were listed by name in various recipes. Soy-related advertisers include Worthington Foods (via Trinidad Health Foods; p. 31) and Bontrae (via Quesnel & Fernandez; p. 32).

"Over the past four years in Trinidad and Tobago, through efforts at the Chaguaramas Agricultural Development Project (a cooperative venture between the Government of Trinidad and Tobago and West Germany), considerable success has been achieved in the production of this rich bean" (p. 6-7). Address: Trinidad.

1892. Loma Linda Foods, Research and Development Department. 1976. Recipes for long life: The low cholesterol cookbook for weight conscious vegetarians. Riverside, California: Loma Linda Foods. 143 p. Illust. (color). Index. 21 x 25 cm. *

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• ***Summary:*** "This book represents the combined efforts of the nutrition staff at Loma Linda Foods Research and Development Department."

1893. Lowe, Berenice Bryant. 1976. Tales of Battle Creek. Battle Creek, Michigan: Albert L. and Louise B. Miller Foundation. 313 p. + viii p.
• ***Summary:*** In the chapter titled "Health becomes an industry," page 81 states that peanut butter was on the menu of the Battle Creek Sanitarium as early as 1893.

1894. Maxwell, C. Mervyn. 1976. Tell it to the world: The story of Seventh-day Adventists. Mountain View, California: Pacific Press Publishing Assoc. *
• ***Summary:*** This history emphasizes the distinctive elements of Adventist theology as they emerged in the 19th century.

1895. Neufeld, Don F. 1976. Seventh-day Adventist encyclopedia, 2nd ed.: Loma Linda Foods. Washington, DC: Review and Herald Publishing Assoc. 1640 p. See p. 797-98.
• ***Summary:*** "A nonprofit corporation manufacturing and distributing health foods in the United States and Canada. It is owned and operated by the General Conference of Seventh-day Adventists for the purposes of (a) furthering by all proper means a better knowledge of the laws of healthful living, (b) manufacturing and selling healthful foods and related products, and (c) encouraging and supporting benevolent, educational, and religious enterprises of the SDA Church. The main office, factory, and headquarters are at 11503 Pierce Street, Riverside, California; the second factory (featuring the production of soy milk in liquid and powdered form) is on Wooster Road, Mount Vernon, Ohio.

"Products include vegetarian protein foods (canned and frozen), soy milk, cereal coffee, gravy mixes, and canned soy beans.

"History. Forerunner of Loma Linda Foods was the Loma Linda Sanitarium bakery, which began operation in 1905. It was called The Sanitarium Food Company and its plant was situated on Anderson Street in Loma Linda. At first it manufactured a variety of breads and wafers, but it soon added other health food items. On Feb. 6, 1933, the name 'Loma Linda Food Company' was adopted, and on July 1, 1935, the first articles of incorporation were filed for a perpetual, nonprofit organization with a 12-member board of directors... On Nov. 14, 1937, groundbreaking ceremonies for a factory building were held on a nine-acre site donated by the Southern California Junior College (now La Sierra College) at Arlington (Riverside). The new factory began operations on July 16, 1938, the main product being Ruskets, a flaked whole-wheat biscuit cereal, but later more than 30 other products were added, the main emphasis being upon the development and perfection of high-protein foods of vegetable origin. The company also distributed related food items processed and packaged by others under the Loma Linda Foods label.

"On Jan. 1, 1951, Loma Linda Foods took over the business of the International Nutrition Laboratories, Inc., Mount Vernon, Ohio, purchased from Harry Willis Miller, M.D. Charles Percy Miles was named manager. The Canadian Division of Loma Linda Foods was established at Oshawa, Ontario, in 1962, on a site donated by Oshawa Missionary College (now Kingsway College). Frank L. Wessely was appointed its manager. It was closed in 1965.

"Loma Linda Foods has afforded financial support to the Seventh-day Adventist Dietetic Association and has provided fellowships to selected postgraduates of the School of Dietetics of Loma Linda University. By Jan. 1, 1965, it had also contributed to the denominational mission program more than $300,000, through the Loma Linda Foods label-saving plan for Sabbath school Investment.

"*General Managers:* G.T. Chapman, 1938-1962; C.P. Miles, 1963-1973; M.E. Dake, 1973." Address: Washington, DC.

1896. Neufeld, Don F. ed. 1976. Seventh-day Adventist encyclopedia, revised [2nd] ed. Washington, DC: Review and Herald Publishing Assoc. 1640 p. 25 cm. Commentary Reference Series, Vol. X. First ed. published 1966.
• ***Summary:*** This indispensable reference work, which is about 10% longer that the original 1966 edition, contains excellent short histories with some updated or additional financial and/or production statistics for the food companies.

A complete list (with city and country) of all SDA food companies is given at "Food companies."

New entries: World Foods Service (1968): "A department of the General Conference whose director coordinates the various phases of the denominational food production and marketing activities throughout the world field. Each division (except North America) has a world food service secretary to further the development of the food ministry within his area of operation.

At the Autumn Council of 1967 a health food department at the General Conference level was created. At the Autumn Council of 1968 this department was named World Foods Service.

"Secretary (until 1974) and Director: E.W. Howse, 1969- ." Address: Washington, DC.

1897. Neufeld, Don F. 1976. Seventh-day Adventist encyclopedia, 2nd ed.: DE-VAU-GE Gesundkostwerk GmbH (German Health Food Factory, Ltd.). Washington, DC: Review and Herald Publishing Assoc. 1640 p. See p. 389-90.
• ***Summary:*** "A firm in Hamburg, Germany, owned by the Euro-Africa Division, which makes a wide variety of products ranging from bread and cereal flakes to nut creams, vegetable spreads, meat analogs from soybeans, and diabetic food. The products are distributed through several channels, but mainly through health-food stores. The factory was

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founded in 1899 at Friedensau, near Magdeburg, and began operation in an old mill under the management of Augusto Pages. But since the factory was too small and too far from markets and sources of imported raw materials, such as fruits and nuts, to operate economically, a new plant was built at Hamburg shortly before World War I.

"In 1940 the political conditions in Germany forced the denomination to transfer the factory to four SDA trustees–Willie Luhr, the former manager, A. Vollmer, O. Schildhauer, and H. Niemann–who continued to operate it as a private company until the building was almost completely destroyed in an air raid on July 28, 1943. Some 12 months later the factory resumed production, but on a diminished scale.

"After World War II, in 1947, a new organization, formed by the former Central European Division, took over operation of the food factory from the remaining trustees. In 1966 a new building was constructed in north Hamburg, at Brodermannsweg 17. New soy products were developed, and a new sales force was organized. The rapid growth of sales, both in and outside Germany, made it necessary to lay plans for more space and greatly expanded facilities. Early in 1974 a new property was purchased in Lueneburg, an attractive industrial area of Germany. The yearly turnover exceeds $5 million."

Note: DE-VAU-GE is an abbreviation for "Deutscher Verein für Gesundheitspflege" (German Society for Health Care). They owned and used the brand GranoVita from at least 1958 until 1991. After that, the story becomes very complicated (See Drosihn 2010). Address: Washington, DC.

1898. Neufeld, Don F.; et al. ed. 1976. Seventh-day Adventist encyclopedia, 2nd ed.: Granose Foods Limited (British Health Food Factory). Washington, DC: Review and Herald Publishing Assoc. 1640 p. See p. 527-28. Or. p. 624.
• ***Summary:*** "A health-food factory situated in Stanborough Park, Watford, Hertfordshire, England, manufacturing several varieties of vegetarian protein foods and breakfast cereal biscuits, one of the latter being called Sunny Bisk. In 1973 business volume totaled £400,000, made possible by updating the processes with modern machinery.

"The SDA [Seventh-day Adventist] health food work in Great Britain was begun by a group of laymen who, under the name The London Health Food Company, purchased health foods from Dr. J.H. Kellogg, of Battle Creek, Michigan, and distributed them to the public. After a few years SDA leaders in Great Britain sent J. Heide, a master baker, to Battle Creek to learn how to make the foods. In 1899 a manufacturing company was formed under the name The International Health Association Limited, changed in 1926 to Granose Foods Limited. The company purchased a flour mill in Salford, near Redhill, Surrey, to serve as the factory... A fire burned the factory to the ground in 1900. Health foods were again temporarily imported from America, but gifts and loans from SDA's re-established the company in Birmingham.

"In 1907 all SDA institutions in England, including the food factory, were centralized at Stanborough Park, Watford. The factory has grown until in 1973 it had a floor space of approximately 44,000 square feet, and still further extensions were planned." Address: Washington, DC.

1899. Neufeld, Don F. 1976. Seventh-day Adventist encyclopedia, 2nd ed.: Nutana (Danish Food Factory). Washington, DC: Review and Herald Publishing Assoc. 1640 p. See p. 1015.
• ***Summary:*** "A health-food factory owned and operated by the Nordic Philanthropic Society in Copenhagen, Denmark. The factory was established by Dr. Carl Ottosen in 1898 to provide healthful food for the Skodsborg Sanitarium, which he had founded that year.

"In 1966 the factory moved from Copenhagen to the middle of Zealand between Koge and Ringsted.

"During the first years the chief items manufactured were bread made from whole wheat; various nut preparations, such as Nuttolene, Protose, and Granola; various malt preparations; and substitutes for coffee and tea. Today the newest product is soya-meat. Nutana produces products of corn, nuts, soybeans, and gluten, as well as vegetable margarine. The greatest sales are on vegetarian cutlets, soya-sausages, and pate. The total sales for 1973 was $750,000. Nutana provides Denmark, Faroe Islands, Greenland, Finland, Iceland, Norway, and Sweden with products."

Note: This is the earliest document seen concerning soy products in Iceland (probably). Nutana was selling soyfood products at this time, and it seems likely that some were going to Iceland. We know of no publications that clearly refer to soybeans or soybean products in Iceland, or the cultivation of soybeans there. Address: Washington, DC.

1900. Neufeld, Don F. 1976. Seventh-day Adventist encyclopedia, 2nd ed.: Sanitarium Health Food Company. Washington, DC: Review and Herald Publishing Assoc. 1640 p. See p. 1285-86.
• ***Summary:*** "A chain of health food factories, wholesale branches, and retail shops in Australia and New Zealand, operated by the Health Food Department of the Australasian Division... Headquarters for the firm are at 148 Fox Valley Road, Wahroonga, New South Wales, Australia.

"Products include Weet-Bix, a flaked-wheat breakfast-food biscuit; cornflakes, and other cereal foods; Marmite, a yeast-extract flavoring; peanut butter; vegetarian meats and textured vegetable protein; and soybean milk

"In 1973 the company was operating 12 factories in Australia and New Zealand and 8 large wholesale branches. There were 68 shops and 4 cafes scattered in the main cities of the two countries; 11 of these retail branches were in company-owned buildings. Total net worth was

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approximately $24.2 million. Approximately 1,700 workers were employed, and the company's products were stocked throughout the grocery trade in Australia and New Zealand. A growing export trade was also being developed, principal markets being the Southern Pacific and nearby Asian countries.

"The gross annual revenue sales were $46 million. In 1973 the company realized a profit of $2.7 million, of which $1.362 million went directly to the treasury of the Australasian Division for mission use. In addition, nearly half of the general administrative expenses of the division are met by the company as operational costs.

"History. The motivating influence leading to the establishment of health food work in Australasia is found in addresses given by Mrs. E.G. White at the Brighton, Victoria, camp meeting in 1893 and in Melbourne, Victoria, in 1895. She spoke of different aspects of the work, and urged the leaders to move forward along medical lines, including manufacturing of health foods and establishing of vegetarian restaurants. In response the Australasian Union Conference on Oct. 31, 1895–Resolved that the Executive Committee be urged to take steps to commence such work in the various large cities of these Colonies by the establishment of both houses and depots for the supply of Health Foods, Sanitary Clothing, etc. as the way may open (Minutes, p. 30).

"In 1897 a consignment of wheat biscuits, granola, gluten, and caramel cereal [grain coffee] arrived from Battle Creek, Michigan. A small factory was rented in North Fitzroy, Melbourne, where the production of granola and caramel cereal was begun. The firm, registered April 27, 1898, was first known as the Sanitas Supply Company and then as the Sanitarium Health Food Agency. Processing was done under the direction of E.C. Halsey, from Battle Creek.

"The results of the Melbourne enterprise were not satisfactory, and Mrs. White counseled that the factory be moved to Cooranbong to be operated in conjunction with the Avondale School for Christian Workers (now Avondale College), to which the managing committee agreed... At this time the firm's present name was adopted. Operations at Cooranbong began in 1899.

"In all these early moves Mrs. White, who was residing in Australia at the time, gave important counsel for the health food work and shared in many of the major decisions relative to the development of the business. At first all sales of health foods were made through conference tract societies, but a retail shop was opened in Sydney in 1902 in association with the first vegetarian restaurant. However, the business was not financially successful, and by 1904, when the whole health food enterprise was heavily in debt, many of the denominational leaders favored closing it... Success was achieved, and in 1906 the first donation by the food company for island mission work was made.

"Between 1907 and 1913 shops and cafes were opened in Melbourne, Brisbane, and Adelaide, followed later by branches in Hobart and Perth. The manufacturing and wholesale sections of the business expanded rapidly in the period 1920-1935... In 1927 the company began to sell directly to retail grocery stores, bypassing the wholesale merchants.

"Two competing businesses were acquired in 1928 and 1929, respectively–Grain Products, manufacturers of Weet-Bix, and the Cerix Company, manufacturers of puffed cereals. These acquisitions widened and strengthened the company's activities.

"The development of the health food work in New Zealand paralleled that in Australia. Manufacturing began at Christchurch in 1900 in a small plant operated by E.C. Halsey, who had been transferred from Australia. Shops and cafes were opened in the main cities, and in 1921 a new factory was built in Christchurch under the management of A.J. Dyason. This was the beginning of an era of rapid growth, which has since continued. The Auckland and Christchurch factories of Grain Products, Ltd., were acquired in 1930. A third factory, in Palmerston North, began operation in 1952." Address: Washington, DC.

1901. Neufeld, Don F. 1976. Seventh-day Adventist encyclopedia, 2nd ed.: Madison Academy and Madison Institutions. Washington, DC: Review and Herald Publishing Assoc. 1640 p. See p. 827-32.

• ***Summary:*** Madison Academy was the school on the senior high school level that came into being with the closing of Madison College in the summer of 1964.

Madison Institutions. Introduction. This "group of institutions situated at Madison, Tennessee, 10 miles northeast of Nashville, was owned and operated from 1904 to 1963 by the Nashville Agricultural Normal Institute Corporation independently as a self-supporting institution, but closely allied to the Seventh-day Adventist (SDA) church. Included were a school (grades one through 16), a sanitarium-hospital, a food factory and a farm of 800 acres.

"Ownership of the college and hospital was transferred to the SDA denomination in April, 1963. In 1964 Madison College was closed, and Madison Hospital became a Southern Union institution. Madison Academy continued to operate under the ownership of the Kentucky-Tennessee Conference. Madison Foods was turned over to the Southern Union Association in 1964, and became a division of Nutritional International Corporation (Worthington Foods). The food factory was operated on the Madison Campus until 1972 when it was moved to Worthington, Ohio."

"Origin of the School. The idea that bore fruit at Madison originated with David Paulsen, M.D. during a talk with Edward A. Sutherland. The latter was the first president of Walla Walla College, president of Battle Creek College when it moved to Berrien Springs [Michigan], and first president of Emmanuel Missionary College [in Berrien Springs]. The school was to be self-supporting by work from

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the students. In Oct. 1904 possession of a farm was secured and the first term of the Nashville Agricultural and Normal Institute (NANI) began with 11 students. E.A. Sutherland was president, an office he held until 1946."

Self-supporting "Units" Established. Madison was founded to train home and foreign missionary teachers. It soon began to send out self-supporting workers. Some units included vegetarian cafeterias and treatment rooms in several large cities of the South–Nashville, Knoxville, Louisville, Memphis (Tennessee), Birmingham (Alabama), and Asheville (North Carolina). "Wildwood Sanitarium and Institute, Wildwood, Georgia, is another self-supporting institution of note."

The Madison Rural Sanitarium was a major institution at Madison from the very beginning. The first physician there was Dr. Lillian Magan, wife of Prof. Percy T. Magan. In the early years, Mrs. Nellie Druillard (Mother "D") trained 3 nurses. After 1963 when the Southern Union assumed ownership, "Sanitarium" was dropped from the name and the institution was called Madison Hospital.

Industries. "The 20 campus industries provided employment as well as learning skills for the students, who could earn all their expenses. The sanitarium-hospital might have been considered the biggest industry and chief source of income for the school. The food factory and the large farm also provided employment and food to feed both students and staff as well as patients.

"As early as 1907 Mrs. White had advised operating a food factory in connection with the Madison school. A decade later, in 1917, a food factory was purchased and moved to the campus. The industry became known as Madison Foods.

"At one time 100,000 copies of the *Madison Health Messenger* were sent out each year. The food factory building, which also contained a bakery, was a five-story structure with a tower, and was situated on the east end of the campus. Madison Foods went through a series of managements until taken over by Worthington Foods in 1964, and in 1972 was moved to the main office in Ohio. In 1973 the building was put to use by the Madison School of Industrial Services.

"For many years the dairy herd was rated among the best herds in the State. There was also a poultry industry with 1,000 hens housed in seven modern units in 1948."

Madison College. "The name given in 1904 was Nashville Agricultural Normal Institute (NANI), indicating training in agriculture and 'normal' courses, or teaching. It was not until 1937 that the name became Madison College...

"In 1928 Madison was accredited as a junior college. In 1933 it was accepted as a four-year college by the Tennessee College Association. The first senior college class was graduated August 27, 1933..."

Madison College Graduates. "In 1960 the Madison College Alumni Association obtained a full-time executive secretary and editor of *The Madison Survey*, Mable H. Towery. A room was set aside on the ground floor of the Druillard Library for headquarters... *The Madison Survey* had been published continuously since 1919. At one time 21,000 copies of the *Survey* were sent out each month free of charge as the voice of Madison College."

Changes in the 1960s. Madison College had become heavily in debt. On November 6, 1963, the news came that the accreditation for the nursing education program at Madison College had been withdrawn by the State of Tennessee. This loss of accreditation, coupled with the heavy debt on the institution, ultimately caused the closing of the college on 1 Sept. 1964.

"Presidents: E.A. Sutherland, 1904-1946; T.W. Steen, 1946-1948; W.E. Straw, 1948-1950; W. Amundsen, 1950-1952; A.A. Jasperson, 1952-1957; W.C. Sandborn, 1957-1961; R.M. Davidson, 1961-1963; Horace R. Beckner, 1963-1964."

Note: The entry for Madison in this 1976 Encyclopedia is much longer and more detailed than the entry in the 1966 encyclopedia. Address: Washington, DC.

1902. Numbers, Ronald L. 1976. Prophetess of health: A study of Ellen G. White. New York, NY: Harper & Row. xiv + 271 p. Illust. Index. 21 cm. [400+* ref]

• ***Summary:*** An outstanding book–one of the best on the early history of health reform in America (1830-1915). A review on the rear dust jacket states: "The first serious and scholarly effort to see Ellen White's development as a 'prophetess of health' in the full context of her social and spiritual milieu. A bright and steady light on the often darkened arena where religions and science interact." Edwin S. Gaustad, Univ. of California, Riverside.

Contents: Abbreviations. Preface. 1. A prophetess is born. 2. In sickness and in health. 3. The health reformers: Contains excellent biographies of: Sylvester Graham (with portrait), William Metcalfe and the Bible Christian Church in Philadelphia, Pennsylvania, William A. Alcott (with portrait), Horace Mann, Dio (Dioclesian) Lewis, Larkin B. Coles, Samuel Thomson, Samuel Hahnemann (German physician) and homeopathy (arrived in the USA in 1825), the law of similars and the law of infinitesimals, hydropathy, Joel Shew, Russell T. Trall (with portrait), Mary Gove, Orson and Lorenzo Fowler, James Caleb Jackson (with portrait), Gerrit Smith, Silas O. Gleason, Glen Haven on Skaneteles Lake, Harriet N. Austin, Bloomer costume and dress reform, National Dress Reform Association founded in Feb. 1856 at Glen Haven, the "American Costume," fire destroys Glen Haven in 1858, undaunted Jackson and Austin purchase defunct water cure near town of Dansville, on Oct. 1 they open "Our Home on the Hillside" to patients, vegetarian meals served, meat, butter, white-flour bread, tea and coffee not allowed on the premises, Jackson prescribes no drugs in treating patients instead using ten natural remedies (air, food,

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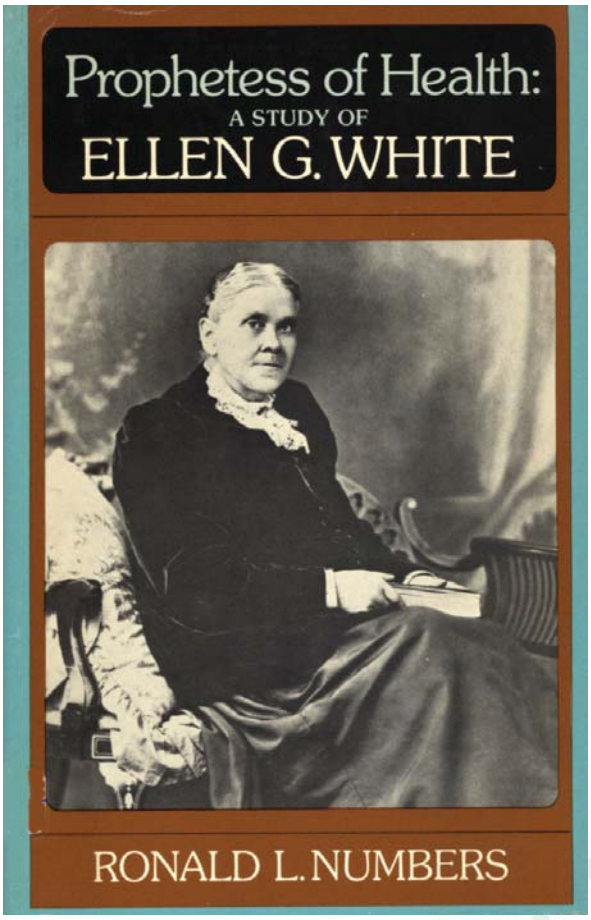


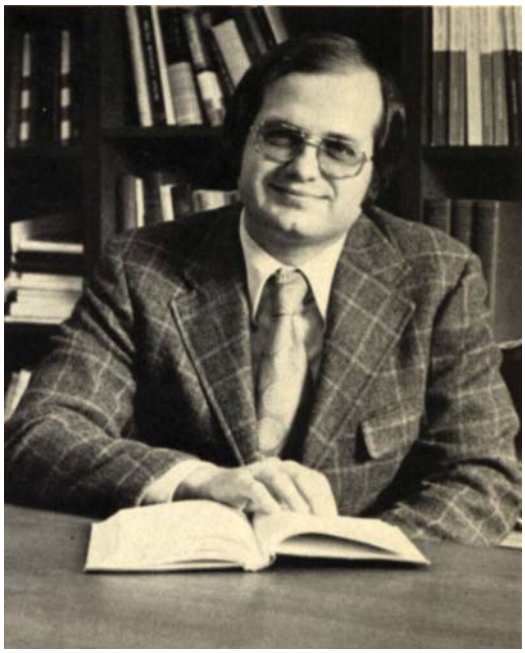
water, sunlight, dress, exercise, sleep, rest, social influence, mental and moral forces), Jackson's extensive writings on health reform during the 1850s, article by Jackson on diphtheria published on 15 Jan. 1858 which introduced Ellen G. White to Jackson

4. Dansville days: Ellen G. White was not the first Adventist to encounter the health reform movement, in the early 1860s, James Caleb Jackson's water cure named "Our Home on the Hillside" (illustration from 1860s) (in Dansville, New York) becomes a favorite retreat for ailing Seventh-day Adventists, Joshua Himes' remarkable cure at Dansville, Joseph Bates adopts Grahmism in 1843 and spends decades as a temperance crusader, John Loughborough, J.P. Kellogg of Tyrone, Michigan (father of John Harvey, Will Keith, and 14 other children), reform-minded Oberlin College [Ohio], Roswell F. Cottrell, many Adventists experiment with health reform and vegetarianism in 1840s, despite early signs of interest, Seventh-day Adventists as a body did not awaken to health reform movement until 1863, Ellen G. White's vision of 5 June 1863 in Otsego, Michigan, first published account does not appear until 15 months after the event, encourages vegetarian diet, conversion of Adventists to new way of eating, visits of Whites to Dansville and major influence of Jackson, writing of Ellen G. White on health reform is strikingly similar to that of earlier health reform writers.

5. The Western Health Reform Institute (in Battle Creek, Michigan, run by John Harvey Kellogg from 1876). 6. Short skirts and sex. 7. Whatsoever ye eat or drink. Like Larkin B. Coles (*Philosophy of Health*, 1853), Ellen G. White was a strong critic of coffee, as well as spirituous liquors, flesh-meats, tobacco, etc. (see p. 160, 166). 8. Fighting the good fight (against Dr. John Harvey Kellogg). Appendix: The 1864 Dansville visit. A note on sources. References.

This is the most interesting, well-researched, and well-written scholarly book on Ellen G. White's health reform work that we have seen. It critically examines the development of the Adventist leader's health ideas, particularly their relationship to the 19th century health reform movement. Drawing on a host of primary documents, the author fully situates her teachings in the social and medical currents of her time without losing sight of a unique woman whose accomplishments were very much her own. The author neither relishes nor shies from his controversial findings. This book "seeks not to condemn or to defend, but simply to understand a multi-faceted woman who has encouraged millions to live healthier and more productive lives."

Concerning his reason for writing this book (p. xi): "My initial goal was modest: to look at Mrs. White's major writings within the context of nineteenth-century health reform. My scope expanded, however, when I accidentally ran across a copy of Dr. L.B. Coles's *Philosophy of Health* in the Loma Linda medical library. Scattered throughout the margins of this book were shorthand notes and pages numbers in the hand of Dr. John Harvey Kellogg, former owner of the volume and a onetime protégé of the prophetess. Unable to find anyone who could decipher the



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shorthand, but suspicious that the page numbers referred to one of Mrs. White's works, I began a volume-by-volume search for a correlation. A check of her *Christian Temperance and Bible Hygiene* finally revealed what Dr. Kellogg had discovered three-quarters of a century before: a strikingly close similarity between Dr. Coles's language and Mrs. White's. This serendipitous discovery spurred me to undertake a thorough examination of Ellen White's development as a health reformer, the result of which is this book."

Concerning the founding of the American Vegetarian Society (p. 70): "In May, 1850, Clinton Hall [in New York City] was the setting for the organizational meeting of the American Vegetarian Society, which brought together many of the biggest names in health reform. Among the officers elected were William Alcott, president; Sylvester Graham and Joel Shew, vice-presidents; R.T. Trall, recording secretary; William Metcalfe [of the Bible Christian Church], corresponding secretary; and Samuel R. Wells, brother-in-law and associate of the Fowlers, treasurer. Indeed by the 1850s, as Sidney Ditzion has observed, 'the vegetarians, phrenologists, water-cure doctors, and anti-tobacco, anti-corset, and temperance people' were so often crossing paths, 'they began to look like participants in a single reform movement.' The outbreak of civil war in [April] 1861 diverted much of the nation's attention from bran bread, baths, and Bloomers, to other, more pressing issues.'"

Photos show: (1) Ellen G. White. (2) Ellen White and her twin sister, Elizabeth Bangs. (3) The Ellen and James White family and Adelia P. Patten at about the time of their first visit to the Dansville water cure. (4) The title page of the first number of *Health: or How to Live*, Mrs. White's second volume on health reform. (5) The original Health Reform Institute in Battle Creek, Michigan (about 1864). (6) Horatio S. Lay. (7) Phoebe Lamson. (8) The new Western Health Reform Institute in the 1870s. (9) Elizabeth Smith Miller in a dress reform costume she designed. (10) Ellen White in her short skirt and pants, about 1874. (11) Two young Adventist sisters, Hannah Sawyer and Josie Chamberlain, in their reform dresses. (12) Title page of *An Appeal to Mothers. The Great Cause of the Physical, Mental, and Moral Ruin of Many of the Children of our Time* (1864), Ellen G. White's first book on health reform, based on her vision of 5 June 1863. (13) Five photos of water treatments at the Battle Creek Sanitarium around the year 1900. (14) Ronald L. Numbers (inside rear dust jacket).

Illustrations show: (1) Sylvester Graham. (2) William Alcott. (3) Russell T. Trall. (4) Phrenology lines on two heads. (5) James Caleb Jackson. (6) Our Home on the Hillside, Dansville, New York, in the 1860s. (7) Trall's Hygeian Home and Hygeio-Therapeutic College at Florence Heights, New Jersey. (8) Young John Harvey Kellogg shortly after he became superintendent of the Western Health Reform Institute. (9) Amelia Bloomer. (10) Harriet N. Austin in the American Costume. (11) Mrs. White's model reform dress, from her book *The Dress Reform.*

Talk with Prof. Numbers. 1991. July 10. Dr. James Caleb Jackson invented Granola (Granula); Dr. John Harvey Kellogg got the idea from him. Ellen Gould Harmon White lived 1827-1915. Address: Asst. Prof. of the History of Medicine and the History of Science, Univ. of Wisconsin, Madison.

1903. Portrait of Dr. Harry W. Miller speaking on the bicentennial of the United States (Photograph). 1976.
• ***Summary:*** This 3½-by-5 inch black-and-white photo shows Dr. Harry Miller, standing behind a microphone at a podium.

1904. U.S. Department of Agriculture. 1976. The annual report on activities carried out under Public Law 480, 83d Congress, as amended, during the period July 1, 1974 through June 30, 1975. Washington, DC: U.S. Government Printing Office. See table 17.
• ***Summary:*** Table 17 is titled "Title II, Public Law 480–total commodities shipped by program sponsor, fiscal year 1975." The main program sponsors and distributing agencies, listed alphabetically, are AJJDC (American-Jewish Joint Distribution Committee), CARE, CRS (Catholic Relief

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Service), CWS (Church World Service), LWR (Lutheran World Relief), SAWS (Seventh-day Adventist World Service), UNICEF, UNRWA (United Nations Relief and Works Agency), and WRC (World Relief Commission). All of these are Private Voluntary Organizations (PVO/PVOs), registered with USAID. The following foods containing soy protein were distributed: Soy fortified sorghum grits (SFSG), CSM (Corn soya mix), WSB (wheat soya blend), and small amounts of soya flour. The vegetable oil which was shipped to many countries was soybean oil; it is not recorded here.

Foods containing soy protein were distributed to the following countries or areas: British Solomon Islands, India, Indonesia, Khmer Republic [Cambodia], Korea, Laos, Nepal, Philippines, Singapore, Sri Lanka, Vietnam.

Afghanistan, Egypt, Gaza, Jordan–East Bank, Jordan–West Bank, Morocco, Tunisia, Yemen.

Benin, Botswana, Burundi, Cameroon, Cape Verde, Central African Republic, Ethiopia, Gambia, Ghana, Guinea, Ivory Coast, Kenya, Lesotho, Liberia, Malagasy Republic, Mali, Mauritania, Mauritius, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, Somalia Republic, Sudan, Tanzania, Togo, Upper Volta, Zaire.

Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama, Peru.

Concerning "veg oil" (soybean oil) shipped under P.L. 480 Title II in fiscal year 1975: India received 14.189 million lb [6,436 metric tons] (p. 116). Address: Washington, DC. Phone: 703-875-4901 (1991).

1905. Wilson, Barry. 1977. Soya meat on the threshold of a boom. *Agra Europe* (*London*) No. 706. p. M/3-M/8. Jan. 7.
• ***Summary:*** By "soya meat" or "vegetable meat" the writer means "TVP (textured vegetable protein)" which is actually textured soy flour (defatted). A good history of TVP in Britain and Europe; it was launched in Britain three years ago at a time when the UK and most of western Europe was beginning an unprecedented beef glut. With beef prices low, TVP struggled.

During the second half of 1976 TVP sales began to increase and they are expected to increase even faster in 1977.

The launch of Kesp (a spun soy protein product) by Courtaulds in 1973 was a fiasco.

Manufacturers of TVP in the UK include: (1) British Arkady, Old Trafford, Manchester. (2) Spillers (Lucas & Co.), Kingswood, Bristol. (3) British Soya Products, Puckeridge, Herts. [Hertfordshire]. (4) Courtaulds, Kesp Protein Foods, Coventry. (5) GMB Proteins, Blackhorse Lane, London. (6) Miles Laboratories, Slough, Bucks.

The names of six distributors and five users are also given.

"There is no doubt that British Arkady has the lion's share of the British TVP human consumption market." The best guess is that British Arkady now has about 40-50% of the UK market, followed by Spillers, then British Soya Products.

It is clear that all the raw material for the TVP [defatted soy flour] sold in the UK is imported from the United States. Briefly describes five commercial products that are on the market. Address: London.

1906. Dugan, George. 1977. Dr. Harry W. Miller, 'China Doctor,' dies: Surgeon, 97, served as physician to Chou [En-lai] and Madame Chiang [Kai-shek]–a pioneer in nutrition. *New York Times.* Jan. 9. p. 36.
• ***Summary:*** Dr. Miller died on 1 Jan. 1977 in Riverside, California, at age 97 of a heart attack. A Seventh-day Adventist, he "developed a process for making soybean milk to feed poorly nourished Chinese children in areas where cows milk was unavailable."

In an interview 3 years ago at his clinic in Hong Kong, he "predicted that the world could become a vegetarian society by the end of this century." By then, he hoped people would realize that raising beef cattle requires the use of too much land and fodder. In recent years his main interests have been raising money for Adventist hospitals in Hong Kong and other parts of Asia, and helping people to switch from eating meat to a vegetarian diet.

He is survived by his wife, the former Mary Greer, and 4 children by a previous marriage. A portrait photo shows Dr. Harry Willis Miller.

1907. *Spectrum: Journal of the Association of Adventist Forums.* 1977. Special section: Commentary on: *Prophetess of Health: A Study of Ellen G. White,* by Ronald L. Numbers. 8(2):27-36. Jan. [41 ref]
• ***Summary:*** A very lively and interesting exchange of views, not only about this book but also about the philosophy, study, and writing of history.

Note: The reviews of Norwood, Brodie and Sandeen are essentially favorable. Those of Schwarz and Guy raise what we think are very interesting points. Contents: Ellen White and Health. I. The prophet and her contemporaries, by W. Frederick Norwood (retired prof. of medical history at Loma Linda University). This section begins: "The lead article in the April 1976 number of *Spectrum*, written by Gary Land, offers some wisdom for this review. Land draws a distinction between the work of a historian and that of a theologian or theologian of history. 'The historian,' he declares, 'interprets history at a different level than the theologian.'"

II. A Biased, Disappointing Book, by Ellen G. White Estate (located at the headquarters of the General Conference in Washington, DC; 32 references).

III. Ellen White's Emotional Life, by Fawn M. Brodie (teacher of history at the Univ. of California at Los Angeles {UCLA}). "Ellen G. White, like the Mormon prophet Joseph Smith, was an eclectic. Both leaders drew from multiple

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sources the ideas they incorporated in their 'revelations.' Mrs. White was indebted chiefly to the health reformers of her time, James C. Jackson, William Alcott, Sylvester Graham and L.B. Coles. Devout believers in the divine origin of her ideas will be disturbed to see the evidence in this volume of how closely some of her revelations parallel paragraphs in Coles' *Philosophy of Health* (1853), a book she knew intimately. But there is no malice in Numbers' exposure of her plagiarism. He writes with great respect for the Adventist movement and for the extraordinary little lady who was responsible for its consolidation and expansion."

IV. The State of a Church's Soul, by Ernest R. Sandeen (teaches at Macalester College, St. Paul, Minnesota. He is considered the foremost historian of American Fundamentalism). "Ronald Numbers' account of Ellen White conforms to the highest canons of historical craftsmanship, and his narrative seems free of special pleading or bias. His is a mature work of great value outside Adventist circles."

V. On Writing and Reading History, by Richard Schwarz (chairman of the history and political science department at Andrews University, he wrote *John Harvey Kellogg, M.D.*). "Dr. Ronald Numbers and I, using essentially the same facts, come up with very different viewpoints on the development of Ellen G. White as a health reformer." Dr. Numbers "states frankly in the preface of his book that he has 'refrained from using divine inspiration as an historical explanation.'" "I would argue that a consideration of the entire life, work and writings of Mrs. White makes the supernatural explanation more satisfying to me." (2 references).

VI. What Should We Expect From a Prophet? Fritz Guy (holding a doctorate of theology from the University of Chicago, Guy is dean of the College of Arts and Sciences of Loma Linda University. 7 references).

VII. An author replies to his critics, by Ronald L. Numbers. R.L. Numbers is author of the book *Prophetess of Health: A Study of Ellen G. White* (1976) (associate prof. of the history of medicine and science, Univ. of Wisconsin at Madison). He received his graduate education at the University of California, Berkeley.

1908. *Canadian Adventist Messenger.* 1977. Ten Talents cookbook not recommended. Feb. 1. p. 4.
• ***Summary:*** "The cookbook *A Good Cook, Ten Talents* has been placed on the not recommended book list by the General Conference Health Department. A review by dietitians, pharmacists and physicians has found the nutritional and medical information contained in the book to be generally unsound and in several instances actually dangerous.

"Persons using this cookbook are advised to view with caution any nutritional statements or medical advice which it contains. Especially dangerous are the recommendations regarding formulas and foods for infants and small children, certain herbal remedies (some of which are poisonous), the listing of several plant foods as 'valuable' sources of Vitamin B-12 or Vitamin D, and the recommendation that apricot kernels be added to soy milk to improve the flavor (apricot kernels are poisonous).

"For further information, please contact: Ella Mae Stoneburner, R.N., M.S., Associate Director, Dept. of Health, General Conf. of Seventh-Day Adventists, 6840 Eastern Ave., N.W., Washington, DC 20012."

1909. Sirtori, C.R.; Agradi, E.; Conti, F.; Mantero, O.; Gatti, E. 1977. Soybean-protein diet in the treatment of type-II hyperlipoproteinaemia. *Lancet* i(8006):275-77. Feb. 5. [18 ref]
• ***Summary:*** This is Dr. Sirtori's major and most influential study on lowering plasma cholesterol by substituting soy proteins for animal proteins. Temptein (textured soy protein isolate) completely replaced animal protein in a diet fed to 20 human subjects. Total cholesterol was lowered 14% after 14 days and 21% after 21 days.

However A.S. Truswell (in Heaton 1979, p. 109) states: "In Milan, Sirtori and co-workers (1977) recently reported impressive reductions of plasma cholesterol and low-density lipoprotein cholesterol in patients with type II hyperlipidaemia given a soya-bean 'isolate'. They attribute the effect to the soya-bean protein. However the preparation they used, 'Temptein,' is a concentrate, not an isolate. It contains 80 per cent of protein but 10 per cent of polysaccharide, most of this indigestible. We and others (Helms, 1977) think it likely this latter fraction had the cholesterol-lowering effect." Address: 1-2. Centre E. Grossi Paoletti for the Study of Metabolic Diseases and Hyperlipidaemia, Univ. of Milan, Italy; 3-4. Maggiore Hospital, Milan.

1910. *Review and Herald.* 1977. Deaths: Harry W. Miller. Feb. 24. p. 23.
• ***Summary:*** This obituary states that Dr. Miller was born on 2 July 1879 in Ludlow Falls, Ohio. He died on 1 Jan. 1977 in Riverside, California. As well as being a famous physician in Asia and the USA, "Dr. Miller was also a pioneer in the field of nutrition. He developed the process of making soybean milk to feed malnourished Chinese children in areas where cow's milk was unavailable."

He graduated from the American Medical Missionary College [at Battle Creek, Michigan] in 1902. Shortly thereafter he married Maude Thompson and they went together to China, where he was one of the first medical missionaries. Two years after their arrival his new wife died, and in 1907 he returned to the United States. In 1908 he married Marie Iverson; they remained in Washington, DC until 1925. Then they returned to China.

During World War II Dr. Miller was once again in the United States, where he served as medical director of the Mount Vernon Hospital in Ohio. While there he founded the

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International Nutrition Laboratory, which [produced soymilk and a line of soy-based vegetarian food products and] carried out experiments in vegetarian protein products (now part of the Loma Linda Foods Company). He returned to Shanghai in 1949, but had to be evacuated in 1950 because of the political revolution. His second wife died in late 1950 in Washington, DC. In 1954 [at age 76] he married Mary Greer.

Survivors include his wife, Mary; three children by his second wife, Marie: Maude Anderson, Harry Miller, Jr., and Clarence Miller; and a sister, Alice (Mrs. Harry Morse). A small photo shows Dr. Miller. Address: Field Secretary, Far Eastern Div.

1911. MacNaughton, Nancy; Castro, Roberto. 1977. Procesamiento de soya en Honduras [Soybean processing in Honduras]. Tegucigalpa, Honduras: Secretaria de Recursos Naturales, Dirección de Planificación Sectorial, Departamento de Proyectos. iii + 69 leaves. Feb. Illust. 28 cm. [37 ref. Spa]

• ***Summary:*** Contents: Summary and conclusions. 1. Introduction. 2. Antecedents: Work conducted (in the rest of the world {USA, Dr. Harry Miller in Shanghai}, China, Philippines, Rhodesia, Sierra Leone, Mauritania, Ethiopia, Ruanda, Nigeria, Nepal, Sri Lanka, Brazil, Bolivia & Maisoy, Paraguay, Chile, Ecuador {Meals for Millions}), in Mexico and Central America ({INCAP in Panama, Dr. Steven Youngberg, Guatemala, Belize, Costa Rica, Nicaragua}, in Honduras), the role of soya in human nutrition. 3. The project: Objectives, goals, development of the study (processing of soymilk {in the home, at the level of an organized group, at the semi-industrial level}, processing of other derivatives of soya / soyfoods {Queso de soya / tofu, harina de soya / soy flour, Brady Crop Cooker}, investments required {in the home, at the level of an organized group, at the semi-industrial level}). 4. Conclusions and recommendations: Conclusions. Recommendations. Bibliographic references (leaves 63-65). Appendix: Nutritional aspects of soya.

Figures show: (1) Flow diagram, with equipment, for the production of Vital soymilk. (2-3) Flow chart for the processing of full-fat soy flour by a simple village process. (4) Flow chart for the processing of full-fat soy flour to make soymilk. (5) Flow chart: Traditional process for the production of soymilk. (6) Flow chart: Process for the production of soymilk on the level of organized groups of farmers; INTSOY process. (7) Construction of a sock filter (INTSOY). (8) Flow chart: Process for the production of soymilk using the Unidad Portatil miller. (9) Flow chart: Process for the production of soymilk [with coco] used in the soymilk factory of Stephen Youngberg, in Peña Blanca, Honduras. Note: Dr. Youngberg is a Seventh-day Adventist. (10) Three flow diagrams: Process for the production of whole soy flour in the home–simple, toasted, and blanched. (11) Koehring Brady 206 Crop Cooker; 2-page brochure insert. (12) Koehring Brady Extruder Cooker; 2-page brochure insert.

Tables show: (1) Equipment needed for processing defatted soy flour; capacity 136 kg (300 lbs.) of soy flour in 8 hours of operation. (2) Characteristics and nutritional composition of soy beverage after filtration. (3) Initial investment in equipment used in making soymilk at the factory of Dr. Stephen Youngberg, in Peña Blanca, Honduras. (4) Cost estimates for the production of soymilk as made at the factory of Dr. Stephen Youngberg, in Peña Blanca, Honduras (in Lps. = lempiras). (5) Equipment and costs of the proposed Maisoy project in Honduras.

Page 20: Work with soy in Africa is relatively recent if compared with early recorded work with soy in Asia. Many of the developing African nations recognize the nutritional needs of their population and have started to experiment with the soybean and soy products. Soybean variety trials have been conducted in the Ivory Coast, Rhodesia, Sierra Leone, and Mauritania. Ethiopia has incorporated soy flour and soybeans into traditional dishes. Ruanda and Nigeria have introduced soybean cultivation technology and local consumption, on account of the severe malnutrition that exists in those countries. Nigeria is producing soybeans for export."

Note: Looking at endnote 5 in this bibliography, which cites the source of this information about soy in Africa, it seems quite clear that the word "Mauritania" was accidentally and incorrectly substituted for the word "Mauritius" in the "Country Reports" (see p. 218 of these Reports).

Page 20: In Honduras. The Ministry of Natural Resources, in cooperation with other organizations, has conducted soybean cultivation / production trials in selected areas in Honduras. In Comayagua, the company named Compañía Mejores Alimentos [Best Foods Company] initiated commercial soybean production within the last few years. Small projects of soybean production and consumption are prospering in communities in the following areas: Sonaguera, Colón; Tela, Atlántida; Buena Fé, Santa Bárbara; Las Animas, El Paraíso; Olanchito, Yoro y Barrancho, Choluteca.

The goal of these projects is to introduce soya as a nutritional supplement in the local diet. These projects are carried out within homemaker's clubs, schools, child dining halls, and various communities, with the support of CARE, CARITAS, The National Board of Social Comfort, like our communities and local agronomics. The largest area for cultivating soybeans is five blocks and the smallest is a quarter block. The majority of these projects can be found in the first stages of experimentation but the participants foresee good results. These small-scale projects are important to note because they consist of cooperative efforts and are self-sufficient. On the other hand, the participants will manage their time and labor, and will be twice as motivated to

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incorporate soy into their daily menus. Address: Honduras.

1912. *Soybean Digest.* 1977. Harry Miller dies. Feb. p. 41.
• ***Summary:*** "Harry W. Miller, M.D., died New Year's Day in California. Dr. Miller was renowned for his contributions to the use of soy products in human diets. He became interested in soy nutrition 74 years ago while visiting in China. His studies later led to the establishment of a soy milk dairy in Shanghai in 1937. Later plants were built in Hong Kong, Manila [Philippines], Bangkok [Thailand] and Malaysia.

"Dr. Miller will be missed by his many friends in ASA. He was 97 last July."

1913. Vyhmeister, Irma B.; Register, U.D.; Sonnenberg, Lydia M. 1977. Safe vegetarian diets for children. *Pediatric Clinics of North America* 24(1):203-10. Feb. [24 ref]
• ***Summary:*** A guide for management of vegetarian diets for infants and children. The three main categories of vegetarianism are lacto-vegetarian, lacto-ovo-vegetarian, and "total or strict vegetarian (vegan)." The latter diet, excluding all foods of animal origin, consists only of plant foods. Gives charts of food groups with sources, and sample menus for children of different age groups. "A variety of foods as unprocessed as practical is important when no animal foods are used in a vegetarian diet." Fortified soymilk and soya meat products are mentioned as providing necessary nutrients. Address: 1. Assoc. Prof. of Nutrition; 2. Prof.; 3. Assoc. Prof., All: Dep. of Nutrition, School of Health, Loma Linda Univ., Loma Linda, California.

1914. Worthington Foods, Inc. Div. of Miles Laboratories, Inc. 1977. Why textured vegetable protein? Because how many ways can you cook a soybean (Ad). *Mother Earth News* No. 43. Jan/Feb. p. 3.
Address: Worthington, Ohio 43085.

1915. Register, U.D.; Blankenship, J.W.; Mak, J.L.; Zimmerman, G.J. 1977. Effect of diet on serum, fecal, and urinary vitamin B-12 levels of total vegetarians (Abstract). *Federation Proceedings* (*FASEB*) 36(3):1121 (Abst. #4500). March.
• ***Summary:*** The subjects in this study were a special group of raw food vegetarians who had been on this type of diet for 2 to 20 years. Serum vitamin B-12 levels of 18 total vegetarians [vegans], 10 lacto-vegetarians, and 11 non-vegetarians were assayed by the radioassay method. The results were 440, 680, and 1,159 picograms per milliliter respectively. The amount of vitamin B-12 excreted in the urine and feces was measured. These studies indicate that a significant amount of vitamin B-12 synthesized by intestinal bacteria is absorbed. Address: Loma Linda Univ., Loma Linda, California 92354.

1916. Tabuchi, Ichiro. 1977. Tônyû no chichi Miraa hakase: Soibinzu wa nijû seiki no mana desu yo [Dr. Miller, the father of soymilk: "Soybeans are indeed the manna of the 20th century"]. *Shin Eiyo* (*New Nutrition*) No. 90. p. 90-96. March. [Jap]
• ***Summary:*** The story of how Dr. Miller, San-iku Gakuin, and San-iku Foods pioneered soymilk in Japan. Contains 3 photos of Dr. Miller. Address: Nihon San-iku Gakuin Kôtô Gakkô, Fuku-Kôchô, Japan.

1917. *Wall Street Journal.* 1977. Miles Laboratories says '76 sales of some foods trailed expectations. April 7.
• ***Summary:*** The company's annual report stated that sales of textured vegetable protein food products have not reached expectations. In 1976 the company's Morningstar Farms breakfast line of Links, Patties, Slices, and Strips lost money for the 2nd year in a row. A new product, Scramblers, has shows good acceptance in test marketing. Two new products are Grillers (a hamburger-like patty) and Stakelets (which tastes like a chapped steak). One promising fact is that 56% of all U.S. families "have one or more members concerned about the cholesterol in their diet."

1918. **Product Name:** Loma Linda Soyagen (Milk Free Soy Beverage Powder Containing No Cane or Beet Sugar).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505. Phone: 714-687-7800 (3/88).
Date of Introduction: 1977 April.
Ingredients: Soy solids, corn syrup, soy oil, soy lecithin, salt, di-calcium phosphate, tri-calcium citrate, calcium carbonate, di-potassium phosphate, artificial flavors, vitamins (ascorbic acid, DL-alpha tocopheryl acetate, vitamin A palmitate, cholecalciferol, riboflavin, phytonadione, cyanocobalamin), ferrous sulfate, tri-potassium citrate.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable.
Nutrition: Per 1 oz powder (approximately ¼ cup): Calories 130, protein 6 gm, carbohydrate 14 gm, fat 6 gm, cholesterol 0 mg, sodium 210 mg, potassium 210 mg.
New Product–Documentation: See next page. Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1977. A less sophisticated version with the same name appeared in 1948.

1919. Worthington Foods, Inc. Div. of Miles Laboratories, Inc. 1977. Why textured vegetable protein? Because beans for breakfast aren't worth waking up to (Ad). *Mother Earth News* No. 44. March/April. p. 4.
• ***Summary:*** Shows a plate with a few whole dry soybeans on it. Advertises a free brochure titled "Why Textured Vegetable Protein?" Address: Worthington, Ohio 43085.

1920. Armstrong, Bruce K.; van Merwyk, A.J.; Coates, H.

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1977. Blood pressure in Seventh-day Adventist vegetarians. *American J. of Epidemiology* 105(5):444-49. May. [14 ref]
• ***Summary:*** Seventh-day Adventist vegetarians had significantly lower blood pressure readings than a comparable group of non-vegetarians. Address: Depts. of Medicine and Surgery, Univ. of Western Australia, Nedlands, Australia.

1921. *New York Times.* 1977. Herbal power: Despite debate, business is booming. June 20. p. 47.
• ***Summary:*** "Other well known herbals are 'Back to Eden,' by Jethro Kloss." A photo shows a man on a ladder in front of a huge selection of bulk herbs in glass jars at Aphrodesia in Greenwich Village, Manhattan, New York City.

1922. Worthington Foods, Inc. Div. of Miles Laboratories, Inc. 1977. Why textured vegetable protein? Because meat isn't all it's fattened up to be (Ad). *Mother Earth News* No. 45. May/June. p. 3.
• ***Summary:*** Shows cattle standing in a field. "Waste not, want not. Raising animals for meat protein is grossly inefficient. And a luxury the world can little afford. While an acre of land, when planted in soybeans, can provide almost 6 years of your daily protein requirements, this same acre provides only a 78-day supply when used to raise beef cattle for meat protein.

"Plant protein: The sensible alternative. Worthington Foods produces more than 40 different textured vegetable protein foods. All are completely meatless, with no cholesterol and no preservatives. And they maintain a favorable polyunsaturated-to-saturated fatty acid ratio. Worthington products are made from protein-rich soybeans, wheat and peanuts, with ingredients derived predominantly from plant sources." Address: Worthington, Ohio 43085.

1923. Howes, Charles D. 1977. Re: The influence of Dr. John Harvey Kellogg on substitute foods and their developers in the USA. Letter to Mr. Stephen H. McNamara, Associate Chief Counsel for Food, U.S. Food and Drug Administration, Washington, DC., July 15. 2 p. Typed, with signature on letterhead. [1 ref]
• ***Summary:*** "Your paper in *Food Engineering*, June 1977 was read with interest. I do not intend to dispute any of the points made in it here, but would like to share with you a historical perspective of the development of substitute foods, A brighter future may be assured if we remind ourselves of the progress of the past.

"John Harvey Kellogg, M. D. promoted a simple vegetarian diet at the Battle Creek Sanitarium in Michigan which he headed during most of his 67 years at the medical institution (beginning in 1875/76). During this period he developed a unique program of diet, hydrotherapy and expert surgery which attracted people from around the country and the world. Patients included a number of leading people such as William Howard Taft, William Jennings Bryan, Roald Amundsen, Lowell Thomas, Alfred DuPont, John D. Rockefeller, Jr., J.C. Penney, Montgomery Ward, S.S. Kresge, etc., etc.

"As might be guessed, Kellogg's views on diet and health were widely spread throughout America and the world. In order to provide a satisfactory vegetarian breakfast Kellogg developed the breakfast cereal and Battle Creek

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became the prepared-cereal capital of the world. The breakfast cereal was a substitute for ham & eggs and other high meat breakfasts.

"Kellogg also invented vegetable protein foods which he served as substitutes for meat. This was the beginning of the meat analogue industry.

"Henry Ford II [sic, Henry Ford] was a patient of Dr. Kellogg and Kellogg was a man who liked to share his ideas with anyone who would listen intelligently. Exactly what was shared we do not know, but back in Detroit Ford established a soy research team. The soy research team invented soy plastic (which was used in Ford automobile steering wheels for several years), soy fabric, and soy fiber [spun soy protein fiber]. When the research team was broken up the leading members joined the food industry and with additional developments produced vegetable fiber suitable for food products. This was the beginning of textured vegetable protein fiber.

"In order to promote his ideas more fully and leave a more lasting impression on the health of the world, Kellogg founded a medical school in connection With the Battle Creek Sanitarium. The American Medical Missionary College was granted a charter in 1895 and had two campuses–Battle Creek & Chicago. Much of the support for the medical school came from the food business. The school gave an excellent education and was soon fully accredited. Into this situation came Harry W. Miller, a medical student from Ohio. Harry Miller started working as a guide in the cereal factory to help support himself as a medical student. He became interested in the food business and became such an expert guide that Kellogg developed an interest in him. Miller was instructed by Kellogg in the area of food processing and read into food development as well as studied medicine. He became well-versed in both areas.

"When Miller graduated he married and soon sailed for China as a medical missionary. He noted malnutrition among infants and a high death rate among them. He also noted that soymilk was made by the people, but only the old people (no doubt those without teeth) drank it. In time Miller applied his knowledge of food processing methods to taking soymilk production out of the kitchen and making it on a large scale in a formulation suitable for infants. In the late 1930's China was invaded by the Japanese and the soymilk plant was bombed. After several adventures he was able to return to the U.S. and founded the first American soymilk plant.

"Thus a "Whole Picture" of substitute foods may be outlined in perspective thus:" A diagram shows John Harvey Kellogg, M.D. on the top line. Arrows point downward from him to those he influenced on the 2nd line: (1) Henry Ford II and the Soy Research Group. (2) Vegetable Protein Foods. (3) Breakfast Cereal. (4) Harry W. Miller, M.D. Arrows point downward to the 3rd row showing that: (1) Ford and the Soy Research Group developed Vegetable Protein Fiber. (2) Dr. Miller developed Soymilk & Soycheese. Arrows point downward to the 4th row showing that both Vegetable Protein Fiber and Vegetable Protein Foods led to the [commercial] development of Textured Vegetable Protein foods.

"I hope this background material will be helpful to you as you deal with the nutritional problems of engineered foods.

"Sincerely,..." Address: PhD, Technical Director, Loma Linda Foods, 13246 Wooster Rd., P.O. Box 388, Mount Vernon, Ohio 43050. Phone: (614) 397-7077.

1924. Goldberg, Michael J.; Smith, J.W.; Nichols, R.L. 1977. Comparison of the fecal microflora of Seventh-day Adventists with individuals consuming a general diet. Implications concerning colonic carcinoma. *Annals of Surgery* 186(1):97-100. July 19. [26 ref]
• ***Summary:*** A qualitative and quantitative study of fecal microflora found no statistically significant differences between vegetarians and non-vegetarians, indicating that animal fats do not significantly alter fecal microflora. Address: Veterans Administration Hospital and the Dep. of Surgery, Univ. of Health Sciences/The Chicago Medical School, North Chicago, Illinois.

1925. *Canadian Adventist Messenger.* 1977. Ten Talents cookbook. Sept. 1. p. 14.
• ***Summary:*** There was an article about the *Ten Talents* cookbook in the Feb. 1 issue of this periodical. Discusses a controversy concerning a news release about the book. "It is understood that *Ten Talents* is not stocked in the Adventist Book Centres in Eastern and Western Canada. However *Ten Talents* is presently being re-edited to clarify information on some of the controversial areas mentioned in the February 1 article. The revised edition is available from Dr. and Mrs. F.J. Hurd, Box 86-A, Route 1, Chisholm, Minnesota 55719."

1926. *Sun* (*The*) (*Melbourne, Australia*). 1977. Deaths–Roberts. Oct. 18. p. 73.
• ***Summary:*** "On Oct. 17 after a long illness, at Nunawading [about 20 miles east of Melbourne, Victoria, Australia]. Fred. Beloved husband of Gladys. Loved father of Fred (dec. [deceased]), Horace (dec.), and Gladys (Mrs. Hawken)."

Note from Leeann Erickson, his great granddaughter. 2007. Oct. 8. F.G. Roberts died while a resident at Coronella Nursing Home in Nunawading; it is one of the Seventh-day Adventist Retirement Homes in and around Melbourne.

1927. *Wall Street Journal.* 1977. Board of Miles Labs approves merger with German firm [Bayer AG]. Oct. 18. p. 23, col. 1.
• ***Summary:*** Bayer A.G. [makers of Aspirin] in Germany plans to acquire Miles Laboratories of Elkhart, Indiana, shortly. Through a newly formed indirect subsidiary, Rhinechem Laboratories Inc., Bayer said it intends to

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buy all Miles common stock for $47 a share cash–up from $40 offered last month. Miles has about 5.4 million shares outstanding, making the offer worth about $253.8 million. Miles is a family-dominated firm that makes consumer pharmaceuticals, foods, chemicals, and diagnostic instruments.

Based in Leverkusen, West Germany, Bayer is not related to Sterling Drug Inc., New York, which owns rights to the Bayer name in the U.S. and makes the Bayer-brand aspirin sold in the USA.

Other articles about this transaction in the Wall Street Journal in late 1997: Bayer offers to acquire Miles Labs (Sept. 27, p. 5:2). Federal antitrust officials examine the bid (Sept. 30, p. 6:3). Board of Miles votes to approve the merger (Oct. 18, p. 23:1). A number of shares of Miles Labs are tendered to Rhinechem Lab (Nov. 11, p. 22:3).

1928. Lublin, Joann S. 1977. Soybean saga: Revival is attempted for meat substitutes that flopped after '73. But new line of Miles Labs is still facing resistance to the taste and the price. Pitch to the health-conscious. *Wall Street Journal.* Oct. 26. p. 1, 27.
• ***Summary:*** Miles Laboratories Inc. is coming out with new versions of its meatless products "that it says taste, feel and smell more like the real thing. A sampling of the new Morningstar Farms line of vegetable-protein products, just now starting to be marketed, largely supports Miles's claim. The products are tastier and juicier, they feel meatier and smell less spicy than earlier versions. But the bacon substitute in particular falls short of the real thing. In the words of one impartial taster, it looks and tastes more like painted cardboard than real bacon."

"When Miles offered its original meat substitutes in 1973, officials predicted sales of more than $100 million a year within the decade. Now, 4 years later, Morningstar Farms sales are running around $15 million a year, less than half the levels expected by now. The products, moreover, have registered pretax losses of $33 million since their development. Others in the food business were similarly overoptimistic. Industry-wide sales of soy protein products last year totaled about $120 million, up from $75 million in 1972 but far short of forecasts of $1.5 billion by 1980... When the original products were offered, meat prices were soaring to 1973 peaks and the public was eager for alternatives."

"Miles Laboratories, best known for its Alka-Seltzer antacid, had great expectations for meat substitutes in 1970 when it bought Worthington Foods Inc., a pioneer in textured-vegetable-protein technology. Miles reformulated several Worthington products and began test-marketing sausage-like links and patties, ham-like slices and bacon-like strips in 1972.

"Consumer surveys at the time showed that more than half of all U.S. households had at least one member concerned about heart-disease risks from excessive cholesterol in his diet. Miles marketers reasoned that many of the 40 million concerned families would welcome cholesterol-free replacements for their breakfast protein. The company spent $7.5 million on a nationwide promotion campaign in 1974, featuring prime-time television commercials emphasizing the nutrition angle.

"About 10 million American families tried the Morningstar Farms breakfast line in the first 18 months, meeting the company's goal. But fewer people than expected came back for seconds, and outside analysts suggest the current sales are half the anticipated volume."

1929. Ellis, Mark. 1977. Inventor's alchemy transforms lowly soybean. *Dispatch* (*Columbus, Ohio*). Oct. 28. Section C. p. 1.
• ***Summary:*** About Bob Boyer, who lives at 5026 Wintersong Lane in Columbus, Ohio; a photo shows him holding a plate of meatless bacon. A consultant for Worthington Foods, Boyer is in the final months of a 5-year contract. Boyer has over 30 patents, some shared with Henry Ford. "Boyer developed the [his] first simulated meat in a kitchen lab after taking a year in 1950 to make a fruitful patent search. He decided to make a simulated pork chop because the meat is white and he had no food dye."

1930. Finegold, Sydney M.; Sutter, V.L.; Sugihara, P.T.; Elder, H.A.; Lehmann, S.M.; Phillips, R.L. 1977. Fecal microbial flora in Seventh Day Adventist populations and control subjects. *American J. of Clinical Nutrition* 30(11):1781-92. Nov. [22 ref]
• ***Summary:*** Little difference was found in fecal flora between vegetarian and non-vegetarian Seventh-day Adventists, although there were significant differences between groups at high risk (American/Western diet) and low risk (Adventist diet) for colon cancer. Address: 1. Chief, Infectious Disease Section, Wadsworth Veterans Administration Hospital and Prof. of Medicine, UCLA Schoo of Medicine; 4-5. Loma Linda Univ. School of Medicine; 6. Dep. of Biostatistics and Epidemiology, LOma Linda Univ. School of Health.

1931. Phillips, Roland L.; Kuzma, Jan W. 1977. Rationale and method for an epidemiologic study of cancer among Seventh-Day Adventists. *National Cancer Institute Monograph* No. 47. p. 107-12. Dec. [26 ref]
Address: Depts. of Biostatistics and Epidemiology, Loma Linda Univ. of Medicine, Loma Linda, California 92350.

1932. Sutton, Suzanne. 1977. Ellen White, Seventh-day Adventists & vegetarianism. *Vegetarian Times* No. 22. Nov/Dec. p. 39. [1 ref]
• ***Summary:*** A brief review, with many quotations, of the teachings on vegetarianism of Ellen G. White, a founder of

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the Seventh-day Adventist faith.

1933. **Product Name:** Soymilk.
Manufacturer's Name: Adventist Health Education Foundation (Egypt Food Factory).
Manufacturer's Address: P.O. Box 12, Heliopolis, Cairo, Egypt.
Date of Introduction: 1977.
New Product–Documentation: Letter from Charles D. Howes. 1978. Oct. List of Seventh-day Adventist soymilk plants.

Soyfoods Center. 1980. Sept. Tofu shops and soy dairies in the West (2 pages, typeset). Gives the company's name, address, and phone number. Owner: Habib Banna. Seventh-day Adventist soy dairy.

Note: This is the earliest known commercial soy product made in Egypt.

1934. **Product Name:** Cedar Lake Vegeburger (Meatless).
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1977.
Ingredients: Wheat protein, water, cornmeal, soy flour, soy sauce, oatmeal, corn oil, vegetable seasoning, salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Midwest Natural Foods Distributors, Inc. 1975. Catalog #7. Nov. Ann Arbor, Michigan. 108 p. See p. 22. Cedar Lakes. "Vegeburger" (19 oz).

Label.

1935. **Product Name:** Cedar Lake Chops (Meatless).
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1977.
Ingredients: Wheat protein, water, soy sauce, vegetable seasoning, salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Label printed on 12 March 1977.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1936. **Product Name:** Cedar Lake Vege-Bits (Meatless).
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1977.
Ingredients: Wheat protein, water, soy sauce, vegetable seasoning, salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Label.

1937. **Product Name:** Cedar Lake Grain Burger–Meatless Vegetarian Patties.
Manufacturer's Name: Cedar Lake Foods of Tennessee, Inc. (Packer).
Manufacturer's Address: Cedar Lake, MI 48812.
Date of Introduction: 1977.
Ingredients: Wheat gluten, whole wheat flour, rye flour, barley flour, soy sauce, vegetable seasoning, salt.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

1938. **Product Name:** [GranoVita Seasoned Patty Mixture with TVP].
Foreign Name: GranoVita Soja-vita.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1977.
Ingredients: Soya protein, bread crumbs, wheat gluten, wheat flakes, glucose, egg protein, yeast, potato starch, onion, spices, sea salt, celery, parsley.
Wt/Vol., Packaging, Price: 200 gm box retails for DM 5.
How Stored: Shelf stable.
Nutrition: Protein content: 36% protein.
New Product–Documentation: Full-page ad for 8 granoVita soy products in the book by Manfred Heide. 1977. *Vegetarische Ernährung: 193 Rezeptvorschläge und Speisepläne für ein Vierteljahr* [Vegetarian nutrition and food: 193 recipe suggestions and meal plans for a quarter of a year]. Stuttgart, West Germany: Paracelsus Verlag. "This product is named "Soja-vita" (Fertig gewuerzte Bratlings-Mischung)."

DE-VAU-GE leaflet. 1980? Rezepte aus der GranoVita Versuchskueche. DVMC. Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products.

1939. **Product Name:** Granolac Infant Soya Milk (Powdered).
Manufacturer's Name: Granose Health Foods Ltd. (Marketer). Made in the USA by Loma Linda Foods.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1977.
Ingredients: Soya bean solids, corn syrup, soya oil, sugar,

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salt, lecithin, vitamins.
New Product–Documentation: *The British Vegetarian.* 1961. March/April. p. 93. "Soya milk for household use." Granose Foods will soon be in a position to supply two varieties of spray-dried soya milk, Soyalac and Soyagen, made by one of their associated companies, Loma Linda Food Company in Arlington, California. Soyalac is specially prepared for infants, whereas Soyagen is for general use. A table compares the nutritional composition of the two products.

Listing in International Vegetarian Health Food Handbook (UK). 1977-78. p. 189. "Granolac Infant Soya Milk by Granose Health Foods Ltd." Manufacturer's catalog. 1980. April. "Infant formula soya milk. As near to the taste, texture and nutritional value of mother's milk as is possible. Basic ingredients similar to Granogen, with modifications. Full analysis available."

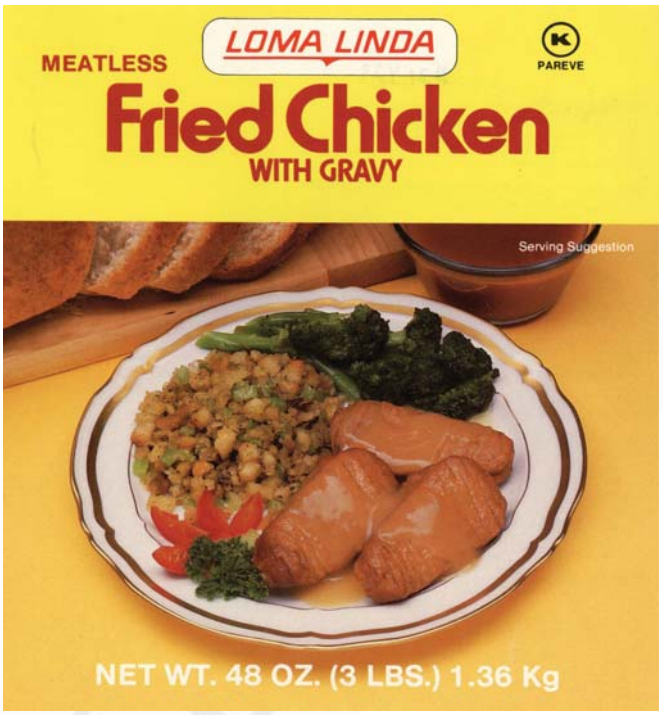
Dorothy E.M. Francis. 1984. "Alternatives to Cow's Milk: Comparisons." p. 147-48. In: David L.J. Freed, ed. Health Hazards of Milk. London, Philadelphia, Toronto, etc.: Ballière Tindall. Granolac Infant, from Granose, is for infants older than 3 months.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product was introduced in 1980. It is no longer on the market, and no label is available.

1940. **Product Name:** Loma Linda Fried Chicken with Gravy (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1977.
Ingredients: Fried chicken: Soy protein isolate, water, corn oil, egg whites, potato flakes, wheat gluten, artificial and natural (vegetable) flavors, dried yeast, salt, dextrose, onion powder, spices, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). Broth: Water, natural (vegetable) flavor, corn starch, wheat flour, dextrose, onion, sugar, salt, artificial flavor.
Wt/Vol., Packaging, Price: 48 oz can. Retails for $2.35 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 2 pieces (3.0 oz–85 gm): Calories 140, protein 9 gm, carbohydrate 4 gm, fat 10 gm, cholesterol 0 mg, sodium 340 mg, potassium 250 mg.
New Product–Documentation: Ad in Mother Earth News. 1977. No. 48. Nov/Dec. p. 3. "Avoid animal fat and cholesterol without losing flavor and protein." Recipe booklet. 1979, dated. Sold frozen.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1977.

Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. This is now a 13



oz can that retails for $2.35. The major ingredients in the fried chicken are now "Vegetable protein (soy and wheat [gluten]), corn oil, water, egg whites, potato flakes..."

1941. Stoia, Rose M. 1977. Vegetarianism: Cultural and nutritional aspects, a bibliography. Seventh-day Adventist Dietetic Assoc., Box 75, Loma Linda, CA 92354. 5 p. *
• ***Summary:*** Cites both professional and popular literature published from 1974 to 1977 in periodicals. Address: Loma Linda, California.

1942. Chen, Philip S. 1977. The joy of being a vegetarian. Mountain View, California, Omaha, Nebraska, and Oshawa, Ontario: Pacific Press Publishing Association. 127 p. 22 cm. [81 ref]
• ***Summary:*** Contents: About the author (a 1-page autobiographical sketch). Preface. 1. Vegetarianism, form fad to favor. 2. Food for philosophers. 3. Is man carnivorous. 4. Food for champions. 5. Mineral content of animal and vegetable foods. 6. Roughage and health. 7. The number one killer. 8. How wholesome is our meat? 9. What else is wrong with meat eating? 10. Animal protein versus vegetable protein. 11. The wise abstainers. 12. The joys of being a vegetarian. 13. The problem of animal waste. 14. The coming food crisis. 15. The soybean–A vegetarian's best friend. 16. Selected vegetarian recipes (using commercial meat substitutes or analogs). 17. Selected recipes (using homemade gluten and tofu). 18. Selected recipes (using natural, readily available ingredients).

Chapter 1 begins: "Vegetarianism in America used to be the butt of ridicule. But now the situation has changed. The laughter that once greeted mention of a vegetarian diet

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has died, thanks to discoveries made in biochemistry and nutrition during the last fifty years." It concludes: "Dr. Jean Mayer, professor of nutrition at Harvard University School of Public Health [in Boston, Massachusetts] and chairman of the 1969 White House Conference on Food, Nutrition, and Health, says that vegetarianism has three things going for it all at once–economics, health, and compassion."

Chapter 15, titled "The soybean–A vegetarian's best friend," begins by stating: "The soybean is a food without peer..." It discusses: Efficiency of soy protein (and supplementary value), soybean oil, minerals, vitamins, and simulated meats. Address: Camarillo, California.

1943. Deutsch, Ronald M. 1977. The new nuts among the berries. Palo Alto, California: Bull Publishing Co. viii + 359 p. Index. 22 cm. [260* ref]

• ***Summary:*** This is a follow-up to the author's 1961 work (revised in Feb. 1967) titled "The nuts among the berries: An exposé of America's food fads." The basic premise of both books is the same–That all popular books and people advocating health foods, natural foods, vegetarian or macrobiotic diets are nuts (crazy). The book is well researched but the tone is again that of an exposé of popular nutrition, one-sided and derogatory. There are two excellent bibliographies. The first, titled "Some controversial books in nutrition, contains 223 citations, listing almost every book ever published on the subjects noted above, including books such as *Diet for a Small Planet.* The second, titled "The factual resources for this book," includes 37 basic nutrition books, textbooks, and articles.

Contents: 1. The magical feast (Adelle Davis; Daisey Adelle Sieglinger). 2. Of cabbages and things (a brief history of "foodism"). 3. Mr. Graham bakes a cracker (Sylvester Graham). 4. Little men, little women, little food (Amos Bronson Alcott, Louisa May Alcott, and vegetarianism). 5. Water, water everywhere (The naturopaths, James Caleb Jackson, Ellen G. White, Father Kneipp). 6. Snap! Crackle! Enter Dr. Kellogg! (Dr. John Harvey Kellogg). 7. The battles of Battle Creek (Michigan and Seventh-day Adventists). 8. Life along the alimentary canal (Metchnikoff). 9. The jungle, the sausage, and the law (Upton Sinclair, Harvey W. Wiley, and the formation of the FDA). 10. Chew, chew Horace (Fletcher, Chittenden). 11. The bare torso king goes public (Bernarr Macfadden, Jack La Lanne, macrobiotics). 12. How to stop your cow from drooling (selling nutrition). 13. Eating for the hull of it (raw sugar, bran, fiber, and foodist or food extremist Alfred Watterson McCann). 14. The drinks are on the Hauser (Gayelord Hauser, macrobiotics). 15. Old proteinaceous Joe or Is there sex after dinner (Lelord Kordel, protein myths, and sex). 16. Mrs. Spratt's millions or Diet is a four-letter word (fat and dieting). 17. Protomania or Richard Nixon's diet revolution (high-protein diets). 18. Swing low, sweet glucose tolerance (hypoglycemia or low blood sugar). 19. How to sell a vitamin (Linus Pauling). 20. My mother squeaked or How to write about health foods (popular health books and articles). 21. The red faced confession and other tales of food cures and law (fraudulent advertising, the FTC). 22. Quick, nurse! The bean sprouts! (unproven therapies and cures, megavitamin therapy). 23. Meanwhile, back at the organic ranch (Jerome I. Rodale). 24. Organic politics or Gloria Swanson goes to Washington (toxic chemicals in foods). 25. How the poison gets into your health food (Center for Science in the Public Interest, Gary Null, and other health promoters).

Let us examine one chapter, 13, titled "Eating for the hull of it." It was well known by the 1990s that dietary fiber was the one nutrient in shortest supply in the American diet, and that this shortage is the cause of many diseases, from simple constipation to various disorders of the digestive tract. Those advocating a natural foods diet argued that we should return to eating whole-grain bread, primarily for the dietary fiber it contains, but also for its extra vitamins and minerals lost in the process of making white flour. Instead of dealing with these important issues, the author spends most of the chapter ridiculing a "foodist" and "food extremist" named Alfred Watterson McCann (born in 1879) and a physician named Dr. William Howard Hay (who graduated in 1891 from the medical school of the University of the City of New York), and comparing the nutritional value of raw vs. white sugar. He also notes that before the Civil War, the wheat used to make most American bread was soft winter wheat. It was easily ground between stones, then "bolted" through a soft cloth to sieve out some of the larger bran particles–a process which Sylvester Graham "felt was against God's purpose." After the Civil War, Scandinavian and German emigrées moved into the virgin lands of Wisconsin, Minnesota, the Dakotas, and Iowa, bringing with them a new tough wheat–the hard spring wheat. When the millers began to grind and bolt it, they found that much of the valuable gluten stuck to the bran. "To leave the bran in the flour meant creating a product that only a Graham or an Alcott would buy; dark coarse in texture, and hard to chew. Not surprisingly, the public rejected it." The first solution was the "middlings purifier" first installed in Minneapolis in about 1871; the purifier used a blast of air to blow away the bran. The primary solution was the Hungarian Mill, or highmilling machine–which had 6-7 sets of porcelain or chilled steel rollers. Sylvester Graham, James Caleb Jackson, and others said it was "unnatural" to take the bran out of bread. "Dr. [John Harvey] Kellogg's protests, which began about the time that the new wheat and new milling methods arrived, were based on his belief in 'auto-intoxication,' which called for bran to 'sweep out' the intestines and clear away their 'toxins.'" Address: Popular scientific and medical reporter.

1944. Heide, Manfred. 1977. Vegetarische Ernaehrung: 193 Rezeptvorschlaege und Speiseplaene fuer ein Vierteljahr [Vegetarian nutrition and food: 193 recipe suggestions and

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meal plans for a quarter of a year]. Stuttgart, West Germany: Paracelsus Verlag. 133 p. Illust. (some color). Index. 24 cm. [13 ref. Ger]

• ***Summary:*** Chapter V, titled "Soya, and important food," discusses the nutritional value of soya and various soyfoods including soy oil, soy lecithin, soymilk, soy flour (and its use in diabetic diets), whole soybeans, textured soy protein (*Soja-Pflanzenfleisch*), soy sprouts, "We have every reason to incorporate soya into our diets!" Soya is so versatile. The introduction of soya into our kitchens can serve our health and keep our fitness for work. Soy-related recipes include: How to cook whole soybeans. How to make soy flour at home. How to sprout soybeans. Soy sprout salad. Soy sprouts with soy noodles and vegetables.

In other parts of the book, textured soy flour (*Sojafleisch*) is served with rice. Soy flour can be added to soups and sauces.

One half-page ad titled "No meal without protein" is run by Henselwerk GmbH, 7031 Magstadt bei Stuttgart. It states that Henselwerk in Magstadt is the pioneer company in processing soybeans. The company's products include: Hensel Vollsoja [Hensel whole soy flour], Hensel Soja fettarm [low-fat soy flour], Hensel Soja-Kost nach Hackfleischart [textured soy protein granules], Hensel Soja-Fleisch in Trockenwuerfeln [textured soy protein cubes], Hensel Soja-Flocken (whole soy flakes), Hensel Kleine gruene Sojabohnen zum Keimen (small green soybeans for sprouting).

A full-page ad titled "For your healthy day" is run by granoVita Soja-Kost. The 8 soy products shown are sold in Reform Houses. All but the first is sold in a can. Soja-Vita (*Fertig gewuerzte Bratlings-Mischung*). Pasta chuta Bolognese. Koletts (Cutlets). Soja-Goulasch (Soy Goulash in Tomato Sauce). Soja-Curry (Soya Meat in Curry Sauce). Sojamilch (Soymilk). Soja-zart. Soja Wuerstchen (Soy Sausages). The author was born in 1934. Address: Germany.

1945. Johns, Warren L.; Utt, R.H. eds. 1977. The vision bold: An illustrated history of the Seventh-day Adventist philosophy on health. Washington, DC: Review and Herald Publishing Assoc. vii + 208 p. Illust. Index. 29 cm.

• ***Summary:*** An excellent book, loaded with old photos, cartoons, illustrations, and other graphics. Contains a colorful and accurate history of the subject. Contents: Elmshaven: The little elderly lady of Elmshaven (Ellen G. White). Pills, potions, purges, and prussic acid [hydrocyanic acid]. Battle Creek: Will success spoil John Kellogg? (Dr. John Harvey Kellogg). Granola, Postum, Corn Flakes, and peanut butter (W.K. Kellogg, C.W. Post). That's a wonderful bargain, but we haven't a cent (David and Mary Paulson). Westward: Another Kellogg, another San (Saint Helena Sanitarium). Where koala bears munched gum tree leaves: Health reform leaps the Pacific (Work in Australia and New Zealand, Sanitarium Health Food Co. makes Granose Biscuits and Weet Bix). God will give the thirsty elephant a drink (Paradise Valley Sanitarium). What makes Burden borrow? (Glendale Sanitarium and John Burden in Southern California). Ernest Lloyd remembers: Present at the purchase of Glendale Sanitarium (J.H. Kellogg, Harry Miller, David Paulson). Loma Linda: The resurrection of Lonesome Linda: New medical center gets off to a very shaky start (Loma Linda Sanitarium and College of Medical Evangelists). "They have gone and done what I told them not to" (American Medical Assoc., Percy Magan and Sutherland).

Photos show: Ellen G. White (p. 8, 11, 14). Ann Stanley Kellogg and John Preston Kellogg, the parents of John Harvey and Will K. Kellogg (p. 23). John H. Kellogg (p. 36, 38, 48, 52, 60, 68-71). Dr. James Caleb Jackson and Dr. Russell T. Trall (p. 40). The Western Health Reform Institute (p. 46, 49). Battle Creek Sanitarium (p. 56). Graph showing yearly patronage of the Battle Creek Sanitarium, 1866-1939. It grew from 53 patients in 1866 to a peak of 7,462 in 1926, then fell to 3,283 in 1935, and rose back to 3,691 in 1939. W.K. Kellogg (p. 74-80). Sydney, Australia, Sanitarium (p. 126). Sanitarium Foods Labels (Australia) including Gluten Meal (p. 142-43). Paradise Valley Sanitarium (California, p. 158-59). Percy Magan (p. 188, 201).

A bar chart (p. 73) shows yearly patronage of the Battle Creek Sanitarium from 53 people in 1866, to 1,174 in 1886, to a local peak of 7,034 in 1916, to an all-time peak of 7,462 in 1962; by 1939 yearly patronage had declined to 3,691. In "1933 the institution went into receivership. The Federal Government eventually turned it into an army hospital." Address: 2. Freelance writer and editor, Wrightwood, California.

1946. Johns, Warren L.; Utt, R.H. 1977. Chronology of the early history of Loma Linda Sanitarium and the College of Medical Evangelists [later Loma Linda University] (Document part). In: W.L. Johns and R.H. Utt, eds. 1977. The Vision Bold: An Illustrated History of the Seventh-day Adventist Philosophy on Health. Washington, DC: Review and Herald Publishing Assoc. 208 p. See p. 174-201.

• ***Summary:*** Loma Linda: The resurrection of Lonesome Linda: New medical center gets off to a very shaky start (Loma Linda Hotel, Loma Linda Sanitarium and College of Medical Evangelists). "They have gone and done what I told them not to" (American Medical Assoc., Percy Magan and Sutherland).

1906 April 15–Dedication of Loma Linda Sanitarium; Ellen White spoke to an audience of about 500. "Loma Linda is to be not only a sanitarium but an educational center... A school is to be established here for the training of gospel medical missionary evangelists" (TVN, p. 186). In 1908-09 120 students were enrolled, incl. eight in the first year of the medical-evangelistic course and seven in the second year–all no doubt medical students hoping to become licensed to practice medicine.

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1909 Dec. 9–The college secured a charter from the State of California in the name of the College of Medical Evangelists; it was authorized to grant degrees in the liberal arts and sciences, dentistry, and medicine. But how would SDAs finance and staff a genuine, fully equipped school of medicine, whose students could pass state board examinations. Ellen White said to go ahead.

1910 June 15–The transfer of Loma Linda Sanitarium assets to the College of Medical Evangelists made the sanitarium legally an integral part of the college. The 1910 council also defined the constituency, named a board of trustees, outlined a curriculum, and elected a faculty. The goal was to develop a fully accredited school of medicine.

1910–Abraham Flexner published *Medical Education in the United States and Canada*, a report that exposed the deplorable state of medical education in the majority of medical schools, many of them little more than diploma mills. Flexner visited 155 medical schools, only 38 of which had budgets. "Some had started without approval or permission. Many students entered them without a high school diploma. Only the best schools had a four-year curriculum of six months each year.

In 1962 College of Medical Evangelists still existed. Address: 2. Freelance writer and editor, Wrightwood, California.

1947. Schaefer, R.A. 1977. Legacy: The heritage of a unique international medical outreach. Mountain View, California: Pacific Press Assoc. xiv + 240 p. 18 cm. [75 ref]

1948. U.S. Department of Agriculture. 1977. The annual report on activities carried out under Public Law 480, 83d Congress, as amended, during the period July 1, 1975 through September 30, 1976. Washington, DC: U.S. Government Printing Office. See table 17.

• ***Summary:*** Table 18 is titled "Title II, Public Law 480–total commodities shipped by program sponsor, fiscal year 1976." The main program sponsors and distributing agencies, listed alphabetically, are AJJDC (American-Jewish Joint Distribution Committee), CARE, CRS (Catholic Relief Service), CWS (Church World Service), LWR (Lutheran World Relief), SAWS (Seventh-day Adventist World Service), UNICEF, UNRWA (United Nations Relief and Works Agency), and WRC (World Relief Commission). All of these are Private Voluntary Organizations (PVO/PVOs), registered with USAID. The following foods containing soy protein were distributed: Soy fortified sorghum grits (SFSG), CSB (corn soya blend), CSM (corn soya mix), WSB (wheat soya blend), and small amounts of soya flour. The vegetable oil which was shipped to many countries was soybean oil; it is not recorded here.

Foods containing soy protein were distributed to the following countries or areas: Near East: Bhutan, Egypt, Gaza, Jordan, Jordan West Bank, Morocco, Tunisia, Yemen.

Latin America: Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Nicaragua, Panama, Paraguay, Peru.

Africa: Benin, Botswana, Burundi, Cameroon, Cape Verde, Central African Republic, Ethiopia, Gambia, Ghana, Kenya, Lesotho, Liberia, Malagasy, Malawi, Mauritania, Mauritius, Niger, Rwanda, Senegal, Seychelles, Sierra Leone, Sudan, Tanzania, Togo, Zambia.

Asia: Bangladesh, India, Indonesia, Korea, Nepal, Pakistan, Philippines, Singapore, Sri Lanka.

Concerning "peanut oil" shipped under P.L. 480 Title II in fiscal year 1970: India received 37,776 million lb (Table 18). Address: Washington, DC. Phone: 703-875-4901 (1991).

1949. Anderson, C.; Taranto, M.V. 1977? Lactic acid fermentation of soy milk. Champaign-Urbana, Illinois: University of Illinois. 21 p. Unpublished typescript. Undated. 28 cm. [26 ref]

• ***Summary:*** "Soy milk without added sugar dos not appear to be a very favorable medium for lactic fermentation. The addition of 2-4% (w/v) glucose enhanced acid production but the addition of citrate had little effect. Adding 10% (w/v) skim milk solids, in addition to glucose, significantly enhanced acid production. When skim milk solids were added to the medium, a 50:50 mixed culture of lactic starter and *Lactobacillus cellobiosus* or *Lactobacillus acidophilus* resulted in the production of the greatest amount of titratable acidity."

"One of the first attempts in using lactic cultures to ferment soy beverage was by J.H. Kellogg in 1934" (U.S. Patent No. 1,982,994).

Note: In 2004 *Lactobacillus cellobiosus* Rogosa et al. 1953 was reclassified as *Lactobacillus fermentum* Beijerinck 1901. Address: Dep. of Food Science, Univ. of Illinois, Urbana, IL 61801.

1950. **Product Name:** [GranoVita "Cutlets"].
Foreign Name: GranoVita Koletts.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1977?
Wt/Vol., Packaging, Price: 400 gm can wholesales for DM 6.
How Stored: Shelf stable.
New Product–Documentation: Full-page ad for 8 granoVita soy products in the book by Manfred Heide. 1977. *Vegetarische Ernährung: 193 Rezeptvorschläge und Speisepläne für ein Vierteljahr* [Vegetarian nutrition and food: 193 recipe suggestions and meal plans for a quarter of a year]. Stuttgart, West Germany: Paracelsus Verlag. This product is named "Koletts (Leckere pflanzliche Koletten).

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DE-VAU-GE leaflets. 1980? Rezepte aus der GranoVita Versuchskueche. And Neue Rezepte mit Soja-Goulasch. Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p. Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products. But no description!

1951. **Product Name:** [GranoVita Soy Curry].
Foreign Name: GranoVita Soja-Curry.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1977?
Wt/Vol., Packaging, Price: 425 gm can wholesales for DM 6.
How Stored: Shelf stable.
New Product–Documentation: Full-page ad for 8 granoVita soy products in the book by Manfred Heide. 1977. *Vegetarische Ernährung: 193 Rezeptvorschläge und Speisepläne für ein Vierteljahr* [Vegetarian nutrition and food: 193 recipe suggestions and meal plans for a quarter of a year]. Stuttgart, West Germany: Paracelsus Verlag.

Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p.

1952. **Product Name:** [GranoVita Soymilk–Instant].
Foreign Name: GranoVita Sojamilch–Instant.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: 04 13 11 89 41.
Date of Introduction: 1977?
Ingredients: Soybeans.
How Stored: Shelf stable.
New Product–Documentation: Full-page ad for 8 granoVita soy products in the book by Manfred Heide. 1977. *Vegetarische Ernährung: 193 Rezeptvorschläge und Speisepläne für ein Vierteljahr* [Vegetarian nutrition and food: 193 recipe suggestions and meal plans for a quarter of a year]. Stuttgart, West Germany: Paracelsus Verlag. This product is named "GranoVita Sojamilch–Instant. Rein pflanzliche Sojamilch-Nahrung."

1953. Edwards, R.A. 1978. Social and legislative constraints [on soy protein foods]: The Australian situation. In: American Soybean Assoc., ed. 1978. International Soya Protein Food Conference, Proceedings. Hudson, Iowa: ASA. 136 p. See p. 12-13.
• ***Summary:*** There are somewhat less than 200,000 vegetarians in Australia, mostly Seventh-day Adventists, Hindus, and Jains. Their dietary needs have been met for the last 40 years by the Sanitarium Health Food Company, which is owned by the Adventist Church. Their meatlike products include Nutmeat, Rediburgers, Vegecuts, and Vegelinks. Initially the protein in these foods came exclusively from nuts, then wheat gluten was added, and more recently they have also included low-fat soy flour imported from the USA. The company imports texturized soy protein products and also makes their own, but they have found that their traditional untexturized vegetable protein foods outsell TVP by a factor of 50 to 1. Sanitarium appears to be the only supplier of non-meat protein foods to Australian and New Zealand consumers, presumably because the market is not big enough to attract a second company of the type.

As far as the author knows, the only Australian manufacturer of TVP other than Sanitarium is Griffith Laboratories, which makes an unflavored TVP for the very large and lucrative pet food market; they also make a low-fat soy flour.

In Australia, heart disease is the most serious disease, accounting for more than 30% of all deaths. With health professionals advocating a reduction in animal products, total fats, saturated fats, and cholesterol, and with the increasing awareness during the last few years of the relation between nutrition and health, "it would seem to me to be an opportune time to give the marketing of soy bean products a deeper and more searching examination than the superficial approaches that have been taken in the past." Address: Prof., School of Food Technology, Univ. of New South Wales, P.O. Box 1, Kensington 2033, Australia.

1954. Anholm, Anne C. 1978. The relationship of a vegetarian diet to blood pressure (Abstract). *Preventive Medicine* 7(1):35. March.
• ***Summary:*** Vegetarian Seventh-day Adventists had significantly lower blood pressure levels than non-vegetarian Mormons, matched for age and sex. Address: Seattle Pacific Univ., Seattle, Washington.

1955. *British Medical Journal.* 1978. Exotic diets and the infant. i(6116):804-05. April 1. [8 ref]
• ***Summary:*** This editorial expresses concern for two groups of children: (1) Those of the Asian immigrant community in the United Kingdom who may become deficient in vitamins D and B-12, and (2) those of the so-called cult diets in the United States, e.g. vegans, members of yogic sects, Zen macrobiotics, and Seventh-day Adventists. Address: England.

1956. Blair, Betty J. 1978. New vegetarianism takes on flavor of respectability. *Detroit News.* April 9. p. 1C, 22C.
• ***Summary:*** Discusses the rise in popularity of vegetarianism, its health benefits, vegetarian researchers, and vegetarian organizations. In the past few years, more and more nutritionists are admitting that a well-planned

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vegetarian diet is a healthy way to eat. "'We have found over and over again that there are no deficiencies in the diets of vegetarians who use the diet properly,' said Dr. Kenneth I. Burke, associate professor of nutrition at the Seventh Day Adventist Loma Linda University in California. 'In fact,' said Dr. Burke, 'studies show that vegetarians generally weigh less and are less disease-prone than the general population.

"Today in the United States an estimated 10 million vegetarians shun all meat in their diets, compared to about three or four million 15 years ago."

Bob Lewanski is co-president of the 400-member Michigan Vegetarian Society (246 Madison, Detroit, Michigan 48226); about 125 people attend the Society's monthly meetings.

1957. Ochetim, S.; Nicholson, H.H. 1978. Soyabeans in diets of growing pigs. *East African Agricultural and Forestry Journal* 43(4):298-304. April. [28 ref]

• ***Summary:*** In Uganda, there are two soybean processing plants. One [Kawempe Flour and Groundnut Mill, Kawempe] produces soybean meal (SBM), and the other [Africa Basic Foods Ltd. in Kampala] produces a number of soybean products including whole extruded soybeans.

The object of this investigation was to study the feeding value of maize-based diets containing either extruded whole soybeans (MES, with 22% soybeans), soybean meal (MSM, with 20% soybean meal), or commercial cereal balancer (MCB, with no soy), and the complete commercial ration on the performance, nutrient digestibility, and carcass quality of growing pigs. Feeding whole cooked soybeans to pigs at this level led to soft or oily carcasses. Address: Dep. of Animal Production, Faculty of Veterinary Medicine, Univ. of Nairobi, P.O. Box 29053, Kabete, Kenya.

1958. Trahms, C.M.; Larson, L.D.; Worthington, B.S. 1978. Dietary intakes and growth of Seventh Day Adventist preschool children (Abstract). *American J. of Clinical Nutrition* 31(4):720. April. Introduction by E.R. Monsen. Address: Dep. of Human Nutrition and Dietetics, Univ. of Washington, Seattle, WA.

1959. Ward, A.G. 1978. Commercial development of soya bean protein products in the EEC. In: Commission of the European Communities. Agriculture. 1978. Report of the Study Group on Vegetable Proteins in Foodstuffs for Human Consumption, in Particular in Meat Products. See p. 83-85. Appendix IV. April.

• ***Summary:*** "The soya bean is the main source of specialized vegetable protein products for human consumption within the EEC. Wheat gluten is also used but only to a very limited extent." It is difficult to estimate the current scale of usage for human consumption.

"Belgium: N.V. Vamo Mills produces toasted defatted flour and grits. No extruders known to occur in Belgium. Production of isolates being undertaken by Purina Protein Europe (associate of Ralston Purina Company USA).

"Denmark: Aarhus Oliefabrik A/S produces defatted flour, soya concentrate (Danpro) and textured soya concentrate. The company operates the only extruder in Denmark. Dansk Sojakagefabrik A/S produces defatted soya flour and grits as well as full fat soya flour.

"France: Société Industrielle des Oléagineux produces defatted soya flour and grits as well as full fat soya flour. Rhône Poulenc is reported to be working with an experimental soya protein spinning plant (not yet commercial). No information has been received about extruders functioning in France.

"Germany: Ölwerke Noury and Van Der Lande, Ölmühle Hamburg A.G. and Holtz and Willemsen all produce defatted soya flour and grits and the first two also produce full fat soya flour and grits. No information has been received about extruders functioning in Germany.

"Netherlands: Cargill Soja Industrie B.V. (associated with Cargill Inc., USA) produces defatted flour and grits. The company has three extruders for textured soya products, each with a capacity of about 7,000 to 10,000 tons per annum. These are not thought yet to be working to capacity. Unimills B.V. produces defatted soya flour, soya concentrate and products textured by extrusion with a single extruder. ADM–De Ploeg B.V. produces defatted soya flour and grits and also textured soya flour. The company has a single extruder of capacity 7,000 to 10,000 tons per annum, and is an associate of Archer Daniels Midland Co., USA.

"United Kingdom: British Soya Products produces defatted soya flour and grits as well as full fat flour. The company also produces by its own techniques (not conventional extrusion) the "Bespro" range of textured products. These may include gluten with the soya material. Spillers Ltd (Soya Food Ltd and Lucas Ltd) produces defatted flour and grits as well as full fat flour. Soya concentrate (Newpro) and textured soya flour are also produced. It is believed that the company now has the production capacity of two extruders (14,000 to 20,000 tons per annum). GMB (Proteins) Limited (jointly owned by General Mills Inc., USA and Bush, Boake Allen Ltd) produces a textured soya product ("Bontrae"), not by conventional extrusion. It is thought the current production capacity is a few thousand tons per annum. Miles Laboratories (U.K.) is linked to Miles Laboratories Inc., USA. Information is lacking as to whether the company has production capacity in the U.K. for textured products, as well as importing U.S. products. Courtaulds Limited produces a range of spun soya protein products (Kesp), some of which may incorporate gluten. Annual production is not known. The British Arkady Co. Ltd is associated with Archer Daniels Midland Co., USA. Defatted soya flour and grits, full fat soya flour and textured soya products (by

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extrusion) are produced. The single extruder has a capacity of 7,000 to 10,000 tons per annum. Extensive research and development has been carried out by Unilever Ltd. (in close association with Unilever in the Netherlands) to develop the "mesophase" process for the preparation of soya protein products and to utilize them in foods. The processes have not yet been commercially exploited.

"No information has been received concerning the production of soya protein products for human consumption and in particular textured products from Ireland, Italy and Luxembourg but Italy has very substantial capacity for the production of oil and meal from soya beans." Address: Procter Dep. of Food and Leather Science, Univ. of Leeds, Leeds.

1960. Granose Foods Limited. 1978. Now our range is even more wholesome (Ad). *Alive* (*England*). May. p. 28.
• ***Summary:*** "We've added five exciting new products to our range of healthier wholesome foods.

"Sausfry, the versatile soya-based sausage mix."

"Vegex Chunks, delicious spun soya protein for casseroles and pies.

"Vegex Mince for Moussaka, Lasagne or Cornish Pasties."

"Se us at Helfex, London."

An illustration shows a basket filled with each of the new Granose products. Address: Stanborough Park, Watford, Herts WD2 6JR [England].

1961. **Product Name:** Granose Sausfry: Seasoned Soya Protein Sausage Like Mix.
Manufacturer's Name: Granose Foods Ltd. (Marketer-Distributor). Made in the UK by British Arkady.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1978 May.
Ingredients: 1980: Vegetable fat, textured soya protein [textured soy flour], rusk, glucose, stabiliser, salt, herbs, spices, colouring, added vitamins.
Wt/Vol., Packaging, Price: 500 gm (1.1 lb) bag.
How Stored: Shelf stable.
New Product–Documentation: Ad in *Alive* magazine (UK). 1978. May. p. 28. "Now our range is even more wholesome." "Sausfry, the versatile soya-based sausage mix."

Manufacturer's catalog. 1980. April. "Textured soya protein in a beef sausage like flavour which only requires the addition of water to make it usable in any of the ways in which sausage meat can be used."

Form filled out and Label sent by Granose Foods Ltd. 1990. June 13. States that the product, made by British Arkady, was introduced in 1980. Address on bag is now Newport Pagnell. Label. 1990. 3.5 by 8 by 2 inch white coated paper bag. Red, yellow, brown, and black on white. An illustration (line drawing) on front panel shows a woman standing behind a table of baked goods. "Healthier wholesome food." Pack panel: "Make it plain... Add 750 ml (1.33 pints) of cold water to contents and leave the mixture for five minutes. Divide and form into sausage shapes, fry gently until golden brown.

"Make it fancy... Cook Sausfry shapes in hot batter for a tasty toad-in-the-hole or wrap in pastry to make savoury Sausfry rolls. Add onion, tomato, sage–any of your favourite flavours–and create exciting new ways to serve Sausfry.

"Note: Sausfry contains no animal matter and no Monosodium Glutamate.

"Ingredients: Textured defatted soya flour (defatted soya flour, iron, thiamin, riboflavin, vitamin B-12), hydrogenated vegetable oil, rusk, stabiliser (Methyl Cellulose, of plant origin), sea salt, hydrolysed vegetable protein, herbs, spices, colour (beetroot red)."

Color photo of package in *Linda McCartney's Home Cooking.* 1990. p. 18.

1962. Granose Foods Ltd. 1978. The Granose grain harvest (Ad). *Alive* (*England*). June. p. 36-37.
• ***Summary:*** Products (non-soy) include Sunnybisk (crispy whole wheat cereal biscuit made since 1895), Muesli, Fruit Bran (breakfast laxative food), Bran, Stabilised Wheatgerm, Swiss-Cup (Coffee Substitute). Granose products "also include exciting soya-based foods... Granose is a member of the worldwide organization, World Food Services, itself a division of the Seventh-day Adventist Church." The Services own over 30 other health food factories. Address: Stanborough Park, Watford, Herts. WD2 6JR, England.

1963. **Product Name:** Granose Curry Sauce.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1978 July.
Ingredients: Textured soya protein, sultanas, wheat flour, starch, salt, pineapple, onion, sugar, tomato powder, apple flake, coconut, spices, herbs.
New Product–Documentation: Manufacturer's catalog. 1980. April. "Spiced curry sauce with textured soya protein and fruit. Serve with rice."

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in July 1978. It has been discontinued.

1964. Possingham, R.E. 1978. Obituary: Roberts. *Australasian Record and Advent World Survey* (*SDA, Warburton, Victoria, Australia*). Aug. 1. p. 15.
• ***Summary:*** "Just one day before her eighty-third birthday, on July 12, 1978, at St. Michael's Hospital, Murrumbeena [a small suburb in Melbourne, to the south east], Victoria, Gladys Maude Roberts fell asleep in Jesus. Born on July 13,

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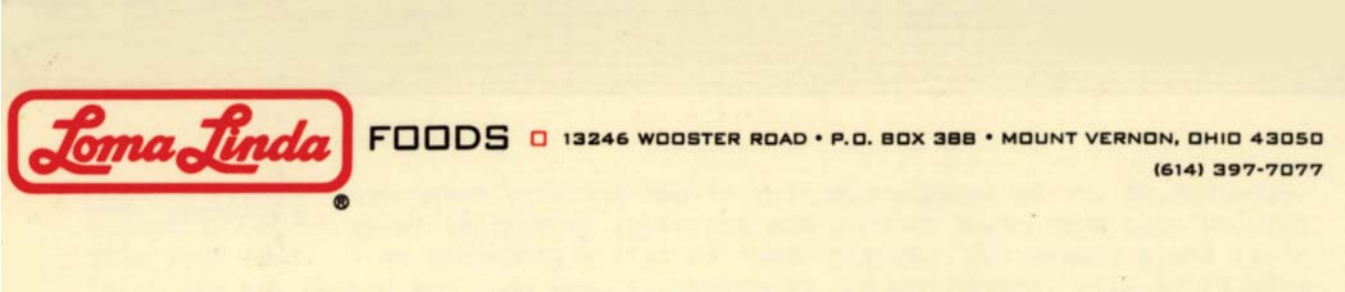

1895, this dear woman lived a life that was rich and full, a life that was spent in the interests of others. It mattered not whether it was a neighbor, a patient at the clinic, a member of the church or her Sabbath school class, she was always available to them. She is predeceased by her husband [F.G. Roberts, of naturopathic and soyfoods fame] and two sons, Fred and Horace, but leaves a daughter, Mrs. Gladys Hawken. To her and the grandchildren, we extend our deepest sympathy. With you, we await the coming of our Christ." Address: Australia.

1965. *Northern Union Outlook* (*Seventh-day Adventist; Minneapolis, Minnesota*). 1978. Hurds hold nutrition class at MJA. Aug. 7. p. 7.
• ***Summary:*** "May 1 through 4, Frank and Rosalie Hurd presented a Natural Nutrition class at the Minneapolis Junior Academy. Two-thirds of those participating were non-Adventists, with attendance averaging 50 per evening." The co-authors of the widely circulated *Ten Talents* cookbook taught about natural foods, meatless main dishes, and even how to make a delicious ice cream with cashew milk and honey.

1966. Simons, L.A.; Gibson, J.C.; Paino, C.; Hosking, M.; Bullock, J.; Trim, J. 1978. The influence of a wide range of absorbed cholesterol on plasma cholesterol levels in man. *American J. of Clinical Nutrition* 31(8):1334-39. Aug. [26 ref]
Address: 1. Medical Professorial Unit, St. Vincent's Hospital, Darlinghurst, NSW, 2010, Australia.

1967. *Adventist Review.* 1978. Deaths: Philip Stanley Chen. Oct. 5. p. 30.
• ***Summary:*** A brief obituary.

1968. Howes, Charles D. 1978. Re: Soymilk at Loma Linda Foods. Letter to William Shurtleff at New-age Foods Study Center, Oct. 12–in reply to inquiry. 2 p. Typed, with signature on letterhead. [1 ref]
• ***Summary:*** Contents: Non-tofu cheese. Hot water grind method. Output of soymilk from this plant is about 2 million gallons per year. The input of soybeans is about 630 tons. SDA soymilk plants worldwide: The newest plant is in Cairo. Brochures showing LLF products. Books by Dr. Philip S. Chen, who was Dr. Howes' major professor. Dr. Chen is now retired and living in southern California. Address: PhD., Technical Director, Loma Linda Foods, 13246 Wooster Rd., P.O. Box 388, Mount Vernon, Ohio 43050. Phone: (614) 397-7077.

1969. Burkitt, Denis P. 1978. Colonic-rectal cancer: fiber and other dietary factors. *American J. of Clinical Nutrition* 31(10):S58-S64. Supplement. Oct. [52 ref]
• ***Summary:*** The author reviews the evidence showing that low-fiber diets are associated with a high incidence of colonic-rectal cancer in Western countries. Notes that vegetarian Seventh-day Adventists have lower rates of colonic-rectal cancer than do other Americans. Address: Honorary Senior Research Fellow, Unit of Geographical Pathology, Thomas's Hospital, London SE1 7EH, England.

1970. Finegold, Sydney M.; Sutter, Vera L. 1978. Fecal flora in different populations, with special reference to diet. *American J. of Clinical Nutrition* 31(10):S116-S122. Supplement. Oct. [21 ref]
Address: 1. Chief, Infectious Disease Section, Wadsworth Veterans Administration Hospital, Los Angeles, California 90073.

1971. Howes, Charles D. 1978. Re: Seventh-day Adventist soymilk plants. Letter to William Shurtleff at Soyfoods Center, Oct. 1 p. Typed. [1 ref]
• ***Summary:*** Lists the soymilk plants in Central & North America (4, in Mt. Vernon, Ohio; Sonora, Mexico; Montemorelos, Nueva Leon, Mexico; San Pedro Sula, Honduras), Asia (2, in Chiba-ken, Japan, and in Poona, India), and the Middle East (1, in Cairo, Egypt). Address: Loma Linda Foods, 13246 Wooster Rd., P.O. Box 388, Mount Vernon, Ohio 43050. Phone: (614) 397-7077.

1972. MacDonald, Ian A.; Webb, G.R.; Mahony, D.E. 1978. Fecal hydroxysteroid dehydrogenase activities in vegetarian Seventh-Day Adventists, control subjects, and bowel cancer patients. *American J. of Clinical Nutrition* 31(10):S233-S238. Supplement. Oct. [30 ref]
• ***Summary:*** Compares the fecal anaerobic bacteria, enzyme activity, and pH values of the stools of bowel cancer patients, vegetarians, and controls. The pH values of stools were

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significantly higher in cancer patients compared to Seventh-Day Adventists. A plot of pH value versus NADP-dependent 7 α-hydroxysteroid dehydrogenase tended to separate the cancer patients from the other groups. Address: Depts. of Medicine and Microbiology, Dalhousie Univ., Halifax, Nova Scotia, Canada.

1973. Phillips, R.L.; Lemon, F.R.; Beeson, W.L.; Kuzma, Jan W. 1978. Coronary heart disease mortality among Seventh-Day Adventists with differing dietary habits: A preliminary report. *American J. of Clinical Nutrition* 31(10):S191-98. Supplement. Oct. From Symposium on Role of Dietary Fiber in Health. [20 ref]

• ***Summary:*** A six-year study of over 24,000 Seventh-day Adventists (SDA) in California, ages 35 to 64, has found that the risk of fatal coronary heard disease (CHD) among non-vegetarian SDA males is three times greater than vegetarian SDA males of comparable age, suggesting that the SDA diet may account for a large share of their low risk.

Table 2 shows that in 1960 some 44.2% of California SDAs reported no consumption of meat, poultry, or fish whatsoever. 4.9% consume these foods less then once a week, 19.5% consume them 1-2 times a week, 7.3% consume them 3 times per week, 20.2% consume them for or more times per week, and 3.9% do not know their frequency of consumption.

The CHD death rate for Adventist men in California with various dietary habits compared with the general population is as follows: Vegetarian 12%, pure vegetarian (vegan) 14%, lacto-ovo vegetarian 39%, nonvegetarian 37%.

SDAs are a small evangelical religious denomination with about 500,000 members in North America and 3 million members worldwide. THey follow a rather unique lifestyle. By church proscription SDAs completely abstain from smoking and from drinking alcoholic beverages. The church highly recommends, but does not require, adherence to several other lifestyle characteristics such as a lacto-ovo-vegetarian diet containing no meat, fish, or poultry, but which does contain dairy products and eggs. Almost all SDAs abstain from pork products and other biblically defined unclean meats. They also tend to avoid coffee and other caffeine-containing beverages, hot condiments and spices, and highly refined foods. Address: Dep. of Biostatistics and Epidemiology, Loma Linda Univ., Loma Linda, California; Univ. of Kentucky, Lexington, KY.

1974. Trowell, Hugh. 1978. The development of the concept of dietary fiber in human nutrition. *American J. of Clinical Nutrition* 31(10):S3-S11. Supplement. Oct. In: H.P. Roth and M.A. Mehlman, eds. Symposium on the role of dietary fiber in health: Proceedings of a workshop sponsored by the Nutrition Coordinating Committee of the National Instutes of Health; held in March 1977 at Bethesda, Maryland. [60 ref]

• ***Summary:*** Contents: Early clinical observations. Refined flour and refined sugar. Available and unavailable carbohydrates. Studies of fiber in Africa. Cleave's hypothesis: the saccharine disease. Burkitt's epidemiological studies (1964). Decision to define fiber (1971-72). Refined carbohydrate foods and disease. Physiological definition of dietary fiber. Components of dietary fiber. Dietary fiber complex. Objections to the concept and the term dietary fiber. Western-risk diseases. Bran supplementation or multiple switchover diet.

Since the time of Hippocrates it has been observed that wheat bran is laxative. In 1542 a British book on diet and health noted that dark bread was laxative and slimming. When Dr. John Harvey Kellogg, an American cereal manufacturer, advocated the use of bran in 1923 in *The New Dietetics*, he stimulated much research. Note: As early as 1909, Dr. Kellogg's company, Battle Creek Foods in Battle Creek, Michigan, was selling and advertising "Sterilized bran (a gentle laxative)."

"Over the next 17 years at least 35 articles were published in the United States on various aspects of fiber and the laxative action of wheat bran. Fundamental studies by Cowgill and Sullivan [1933] demonstrated that wheat bran increased stool weights. Williams and Olmsted [1935, 1936] estimated the degradation of cellulose, hemicellulose, and lignin in the gut.

"Concurrently many studies were underway in Britain on the action of wheat bran. For example, Dimmock [1936, 1937] reported that he had used bran in the successful treatment of 100 patients suffering from constipation, seven with hemorrhoids, two with colitis, and several others diagnosed as having irritable colon. He cited some 75 references in American and British medical literature.

"Other clinical and experimental studies came from India. McCarrison [1921, 1936] reported that Hunza tribesmen and Sikhs, who ate whole wheat bread, legumes, and fruit, were healthier than Madras Indians who ate polished white rice. These observations were made before vitamins had been identified or the benefits of fiber even postulated. Several years later [1967] Malhotra described the relationship between many diseases and diet, including amounts of fiber."

"Walker in South Africa [1947] extended these studies among African blacks and later suggested that cereal fiber protected them against certain metabolic disorders. Trowell in Uganda elaborated this concept with regard to the rarity of common noninfective diseases of the colon. Another stream of inquiry stemmed from the hypothesis of Cleave who postulated that the presence of refined sugar, and to a lesser extent white flour, caused many metabolic diseases, while the loss of fiber caused certain colonic disorders. Meanwhile Burkitt had collected massive evidence of the rarity of appendicitis and many venous disorders in rural Africa and parts of Asia."

"In 1971 the status of fiber research in human nutrition

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appeared to be in a state of confusion, almost as if there had been a concerted plan to conceal the presence of fiber, to avoid defining its constituents or analyzing them, to refrain from reporting even crude fiber in the food data of experiments, or to plan prospective experiments to assess whether it was an inert substance, merely cellulose, or a group of substances... In 1972 Trowell proposed a new physiological definition of fiber in terms of the residue of plant foods that resisted digestion by alimentary enzymes of man." Initially Trowell stated frequently that fiber was derived entirely from plant cell walls. In 1975 gastroenterologists pointed out that storage polysaccharides (often water soluble), pectic substances, plant gums, and mucilages should be included as undigested polysaccharides in a redefinition of dietary fiber. Trowel and others published this redefinition in the journal *Lancet* in 1976.

Table 1 shows the components of dietary fiber. 1. Structural materials of plant cell-wall: 1A. Structural polysaccharides (cellulose, hemicelluloses, pectic substances). 1B. Noncarbohydrate constituents (lignin). 2. Nonstructural materials, natural or used as food additives: 2A. Polysaccharides from a variety of sources (storage undigested polysaccharides, gums, mucilages, algal polysaccharides, fungal chitins, chemically modified polysaccharides). Address: Dep. of Medicine and Pediatrics, Makerere Univ. and Uganda Govt., Uganda. Address reprint requests to: Dr. Hugh Trowell, Woodgreen, Fordingbridge, Hampshire SP6 2AZ, England.

1975. Chen, Philip S.; Chung, Helen D. 1978. Soybeans for health and longer life. New Canaan, Connecticut: Keats Publishing, Inc. xii + 178 p. Index. 18 cm. (A Pivot Health Book).

• ***Summary:*** A revised and condensed pocketbook version of Chen and Chen 1956. Contents: Preface. Foreword. Introduction. Part I: Nutritive value of the soybean. 1. Protein. 2. Fat. 3. Carbohydrates and caloric value. 4. Minerals. 5. Vitamins. 6. Soybeans and world population. 7. Soybeans and disease.

Part II: Soy products. 8. Soybean oil: Phosphatides, margarine. 9. Soybean oil meal: Gelsoy, Multi-Purpose Food. 10. Soy flour. 11. Concentrated soy protein products: Soy protein concentrates (Griffith Laboratories makes Isopro and GL-301), soy protein isolates, and textured or spun soy proteins. 12. Soy milk. 13. Soy cheese (tofu). 14. Soy sauce. 15. Soybean sprouts.

Part III: Soybean culture and preservation. 16. Soybean culture. 17. Preservation of soybeans (preserving green soybeans by canning, freezing, and dehydration).

Part IV: Recipes. 18. Soybeans and soybean pulp. 19. Soy flour: Breads, cakes, cookies, pies, soups, other recipes. 20. Soy grits and soy flakes. 21. Soy milk. 22. Soy cheese. 23. Soybean sprouts. Appendix: Soybean utilization (chart). References. Address: 1. PhD; 2. M.S. Both: USA.

1976. *Focus* (*The Andrews University Magazine*). 1978. Obituaries: Philip Stanley Chen. Fall. p. 56.

• ***Summary:*** Born on 17 Aug. 1903 near Shanghai, China, he died on 29 July 1978 in Camarillo, California. "His parents died of opium use when he was small and he was reared by his grandfather who sent him to the newly opened Adventist mission school near Shanghai." He arrived at Emmanuel Missionary College [later renamed Andrews Univ.] in 1929 and received his BS degree in 1929. "He then went to Michigan State College and completed a masters and a PhD in organic chemistry by 1933. During this time he met Helen Feng, a teacher of Mandarin and the first Chinese coed at Michigan State. They were married Aug. 3, 1931. He was head of the chemistry department at Madison College for a number of years. Here he continued his research on the nutritional value and methods of the soyabean."

"Survivors include his wife, Helen; a sister in Peking; four sons, Philip, Bethesda, Maryland; John, Cold Water, Idaho; George, Weimar, California; and Sam, Glendale, California; two daughters, Helen, Camarillo; and Ruth, Santa Rosa, California." Address: Berrien Springs, Michigan.

1977. **Product Name:** [Granix Crackers with Soy Flour].
Foreign Name: Granix Galletitas con Soja.
Manufacturer's Name: Alimentos Granix.
Manufacturer's Address: Av. San Martin 4625 (C.P. 1602), Florida, Prov. de Buenos Aires, Argentina. Phone: 760-0307/7292/5676.
Date of Introduction: 1978.
Ingredients: 1990: Wheat flour, vegetable oil (contains soy and/or sunflower), defatted soy flour, salt, malt extract, sodium bicarbonate, butter flavor (esencia de manteca).
Wt/Vol., Packaging, Price: Plastic bag. Normal 270 gm. Family size 750 gm. Secretarial 23 gm. Fresh pack 3.6 kg. Tin can 3.5 kg.
How Stored: Shelf stable.
Nutrition: Per 100 gm.: Calories 442, protein 15.6 gm, fat 12.8 gm, carbohydrates 67.7 gm, fiber 0.7 gm, calcium 64 mg, phosphorus 220 mg, iron 0.9 mg, sodium 1500 mg, vitamin B-1 0.18 mg, vitamin B-2 0.24 mg, niacin 5.020 mg.
New Product–Documentation: Manufacturer's brochure. 1989? "Granix por excelencia." A color photo shows the labels of these square crackers in 4 packet sizes. Letter sent by Jorge Manrique of Alimentos Granix. 1990. July 13. This product was introduced (without an English name) in 1978. Then in 1986 it was introduced with an English name (Granix Soy Plus Crackers) printed as prominently as the Spanish name on the package. Label. 12 inches square, unfolded. Red, white, orange, and black on clear plastic. "Made with hydrogenated vegetable oils. Contains 9.35% fat. With artificial essence of shortening (Fantasia-lard)." The latter term may refer to either butter flavor or shortening (imitation lard). Note: This is the earliest known commercial

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soy product made in Argentina.

1978. **Product Name:** [Like Liver-Sausage (Meatless Liverwurst)].
Foreign Name: WieLeberwurst.
Manufacturer's Name: Bruno Fischer GmbH.
Manufacturer's Address: Taunusstrasse 13, 5000 Köln [Cologne] 91, West Germany. Phone: 02 21 / 83 26 51.
Date of Introduction: 1978.
Ingredients: Includes whole cooked then ground soybeans.
New Product–Documentation: Talk with Bruno Fischer. 1995. March 22. His company's first soy product was introduced in 1978. See interview for company history and context.

Talk with Bruno Fischer. 1998. May 14. His company's first soy product was named WieLeberwurst ("Like Liver-Sausage"). It contained less than 30% of cooked, ground soybeans.

Note: This is the earliest commercial soy product seen (Feb. 2013) made Bruno Fischer GmbH. The company's next product, *Soja Drink* (soymilk) was launched in 1991.

1979. **Product Name:** [GranoVita Vegetarian Soy Sausages (Spicy)].
Foreign Name: GranoVita Vegetarisch essen Soja-Wuerstchen (Pikant Gewuerzt).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1978.
Ingredients: Vegetable oils and fats in varying proportions by weight, water, whole soybean puree, egg protein, onions, red cabbage, garlic, wheat gluten, glucose, spices, salt, seasonings, smoke seasoning, yeast flakes, rolled oats, thickeners (carob seed meal and guar seed meal), Graham flour, citric acid as an acidifier. Sauce: Water, salt, soy sauce.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Form filled out and Labels sent by DE-VAU-GE. 1990. June 11.

1980. **Product Name:** Granose Vegex [Beef-Flavoured Chunks, or Mince].
Manufacturer's Name: Granose Foods Ltd. (Marketer-Distributor). Made in the UK by Courtaulds.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1978.
Ingredients: Soya protein, vegetable oil, edible starch, salt, flavouring, natural colour.
New Product–Documentation: Ad in *Alive* magazine (UK). 1978. May. p. 28. "Now our range is even more wholesome." "Vegex Chunks, delicious spun soya protein for casseroles and pies."

Manufacturer's catalog. 1980. April. "Textured spun protein which has a similar texture to meat. Beef like flavour. It has a long shelf life, and is a balanced protein."

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Courtaulds UK, was introduced in 1978. It has been discontinued.

1981. **Product Name:** Granose Ravioli (Vegetarian).
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1978.
Ingredients: Durum wheat flour, tomato paste, vegetable oil, bread crumbs, salt, corn starch, spices, textured soya protein (textured soy flour), groats, yeast extract, mushroom, egg albumen, carrot, onion flakes, egg whole powder, caramel.
New Product–Documentation: Manufacturer's catalog. 1980. April. "Traditional Italian style pasta filled with savoury soya protein in a spicy tomato sauce. Serve hot on toast or with potatoes or other vegetables."

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1978. But a note says "Not Applicable."

Label sent by Granose. 1990. July 11. The soy is textured soy flour.

1982. **Product Name:** Granose Cannelloni.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1978.
Ingredients: Durum wheat flour, tomato puree, vegetable oil, sugar, textured soya protein (textured soy flour), onion, carrots, salt, celery, oats, cornstarch, mushroom, spices, yeast extract, egg albumen, egg whole powder, caramel.
New Product–Documentation: Manufacturer's catalog. 1980. April. "Traditional Italian style Cannelloni filled with spicy soya protein in a tangy tomato sauce. Heat in ovenproof dish topped with grated cheese."

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1978. It has been discontinued.

1983. **Product Name:** Granose Vegetarian Goulash.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1978.
Ingredients: 1980 and 1990: Water, textured soya protein, maize starch, hydrolised vegetable protein, tomato puree, wheat flour, salt, yeast, carrot, onion, potato, leek, capsicum, mushroom, sugar, paprika, spices, herbs, vegetable oil.

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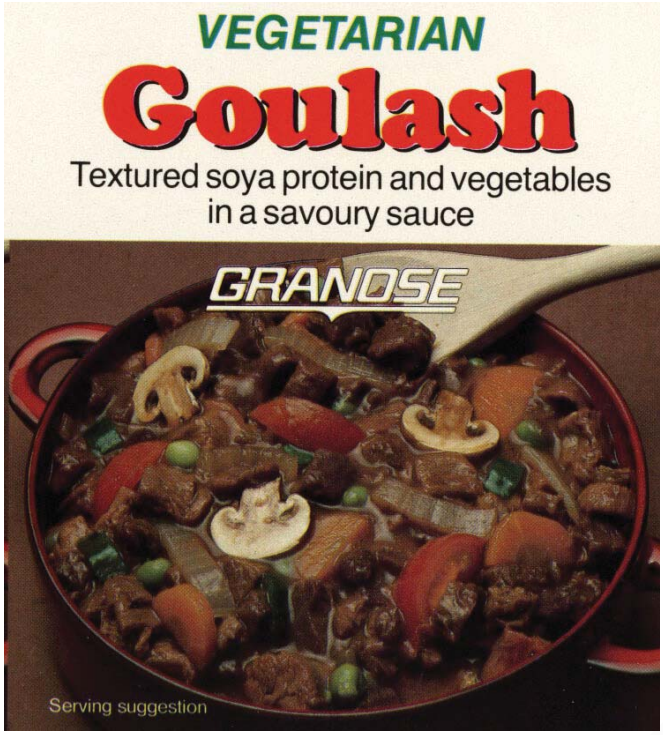

Wt/Vol., Packaging, Price: 425 gm (15 oz) can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Manufacturer's catalog. 1980. April. "Soya protein and vegetable stew in a sauce flavoured with paprika. May be heated as in the can or have added vegetables."

Form filled out and Labels sent by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1978. Label. 1990. 8.5 by 4.25 inches. Photos on front and back panels show a kettle or wok full of the ready-to-serve product, which resembles a meat casserole. "Textured soya protein and vegetables in a savoury sauce... A traditional stew with soya protein and vegetables in a tasty sauce seasoned with paprika and tomato. Contains no animal products."

1984. Gridley, Daila S. 1978. Effect of time and diet on the immune status of mice challenged with herpes-transformed cells. PhD thesis, Loma Linda University, California. *
• ***Summary:*** Meat and high-soy protein depressed immunity and enhanced tumor development in rats. A high-fat diet was tumor enhancing when combined with casein, but tumor inhibiting when combined with soy protein.

1985. **Product Name:** Loma Linda Sizzle Burgers (Meatless Hamburger Patty based on Spun Soy Protein Fiber).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1978.
Ingredients: Soy protein concentrate, wheat gluten, corn oil, rolled oats, water, egg whites, onion, artificial and natural (vegetable) flavors, corn starch, dried yeast, salt, whole wheat flour, caramel color, dextrose, spices, guar gum, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 10 oz paperboard box.
How Stored: Frozen.
Nutrition: Per 1 burger (2.5 oz–71 gm): Calories 210, protein 15 gm, carbohydrate 13 gm, fat 11 gm, cholesterol 0 mg, sodium 320 mg, potassium 180 mg.
New Product–Documentation: See next page. *Soybean Digest Bluebook.* 1979. p. 93. "Sizzle Burger." Ad in Vegetarian Times. 1980. No. 40. Aug. p. 25. "Sizzle Burgers. A tasteful way to avoid cholesterol, preservatives and added MSG." Ad in Mother Earth News. 1980. Nov/Dec. p. 2.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1978.

1986. **Product Name:** Loma Linda Swiss Steak with Gravy (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1978.
Ingredients: Soy protein concentrate, wheat gluten, corn oil, water, rolled oats, egg whites, corn starch, onion, artificial flavors, natural (vegetable) flavors, dried yeast, whole wheat flour, salt, caramel color, dextrose, spices, guar gum, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 25 oz (710 gm) can. Retails for $3.99 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 1 steak (2.6 oz–74 gm): Calories 140, protein 9 gm, carbohydrate 8 gm, fat 8 gm, cholesterol 0 mg, sodium 350 mg, potassium 180 mg.
New Product–Documentation: See page after next. *Soybean Digest Bluebook.* 1979. p. 93. "New meatless swiss steak." Sold frozen or canned. Ad (full page, color) in Bestways. 1980. June. p. 47. "Swiss Steak. Its a real no-meat and potatoes dinner. No cholesterol, no preservatives or added MSG." Now available in 13 oz and 28 oz cans. They are made by "combining two nutritious vegetable proteins."

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1978.

Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19.

1987. **Product Name:** Loma Linda Tender Rounds (Meatless Meatballs with Gravy).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA

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Loma Linda Sizzle Burgers capture the wonderful flavor and texture of meat hamburgers, and there's no cholesterol. They're made from Loma Linda's special ingredient, combining two nutritious vegetable proteins. Thanks to our continuing food and flavor advancements, you get terrific taste without preservatives or added MSG. No animal fat or cholesterol, either!

Loma Linda Sizzle Burgers are pre-cooked, then frozen to lock in flavor. Just heat and serve like meat burgers, with buns and fixings. Or, serve as a family-pleasing main dish.

Check out the whole line of Loma Linda meatless foods today. And write us directly for your free Sizzle Burger recipe folder.

Loma Linda Foods®
SINCE 1906 RIVERSIDE, CA 92515

Sizzle Burgers. A tasteful way to avoid cholesterol, preservatives and added MSG.

2

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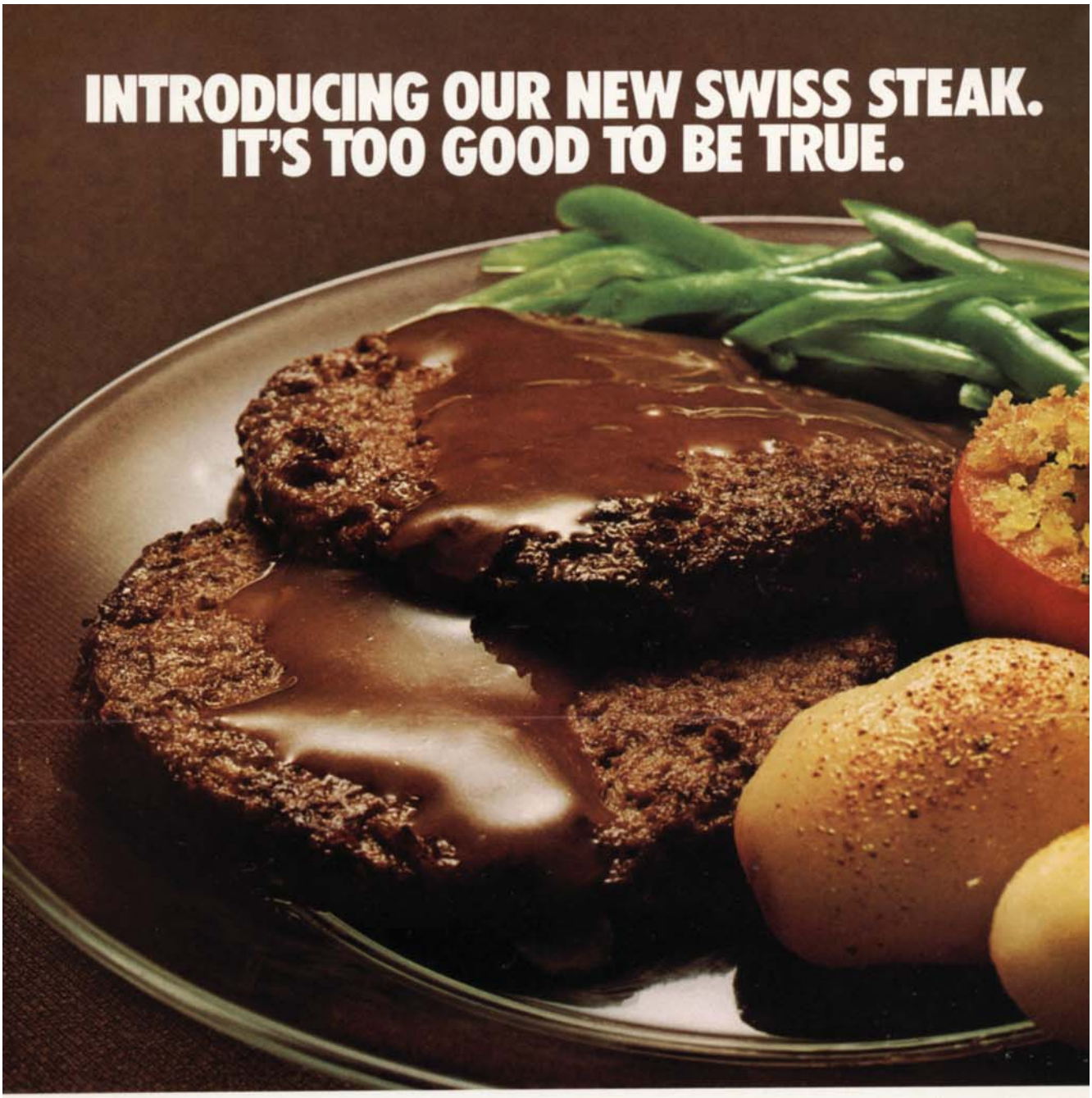

Loma Linda's new Swiss Steak with Gravy has so much of the taste and texture of steak that you may even think it's better than the real thing.

That's because it contains Loma Linda's own special ingredient, combining two different vegetable proteins. This special blend results in better texture plus a more favorable nutritional balance.

Loma Linda's new Swiss Steak is precooked and comes smothered in its own rich gravy. So you just open a can and it's ready to heat and serve.

Our Swiss Steak makes a scrumptious main dish entree when served with cooked vegetables and a salad. Or a really hearty lunch served as an open-faced steak sandwich. It can be featured in stews and casseroles.

So try Loma Linda's new Swiss Steak with Gravy soon. It has the flavor of steak with none of the animal fat, preservatives or cholesterol. Which is why we say it's too good to be true.

Loma Linda Foods®
SINCE 1906

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92515.
Date of Introduction: 1978.
Ingredients: Tender Rounds: Wheat gluten, soy protein isolate, water, corn oil, wheat flour, egg whites, soy protein concentrate, corn starch, soy flour, dried yeast, artificial flavors, dextrose, onion, oat flour, natural (vegetable) flavor, onion powder, salt, garlic powder, caramel color, guar gum, artificial colors, spice, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). Broth: Water, corn starch, natural (vegetable) flavors, wheat flour, dextrose, onion, sugar, salt, caramel color.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per approximately 6 meatballs (2.6 oz–73 gm): Calories 120, protein 15 gm, carbohydrate 7 gm, fat 4 gm, cholesterol 0 mg, sodium 310 mg, potassium 115 mg.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1978. A product with the same name but with different soy protein ingredients was introduced in 1953.

1988. **Product Name:** [Textured Soy Flour].
Manufacturer's Name: Produtos Alimenticios Superbom.
Manufacturer's Address: Caixa Postal 8633, 01051 Sao Paulo, Brazil.
Date of Introduction: 1978.
New Product–Documentation: John. 1981. Spectrum. Feb. "Adventist Food Companies: Recent Developments. p. 32-33. In about 1978 Superbom in Brazil and Granix in Argentina entered the soy protein business and by 1981 were producing a total of 700 tons a year of TSF. The demand for these products was caused in part by government proclaimed "meatless days" so that those two countries could export more meat. In 1978 Superbom's sales from all food products was over $7 million, way up from $4.3 million in 1975. It also had a chain of three vegetarian restaurants."

1989. **Product Name:** Sanitarium Health Foods Bologna (Canned Frankfurter Flavored Loaf).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1978.
Ingredients: Wheat protein, vegetable oil, yeast, soy protein, salt, Savex, hydrolysed vegetable protein, rice, garlic, onion.
Wt/Vol., Packaging, Price: 430 gm can.
How Stored: Shelf stable.
New Product–Documentation: Letter from Sanitarium Health Food Co. 1981. Label. 10 by 4 inches. Full color. Photo shows a cylindrical Bologna loaf on a bed of rice and mushrooms. "Vegetable Protein–Ideal for salads, casseroles, sandwiches, etc." Recipes for Spanish Salad and Bologna Contadini.

Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1978.

1990. **Product Name:** Sanitarium Health Foods Vita-Burger (Flavoured T.V.P.).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1978.
Ingredients: Soy flour, salt, hydrolysed vegetable protein, flavouring, syrup, caramel.
Wt/Vol., Packaging, Price: 200 gm box.
How Stored: Shelf stable.
Nutrition: Protein 50%, moisture 8%, ash 8%, fibre 3%, carbohydrate 30%, fat 1%.
New Product–Documentation: Letter from Sanitarium Health Food Co. 1981. Label. Box. 13 by 9.5 inches. Full color. Photo shows 7 burgers in tomato sauce in a skillet. "Textured Vegetable Protein. Main course vegetable protein. Ideal for patties, burgers, casseroles." Recipes for Spaghetti Sauce and Vita-Burgers (hamburgers).

Letter from Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1978.

1991. **Product Name:** Sanitarium Health Foods Pelletized Flake Biscuits.
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, N.S.W. 2076, Australia.
Date of Introduction: 1978.
New Product–Documentation: *Soybean Digest Blue Book.* 1978. p. 26.

1992. Stoia, Rose Greer. 1978. Feeding the vegetarian infant. Loma Linda, California: Seventh-day Adventist Dietetic Assoc. *
• ***Summary:*** This brochure provides practical information on feeding vegetarian babies, with emphasis on protein and iron-rich foods.

1993. Austin, James E.; D'Cruz, J.R.; Popper, E.; Quelch, J. 1978. The marketing factor for nonconventional protein products. In: M. Milner, N.S. Scrimshaw, and D.I.C. Wang, eds. 1978. Protein Resources and Technology: Status and Research Needs. Westport, CT: AVI Publishing Co. xxi + 629 p. See p. 111-35. Chap. 9. [13 ref]
• ***Summary:*** Contents: Introduction. Marketing management for new products: The marketing process, a consumer orientation, the product life cycle, new product acceptance. The marketing and food technology interface: Short term, long term. New protein resources: Marketing problems and prospects: Meat extenders and textured meat alternatives, livestock, dairy, grain, legumes, fish protein, leaf protein,

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single-cell protein (SCP), marketing barriers. Case studies: Case 1, margarine: Evolution of a new food product. Case 2, Textured vegetable protein: Effective marketing segmentation (Miles/Worthington). Case 3, Whey blends: New protein product introduction. Marketing research priorities. Public policy considerations.

Page 119 states: "The term, 'textured meat alternatives,' refers primarily in the context of this report to products of vegetable protein made from the soybean, although it embraces protein products from other sources." Address: 1-3. Harvard Business School, Boston, Massachusetts 02163.

1994. Boyer, Robert A. 1978. Technological gaps in vegetable protein texturization. *J. of Texture Studies* 9(1/2):179-89. [14 ref]

• ***Summary:*** Contents: Introduction. Vegetable protein raw materials. Raw material flavor problems. Current texturizing methods. Binders. Scientific literature gaps. Proposed new texturizing techniques. Conclusions.

"The growth of the textured vegetable protein industry has not kept pace with early predictions. High costs and marginal quality are among the factors retarding progress. Some of the technological gaps handicapping the industry are: lack of a process for preventing formation of off-flavors by enzymes while maintaining protein functionality, lack of a low cost thermosetting binder, lack of a protein suitable for spinning, and the indigestibility of certain soybean fractions."

"Two methods of texturization dominate the industry today: extrusion by screw presses and wet spinning... Extrusion accounts for a majority of the tonnage of textured vegetable protein (TVP) being produced today." The relatively inexpensive soy flour (about one-third the cost of soy protein concentrate and one-sixth the cost of soy protein isolate) can be used as the starting material. The extruded products are usually in the form of dry granules or expanded and porous chunks.

Perhaps the most serious problem confronting any process based on the use of soy flour is the lack of digestibility and frequent incidence of flatulence. Address: Miles Laboratories, Worthington, Ohio 43085.

1995. Calella, John R. 1978. Cooking naturally: An evolutionary gourmet cuisine of natural foods. Berkeley, California: And/Or Press. ix + 112 + 5 p. Illust. by Pedro J. Gonzalez. Index. [81 ref]

• ***Summary:*** The author of this vegetarian cookbook, of Italian ancestry, is popularly known as "Organic John." He likes to use fresh foods, and he has a call-in radio show in San Francisco. In chapter 4, Ingredients (p. 16-), he discusses soya butter [margarine], miso, tamari, instant protein powder (incl. Shaklee's Instant Protein), lecithin granules, Soyamel powder (powdered soymilk made by Worthington Foods), Balanced protein seasoning (powdered HVP made from soybeans).

Chapter 10 (p. 79-83) contains a long section on soya beans, with recipes: Homemade soya bean curd (tofu). Things you can do with tofu. Soya patties (with dry soya beans). Soya bean loaf. Green soya bean mix (with dry green soya beans). Soya beans in a beet stew. Soya bean spread.

In the section on Fruit Sherbets, many of the recipes contain 2 tablespoons Soyamel (powdered soymilk) and lecithin granules. Address: Berkeley, California.

1996. Eckstein, Eleanor F. 1978. Menu planning. 2nd ed. Westport, Connecticut: AVI Publishing Co. xiv + 416 p. See p. 312-23. [24 ref]

• ***Summary:*** This textbook on foodservice and menu planning contains sections on culturally-based food preferences. Chapter 28 (p. 312-23) is titled "Foodways of Vegetarians and Fruitarians." Contents: Introduction. Religious avoidance of meat (Seventh-day Adventists, Hare Krishnas). Neo-vegetarianism (since about 1965; many article by J. Dwyer). Hospitals. Colleges and universities. Restaurants.

Table 28.1 is titled "Food patterns of vegetarians and fruitarians." In the left column is various groups and subgroups, and in the right column the food pattern of each. The left column reads: Religious: Buddhists, Seventh-Day Adventists, Catholic Trappist monks (lacto-vegetarian), Jains, Hare Krishnas (lacto-vegetarian), Macrobiotics. Food faddists: Non-violence philosophy, lacto-ovo vegetarians, moderate vegetarians, strict vegetarians (vegans; "Will not eat animal products in any form. Do not eat cooked foods, refined, or processed foods."), moderate fruitarians, strict fruitarians ("Eat only fruits and nuts."). Economic: Financially and geographically motivated. Address: Consultant, Nutrition and Food Service Management, Reno, Nevada.

1997. Ford, Barbara. 1978. Future food: Alternate protein for the year 2000. New York, NY: William Morrow and Company, Inc. 300 p. Index. 22 cm. [40+ ref]

• ***Summary:*** The author concludes that soybeans are most likely to be the protein source of the future. Chapter 2, "The Cinderella Bean" (p. 32-53) and Chapter 3, "Soybeans, Oriental Style" (p. 54-71) both discuss the benefits of soybeans. Pages 37-38 note that soybeans were once called "haybeans" and their hay was called "haybean hay."

Note: This is the earliest English-language document seen (Oct. 2011) that which uses the term "haybean" or "haybeans."

The work of the USDA Northern Regional Research Lab. (NRRL) with soyfoods is described at length. While at the NRRL she first encountered "sufu." In "Chinese markets, sufu is not called sufu but 'bean curd' or 'bean cake.' As soon as I saw sufu I realized it has an image problem–not as unappetizing as natto, but distinctly unpleasant. Picture

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grayish chunks of some odd-looking material floating in a murky liquid, like biology specimens in a bottle, and you have a typical bottle of sufu.

"Sufu looks so bad that my husband, who has faithfully eaten a number of odd-looking sources of protein that I have purchased over the years, refused it. It took a little courage for me to tackle one of the grayish lumps myself but I finally ate one. To my surprise, it was good, rather like a tangy dairy cheese but with a distinctive, nonbeany flavor of its own" (p. 60-61).

Chapter 6, "It Ain't (Just) Hay," is about alfalfa leaf protein and leaf protein concentrate. Research on leaf protein "really started during World War II, when British scientist N.W. Pirie suggested the use of leaves to augment dwindling meat supplies... Pirie's proposal never got underway during the war because of the costs involved, but after the war he was given a laboratory where he carried out most of the pioneering work on leaf protein."

Chapter 9, "SCP: Promises, Promises," is about single-cell proteins such as the bacteria *Cellulomonas* and *Pseudomonas* (the champion, which can double its weight in 9 minutes). A probable culprit in SCPs is "nucleic acids, which have been shown to cause elevated uric acids in humans if used over an extended period of time. Raised uric acid levels lead to gout, kidney stones, and gallstones. Some bacteria contain from 15 to 16 percent nucleic acids, a fairly high level. Yeasts and fungi contain from 6 to 11 percent, still a high level. Algae have less." It is recommended that humans not consume more than 2 grams (0.7 ounces) of nucleic acids per day. Address: USA.

1998. Hardinge, Mervin [sic, Mervyn] G.H. 1978. Plant fibers and human health. In: Gene A. Spiller, ed. 1978. Topics in Dietary Fiber Research. New York: Plenum Press. x + 223 p. See p. 117-26. Chap. 5. [20 ref]
• ***Summary:*** A review of the literature on the health and nutritional aspects of dietary fiber in vegetarian diets. Contents: Introduction. Dietary fiber in vegetarian and non-vegetarian diets. Dietary fiber and epidemiological aspect of disease: Fiber intake and digestive system function, fiber intake effect on character and transit time of stools, fiber intake and body weight, fiber intake, blood pressure and serum cholesterol, fiber intake and colorectal cancer. Conclusion. Address: Loma Linda Univ., Loma Linda, California.

1999. Holmes, Charlotte Van Gundy. 1978. Cooking for living. The art of healing. Sulfur Springs, Arkansas: Philadelphia Institute, Inc. 102 p. No index. 20 cm. [11* ref]
• ***Summary:*** The section titled "Soy beans" (p. 31-33) has the following contents: Introduction and list of different food products made from soy beans. Drying, freezing, canning, and tenderizing whole dry soybeans. How to make soybean milk: From beans, from soy flour, how to use the residue [okara] left from making soy milk. Soy cheese (also called "vegetable cheese" or "tofu"): How to make soy cheese from soy milk, how to make soy cream, how to make soy mayonnaise.

Also discusses: Homemade soy butter [soynut butter] (p. 57-58). Entrees (p. 58-60): Soy bean loaf, Soy cheese patties, Soy loaf, Soy grits loaf, Peanut butter patties. Soy sauce and Sovex (p. 83).

Note 1. The author's father, Theodore Van Gundy, was a soyfoods pioneer in southern California. The first printing of this book was in 1967, the second in 1970, and the third in 1973.

Note 2. On the cover is written (as if it were the title): *Keys to Cooking for Living: Recipes and Menus.*

Note 3. With This book, Charlotte encloses a pamphlet about Sulphur Springs, Arkansas. It is a sort of spa where people go to use the not mineral waters to help them recover from certain kinds of illnesses. Address: M.D., P.O. Box 308, Sulphur Springs, Arkansas 71768.

2000. Milner, Max; Scrimshaw, N.S.; Wang, D.I.C. eds. 1978. Protein resources and technology: Status and research needs. Westport, Connecticut: AVI Publishing Co. xxi + 629 p. Illust. Index. 26 cm. [400+ ref]
• ***Summary:*** Contents: Contributors. Preface. Acknowledgments. Section I: Summary and research recommendations. 1. Objectives and research recommendations. 2. Factors affecting protein supply and demand. 3. Common issues in the development and utilization of protein resources. 4. Status and potential of specific resources. Section II: Common issues and problems in protein resource development. 5. United States and world protein production and consumption. 6. Energy constraints in protein production. 7. Legal and regulatory barriers to the introduction of novel protein foods. 8. The politics of new protein: Obstacles and opportunities facing research and development. 9. The marketing factor for nonconventional-protein products. 10. Nutritional evaluation of proteins and protein requirements. 11. Toxicological aspects of protein production and processing. 12. Basic food science and technology problems affecting the properties and processing of protein resources. 13. The constraints on improving protein quality in plants by genetic means. 14. Research on nitrogen and carbon input to increase domestic crop protein production. Section III: A review of specific protein resources. 15. Grain crops. 16. Cereal proteins from grain processing. 17. Oilseed proteins. 18. Food legumes as a protein source. 19. Livestock animal production. 20. Proteins from dairy products. 21. Animal protein from meat, poultry and eggs. 22. Aquatic proteins. 23. Potatoes. 24. Nonphotosynthetic single-cell protein. 25. Photosynthetic single-cell protein. 26. Leaf protein in relation to forage crop production and utilization. 27. Chemical synthesis of nutrients. Address: MIT, Cambridge, Massachusetts 02139.

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2001. Moore, Shirley T.; Byers, Mary P. 1978. A vegetarian diet: What it is; how to make it healthful and enjoyable. Santa Barbara, California: Woodbridge Press Publishing Co. 120 p. With 7 color photos. 23 cm. [111 ref]
• ***Summary:*** A sound, readable, and well documented book written by Seventh-day Adventist nutritionists. Covers up-to-date information on nutritional adequacy of vegetarian diets, types of vegetarians, daily food guides, and sample menus. The tone of Chapter 1 is quite defensive, as if Seventh-day Adventists had been previously accused of being unscientific, faddists, and/or quacks.

Contents: Acknowledgments. Preface. 1. A vegetarian diet: What it is; what it is not. 2. Filet mignon or pecan patties. 3. Food and people. 4. Now for the menu. 5. The littlest vegan: A nonmeat diet for infancy. 6. Why the vegetarian lifestyle. Conclusion. Appendixes: A. Sample menus for a week. B. Suggestions for dining away from home: Full-fledged vegetarian restaurants, restaurants catering to cultural food tastes (Chinese, Japanese, Greek, Italian, Mexican), cafeterias, smorgasbords, restaurants, salad bars, airlines, supermarket meals (no specific restaurants are mentioned–only these types). C. A sampling of vegetarian cookbooks [28 books are listed, many of them by Seventh-day Adventist authors]. D. Meat analog manufacturers [ADM, Cedar Lake Foods, General Mills, Loma Linda Foods, Miles Laboratories / Worthington, Millstone Foods]. Address: 1. PhD; 2. M.A. Both: Loma Linda Univ., Loma Linda, California.

2002. Schaeffer, Richard A. 1978. Legacy. Mountain View, California: Pacific Press Publishing Assoc. *
• ***Summary:*** Pages 66 and 67 describe how Dr. John Harvey Kellogg invented peanut butter. Unfortunately no date is given for the anecdote.

2003. Seventh-day Adventist Dietetic Assoc. 1978. Diet manual, utilizing a vegetarian diet plan. 5th ed. Loma Linda, California: Seventh-day Adventist Dietetic Assoc. 280 p.
• ***Summary:*** This comprehensive loose-leaf handbook for the planning, selection, and coordination of vegetarian diets was edited by Judy Dean Baloga, M.S., R.D., with Marilyn Delinger, Margaret Kemmerer, Lydia Sonnenberg, Kathleen Zolber.

Table M-1 titled "Ingredients of selected vegetable protein foods" (p. 248-57) gives all the ingredients in 85 such products, most of which are made by Seventh-day Adventist companies. Table M-2 (p. 258-66) gives the nutrient composition of each of these products. Address: P.O. Box 75, Loma Linda, California 92354.

2004. U.S. Department of Agriculture. 1978. The annual report on activities carried out under Public Law 480, 83d Congress, as amended, during the period October 1, 1976 through September 30, 1977. Washington, DC: U.S. Government Printing Office. See table 18.
• ***Summary:*** Table 18 is titled "Title II, Public Law 480–total commodities shipped by program sponsor, fiscal year 1977." The main program sponsors and distributing agencies, listed alphabetically, are AJJDC (American-Jewish Joint Distribution Committee), CARE, CRS (Catholic Relief Service), CWS (Church World Service), LWR (Lutheran World Relief), SAWS (Seventh-day Adventist World Service), UNICEF, UNRWA (United Nations Relief and Works Agency), and WRC (World Relief Commission). All of these are Private Voluntary Organizations (PVO/PVOs), registered with USAID. The following foods containing soy protein were distributed: Soy fortified corn meal (SFCM), soy fortified sorghum grits (SFSG), CSM (corn soya mix), WSB (wheat soya blend), and small amounts of soya flour. The vegetable oil which was shipped to many countries was soybean oil; it is not recorded here.

Foods containing soy protein were distributed to the following countries or areas: Near East: Bhutan, Egypt, Gaza, Jordan, Jordan West Bank, Lebanon, Morocco, Tunisia, Yemen.

Latin America: Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Panama, Peru.

Africa: Benin, Botswana, Burundi, Cameroon, Chad, Congo, Ethiopia, Gambia, Ghana, Ivory Coast, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mauritania, Mozambique, Niger, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Togo, Upper Volta, Zambia.

Asia: Bangladesh, India, Indonesia, Nepal, Philippine Islands, Singapore, Sri Lanka. Address: Washington, DC. Phone: 703-875-4901 (1991).

2005. **Product Name:** [Granix Nutrisoja Textured Soy Flour].
Foreign Name: Granix Nutrisoja Granulado.
Manufacturer's Name: Alimentos Granix.
Manufacturer's Address: Av. San Martin 4625 (C.P. 1602), Florida, Prov. de Buenos Aires, Argentina.
Date of Introduction: 1978?
Ingredients: Defatted soybeans.
Wt/Vol., Packaging, Price: 250 gm poly bag.
How Stored: Shelf stable.
Nutrition: Per 100 gm.: Calories 349, protein 50.5 gm, fat 1.0 gm, ash 6.3 gm, moisture 6.0 gm, carbohydrates 34.5 gm, fiber 1.7 gm.
New Product–Documentation: John. 1981. Spectrum. Feb. "Adventist Food Industries: Recent Developments." p. 32-33. "Granix keeps its 300 workers busy 24 hours a day in 3 shifts. 40% of the companies profits are passed directly into the church budget, with considerable sums going to finance evangelism. There are plans to expand production by 500%.

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Net profits for Granix in 1979 were $1,055,000. During the first 9 months of 1980 they were $1,452,000."

Manufacturer's brochure. 1989? "Granix por excelencia." A color photo shows the package label and a table gives the nutritional composition. The package is red and blue on white, with a large oval window in the front. Letter and label sent by Jorge Manrique of Alimentos Granix. 1990. July 13. He forgot to give the date that this product was introduced. Label. 3.75 by 9.5 by 1.5 inch plastic bag. Red, blue, gold, and white.

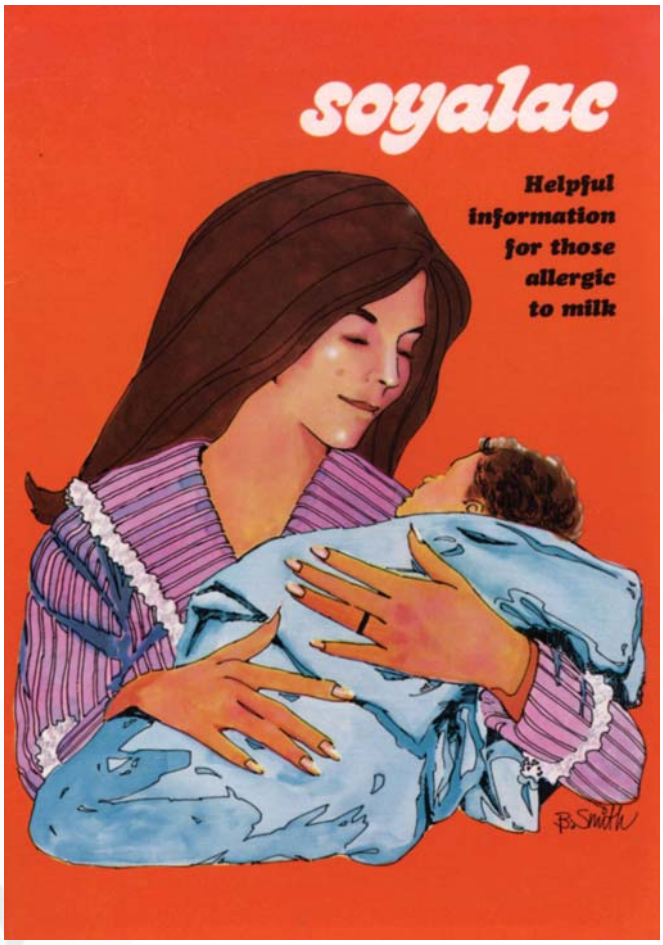
2006. **Product Name:** [Soymilk].
Manufacturer's Name: Alimentos Integronaturales.
Manufacturer's Address: Apartado 16, Montemorelos, NL, Mexico.
Date of Introduction: 1978?
New Product–Documentation: Letter from Charles D. Howes. 1978. Oct. List of Seventh-day Adventist soymilk plants.

Shurtleff. 1981. Overseas Adventist Food Companies. p. 8. Letter from Robert Folkenberg. 1983. Feb. 15. The company is presently producing about 3,000 liters/week of soymilk.

2007. Loma Linda Foods. 1978? Soyalac. Helpful information to those allergic to milk. Riverside, California. 34 p. Undated. Illust. 18 cm.
• ***Summary:*** On the cover is a mother (with long brown hair) holding a child in a blue blanket against an orange-red background.

Contents: Presented to. What is allergy? Asthma, eczema and colic. Soyalac: For infants, children and adults–milk free recipes for your pleasure. Four types of Soyalac are available (hypoallergenic, fiber free): i-Soyalac Concentrated, Soyalac Concentrated, Soyalac Ready-to-Serve, and Soyalac Powder. Suggestions on infant feeding: Ready to serve, concentrated liquid. Baby's birth record. Baby's immunization record [against 10 diseases + Schick test]. Baby's appointments for check-up. Growth record for. Beverages (each recipe in the recipes section calls for Soyalac). Hot breads. Main dishes. Soups, sauces and mayonnaise. Cookies. Desserts. Allergic foods checklist. Address: Riverside, California.

2008. **Product Name:** Loma Linda Gravy Quick [Brown, Chicken Style, Country Style, Mushroom, Onion].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1978?
Ingredients: Brown: Enriched wheat flour, salt, cottonseed oil, natural (vegetable) flavors, soy flour, onion powder, monosodium glutamate, caramel color.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian*



Meal Plan. 7th ed. Appendix A.6-27. Soy flour is typically about the fifth ingredient in each flavor of gravy.

2009. Meal plans for total vegetarians. 1978? Loma Linda, California: Loma Linda University, School of Health, Dep. of Nutrition. Undated. *
• ***Summary:*** A brochure of simple, inexpensive menus with cost and nutrient data, plus recipes and shopping suggestions.

2010. Meals without meat (Leaflet). 1978? Loma Linda, California: Seventh-day Adventist Dietetic Assoc. Undated. Revised 1990. *
• ***Summary:*** Discusses the health advantages of a vegetarian diet, protein, and meal planning.

2011. **Product Name:** [Soymilk].
Manufacturer's Name: Pan American Health Service.
Manufacturer's Address: Box 191, Peña Blanca, San Pedro Sula, Honduras.
Date of Introduction: 1978?
New Product–Documentation: Letter from Charles D. Howes. 1978. Oct. List of Seventh-day Adventist soymilk plants.

Soyfoods Center. 1980. Sept. Tofu shops and soy

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dairies in the West (2 pages, typeset). "Pan American Health Service, Box 191, San Pedro Sula, Honduras. Owner: Dr. Steven Youngberg. Seventh-day Adventist soy dairy."

Letter from Eric C. Fehlberg, Director, International Health Food Assoc. 1990. May 24. This organization no longer exists. Talk with Don Meinders of Pan American Health Service. 1992. Feb. 4. Dr. Steven Youngberg was the son of missionaries in India. When the family returned to the USA, he got his medical degree at Loma Linda University in the mid-1950s. His first medical practice was in the Texas border area, where he worked with poor Mexican laborers. He had a little medical van, and was very active with tuberculosis work. Then he went to Tabasco, the state in Mexico, and started a tuberculin hospital there. Then he went to Honduras in about 1961, bought land, and started the Pan American Health Service (PAHS) in the jungle. In about 1972 he started a soymilk plant and a bakery on the PAHS grounds. PAHS still exists and is very active, with a medical clinic, an orphanage for malnourished children, and a farm. The bakery produces the only whole-wheat bread in Honduras. But the soymilk plant is not presently in operation. About 6-8 years ago the soymilk equipment was disassembled by an administrator who wanted to sell it. Dr. Youngberg was in the USA at the time undergoing heart surgery. When he returned to Honduras, he immediately stopped any ideas of selling the soymilk plant. The parts are now in boxes. This soymilk was never sold commercially. It was only served at the clinic. Don was at the PAHS recently; he has been there for about 1 year and plans to stay down there. Dr. Youngberg is now about age 74-75, living in Texas, and well enough to talk. PAHS is a private foundation, privately funded with about half the funds coming from Seventh-day Adventists. A Mennonite group run by a woman doctor from the East Coast of the USA in San Pedro is producing a protein-rich "Soy Bar," like a granola bar.

Note: This may be the earliest known commercial soy product made in Honduras. However it is unclear whether or not this product, or any other soy product made by the PAHS was ever sold commercially. On the PAHS website (panamhealth.org), retrieved 3 Feb. 2009, the soymilk is mentioned but there is no indication that it was ever sold commercially. In 2001 Dr. Stephen Youngberg died in Ft. Worth, Texas; his body was buried in Peña Blanca, Honduras. We do not know enough about the "Soy Bar" to give it a "Commercial Soy Product" record.

2012. Blair, Betty J. 1979. Fruitarians squeeze [vegetarian] diet to the limits. *Detroit News.* Jan. 2. p. 1D, 2D.
• ***Summary:*** Discusses the philosophy and nutritional value of a fruitarian diet. "Many fruitarians eat some vegetables, seeds and nuts–broadly defining 'fruit' as any plant-product which drops off its tree, vine or stem naturally and does not require the destruction of the plant... Such plant delicacies as carrots, cabbage, lettuce, broccoli, and all leafy green vegetables, grains, potatoes, and peanuts are taboo."

Mrs. Nellie Shriver, a former history teacher, is coordinator of the 5-year-old Fruitarian Network in Washington, DC. It has about 6,000 members of the estimated 7-10 million vegetarians nationwide. Shriver personally prefers an uncooked, total fruit diet. Studies by Loma Linda University show that a fruitarian diet is most likely to be deficient in protein, calcium, and calories. Fruitarians believe that growing fruit makes the best use of land. Fruit yields as high as 140,000 pounds per acre, while vegetables yield only 20,000 to 40,000 lb/acre. Address: News staff writer.

2013. Hartman, Warren E. 1979. Re: Visit to Worthington plant in Ohio. Letter to William Shurtleff at New-Age Foods Study Center, Jan. 20–in reply to inquiry. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "In regard to our facilities here at Worthington, we would be happy to have you visit our facilities–most of the production is done here, however, we do have a plant in Schaumburg, Illinois, which does some manufacturing of the plant protein products for the Morningstar Farms label... I would be happy to edit or proof read any copy you have concerning the Worthington line and make such corrections and additions as I feel would be valuable."

Note: Schaumburg, Illinois, is about 25 miles northwest of Chicago. Thus it is about 295 miles northwest of Worthington, Ohio. Address: Technical Consultant, Worthington Foods, Worthington, Ohio.

2014. Shurtleff, William; Aoyagi, Akiko. 1979. The book of tofu: Food for mankind. Condensed and revised. New York, NY: Ballantine Books. A division of Random House, Inc. xii + 433 p. Jan. Illust. by Akiko Aoyagi Shurtleff. Index. 18 cm. [60 ref]
• ***Summary:*** This book has been extensively revised and updated. Many names of Japanese tofu have been Americanized. Contents: Preface. Acknowledgements. 1. Protein East and West. 2. Tofu as a food. 3. Getting started: Favorite tofu recipes. 4. Soybeans. 5. Fresh soy puree. 6. Okara (Soy pulp). 7. Curds and whey. 8. Tofu & firm tofu. 9. Deep-fried tofu: Deep-fried tofu cutlets, deep-fried tofu burgers & treasure balls (tofu treasure balls, p. 269), and deep-fried tofu pouches. 10. Soymilk. 11. Silken tofu. 12. Grilled tofu. 13. Frozen & dried-frozen tofu. 14. Fermented tofu. 15. Yuba. Appendices: A. Tofu restaurants in Japan. B. Tofu shops and soy dairies in the West. C. Varieties of tofu in East Asia. D. Table of equivalents. Bibliography. Glossary. Contains 250 recipes and 100 illustrations. Price: $2.95.

This new edition features: (1) New recipes: Over fifty new American-style tofu recipes including Creamy Tofu Dressings, Tofu Teriyaki, Tofu Burgers, Tofu Eggless Egg Salad, and the like. The key to the book is an updated list of favorite tofu recipes plus suggestions for incorporating them

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into a weekly menu (p. 56). (2) New sections: An extensive new introduction to Soy Protein Foods (p. 66), dairylike products made from tofu (p. 150), dairylike products made from soymilk (p. 302) including soymilk yogurt (fermented), ice cream, kefir, mayonnaise, whipped cream, popsicles, buttermilk, and soy shakes. (3) New chapters: Fermented Tofu and Varieties of Tofu in East Asia. (4) New basic methodologies: The key recipes for homemade tofu and homemade soymilk have been simplified and improved. (5) Updates: A complete listing of the 120 tofu shops and soy dairies now operating in the West; over 60 Caucasian-run shops have opened in the past two years. (6) New Americanized tofu names: Including deep-fried tofu burgers, deep-fried tofu cutlets, deep-fried tofu pouches, deep-fried tofu puffs, silken tofu, wine fermented tofu, and fresh soy puree. A major goal of this book is to coin English names for tofu products that will catch on and come to be used in labeling commercial products, in cookbooks, etc. (7) No sugar.

Note 1. This is the earliest English-language document seen (April 2013) that contains the following terms related to deep-fried tofu: "fried tofu cutlets" or "deep-fried tofu cutlets" (p. v, to refer to *nama-agé*), "fried tofu burgers" or "deep-fried tofu burgers (to refer to *ganmodoki*), "tofu treasure balls" or "deep-fried tofu treasure balls" (p. v, 269, to refer to *Hiryozu*), "fried tofu pouches" or "deep-fried tofu pouches" (p. v, to refer to *aburagé*).

Page 110: "In Japan, tofu is also called *momen-goshi* ('cotton-filtered') to distinguish it from its popular counterpart *kinu-goshi* ('silken tofu')." Note 4. This is the earliest English-language document seen (April 2013) that uses the term "silken tofu."

Note 5. This is the 2nd earliest English-language document seen (Oct. 2011) that contains the term "Wine-fermented tofu" (p. 361).

In Jan. 1988 a new printing (but not a new edition) of this book (the 13th), slightly revised, appeared. It had a new cover and many new small illustrations. The subtitle was "Protein Source of the Future–Now!" The heading: "The World's Bestselling Book on Tofu." Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.

2015. Howes, Charles D. 1979. Re: More about soymilk at Loma Linda Foods. Letter to William Shurtleff at New-age Foods Study Center, Feb. 12–in reply to inquiry. 2 p. Typed, with signature on letterhead. [3 ref]

• ***Summary:*** "We only use an isolate [soy protein isolate] in the infant formula i-Soyalac, all of our other products are made starting with the whole bean. i-Soyalac was developed several years ago in response to market demands. The main reason for the demand, I rather suppose, was due to the reduced flatulence associated with an isolate product. It is much more simple to make a product starting with the isolate so that if only one line were to be built it might be a little less expensive to formulate starting with the isolate due to reduced capital investment. However, even when all the necessary equipment is in, there is still some trade-off in making the isolate product vs. the whole bean product. Some of these are (a) reduced time for production when starting with an isolate, (b) reduced clean-up and sanitation because less equipment is used, (c) reduced need for storage space for bulk beans since the isolate comes in bags (d) no soy fines [okara].

"The advantages of starting with the bean over the isolate include (a) a better flavor (at least to some people), (b) better stability, (c) some oil from the bean is utilized, (d) the cost [of ingredients] is a little less than starting with isolate, but as mentioned above there is a trade-off and more equipment, steam, time, etc. are required and the problem of dealing with the soy fines must be handled.

"Trypsin inhibitor inactivation is approached realistically in our process. The paper by Baker & Mustakas (1973) is enclosed and might be helpful to you in your discussion of this problem. Infant formulas such as Soyalac contain only residual amounts of trypsin inhibitor since about 95-97% is destroyed during processing (see *J. Agric. Food Chem.* 24: 393-397 for exact levels).

"Dr. Harry W. Miller's International Nutrition Laboratory started making soymilk in the United States in the autumn of 1939. Production ended in the Shanghai plant on 13 August 1937 due to the war. The plant was destroyed by fire and bombing at the beginning of World War II. A copy of the rare booklet "The Story of Milk from the Soya Bean" published by Dr. Miller in 1944 is enclosed and will give some interesting details.

"The first American to work with soymilk (I believe) was John Harvey Kellogg under whom Dr. Miller worked and studied while in medical school. Dr. Kellogg was not only Harry Miller's supervisor at the food plant, but also the president of his medical school, and his professor in several classes. Enclosed are a couple of pages from Schwarz's biography of Kellogg that might be helpful in your study. Miller took a good idea and developed it into a manufactured product. Miller did a lot of research and development as well as engineering to make his idea a reality. The plant became part of Loma Linda Foods in 1950.

"Sincerely,... 3 enclosures." Address: Loma Linda Foods, 13246 Wooster Rd., P.O. Box 388, Mount Vernon, Ohio 43050. Phone: (614) 397-7077.

2016. Howes, Charles D. 1979. Re: Details about soymilk at Loma Linda Foods. Letter to William Shurtleff at New-age Foods Study Center, Feb. 27–in reply to inquiry. 1 p. Typed, with signature on letterhead. [1 ref]

• ***Summary:*** Discusses: His views on the boiling water grind. The researchers at Cornell University (Ithaca, New York) deserve full credit for the important work they did.

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Loma Linda was issued patent No. 3,288,614 in 1966 on the process they were using during the 1960s. Describes the steps in that patent issued to C.P. Miles. Address: Loma Linda Foods, 13246 Wooster Rd., P.O. Box 388, Mount Vernon, Ohio 43050. Phone: (614) 397-7077.

2017. Shultz, Terry D.; Leklem, James E. 1979. Vitamin B-6 status in Seventh-day Adventist vegetarians and non-vegetarians (Abstract). *Federation Proceedings* (*FASEB*) 38(3):452 (Abst. #1186). March.
• ***Summary:*** Vegetarian diets tend to contain higher amounts of fiber than non-vegetarian diets. Vitamin B-6 status may be adversely affected by high-fiber diets. Blood and urine samples were obtained from 41 Seventh-day Adventist (SDA) vegetarians, 16 SDA non-vegetarians, and 31 other non vegetarians. The groups were subdivided into vitamin supplement users (VU) and non-users. Vitamin B-6 status did not differ significantly among non-vitamin-users in the 3 groups. Address: Oregon State Univ., Corvallis, OR 97331.

2018. Smith, S.; Shultz, T.; Ross, J.; Leklem, J. 1979. Nutrition and cancer attitudes and knowledge of Seventh-day Adventists (Abstract). *Federation Proceedings* (*FASEB*) 38(3):713 (Abst. #2559). March.
• ***Summary:*** Questionnaires on attitudes toward and knowledge of nutrition and its relationship to cancer were sent to 1,000 randomly selected Oregon Seventh-day Adventists (SDA). 208 of 500 females and 123 of 500 males responded. 61% of the respondents strongly agreed that there is a relationship between diet/nutrition and cancer. From 90-95% of both males and females agreed that some foods contain cancer causing substances. Vegetarians more strongly than non-vegetarians agree that there is a relationship between diet and cancer and that specific nutrients are related to cancer risk. Address: Oregon State Univ., Corvallis, OR 97331.

2019. Thomson, W.A.B. 1979. Infant formulas and the use of vegetable protein. *J. of the American Oil Chemists' Society* 56(3):386-88. March. [15 ref]
• ***Summary:*** Contents: Abstract. Infant formulas and the use of vegetable protein. A photo shows Thomson. Table 2, titled "Soy-based infant formulas," gives the name, product form (P = powder. R = ready to eat. C = concentrated liquid) and manufacturer or each. Bon Lact, P, Wakodo Pharmaceuticals, Japan. Espelin, P, Med-Nim (PTY) Ltd., South Africa. Isomil, R C P, Abbott Laboratories (Ross), USA. Lactopriv, P, Topfer, West Germany. Mull-Soy, C, Syntex Laboratories, USA. Multilac, P. Carlo Erbe S.p.A., Italy. Neo-Mull-Soy, R C, Syntex Laboratories, USA. Nursoy, R C, Wyeth Laboratories, USA. Nutri-Soja, C P, N.V. Nutricia, The Netherlands. Prosobee, R C, Mead Johnson, USA. Sobee, P, Mead Johnson, USA. Soja Semp, C, Semper, Sweden. Soyalac, R C P, Loma Linda Foods, USA. i-Soyalac, C, Loma Linda Foods, USA. Vegebaby, R, Laboratoire Sopharga, France. Address: PhD, Ross Laboratories, 625 Cleveland Ave., Columbus, Ohio.

2020. Welsh, Thomas L. 1979. Meat and dairy analogs from vegetable proteins. *J. of the American Oil Chemists' Society* 56(3):404-06. March.
• ***Summary:*** Contents: Abstract. Introduction. Definitions: Meat analogs, dairy analogs. Design of meat analogs: Nutrition, protein efficiency. Marketing of meat and dairy analogs. Regulatory aspects. Other protein sources. A photo shows Welsh. Address: Vice President, R&D, Grocery Products Div., Miles Laboratories, Inc., 7123 West 65th S.E., Chicago, Illinois.

2021. Worthington Foods, Inc. Div. of Miles Laboratories, Inc. 1979. Nutritional data sheet [Nutritional analyses of 64 Worthington products]. Worthington, Ohio. 6 p. Manufacturer's catalog.
• ***Summary:*** Products are divided into canned and frozen. Address: Div. of Miles Laboratories, Inc., Worthington, Ohio 43085.

2022. **Product Name:** Soy Coffee with Chicory, Soya Meat, Soya Soft Drink.
Manufacturer's Name: Spicer College Products & Services (dba Spicer's Food Specialties).
Manufacturer's Address: Aundh Road, Poona, 411 007, India.
Date of Introduction: 1979 April.
New Product–Documentation: Label and color photo. 1986. Shows package (box). Red, yellow, white, and brown with coffee in cup on front panel. "Delicious Drink. Caffeine Free." Net Wt. 200 gm.

Full-page ad in *The Times of India.* 1979. April 23. p. 11. "From the seed of the soya an idea is born." Spicer's Food Specialties now offers four unusual products for your health: Soya Meat, Soya Coffee (with the full, rich flavour of chicory), soya "milk substitute" (Soyalac–formulated to provide the full nutritive value of buffalo's milk), Soya soft drink–Plus! Wholesome Granola breakfast.

2023. Spicer's Food Specialties. 1979. Display ad: From the seed of the Soya an idea is born. *Times of India* (*The*) (*Bombay*). April 23. p. 11.
• ***Summary:*** A very interesting full-page ad, with lots of white space. In the very center is a large photo of a soyabean. Below it is the caption: "The world's richest source of protein."

In the left column: "4 unusual products for your health. 1. Soya Meat: Now you can eat meat yet stay vegetarian. The secret? Delicious protein-packed soya meat. It comes frozen fresh–just like regular meat. And you can mince it, fry it or roast it–to make korma, keema mutter, seekh kababs and

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more.

"2. Soya coffee: Now you can drink coffee to your health. Because we've taken out the coffee beans (and the caffeine) from your favourite beverage. Instead we've put in the goodness of soya beans and the full, rich flavour of chicory.

"3. Soya "milk substitute": Soyalac [canned soymilk]. Formulated to provide the full nutritive value of buffalo's milk. It's easy to digest–recommended by doctors around the world for children allergic to regular milk. It's easy to preserve–needs no refrigeration.

"4. Soya soft drink. When you're hot and thirsty, reach for the drink with a difference. A drink that nourishes as it refreshes. Low in fat, high in protein, its perfect for growing children as well as hardworking adults. Fill up the fridge at home. Introduce it to your workers in the company canteen. (Limited distribution).

"Plus! Delicious egg noodles. Wholesome Granola breakfast cereals. Spicy peanut bread."

In the right column: "From a very unusual company. At the age of 23, a young man gave up a promising medical career in America to come to Asia and serve the poor and the sick. In Japan and China he 'discovered' the soya bean and its extraordinarily high protein content.

"That man was Dr. Harry Miller, the inspiration behind Spicer's Food Specialties division. The institute, located near Poona, has its own farms and manufacturing facilities.

"Dr. Miller personally invented several soya products and initiated a continuing programme of developing and manufacturing soya and other health foods around the globe. Spicer's Food Specialties division is part of this world-wide programme.

"Its your assurance of up to date know-how, world class standards of hygiene and uncompromising quality control behind every product from Spicer's.

"Good taste and good sense. Spicer's Food Specialties. Exclusively marketed by Argosy Foods Division, 1st Floor, Dhiraj Chambers, Waudby Road, Bombay 400 001.

"Free! Mini information ad recipe booklet "Food for Thought" at your dealer–or write to Argosy Foods Division.

"Distributed by:" The names, addresses and phone number of four local distributors are given. "Available at better stores and supermarkets everywhere!"

Note: The first soy dairy in India was opened by Seventh-day Adventists in at Spicer Memorial College in Poona. In 1973 they began making soymilk (Soyalac) and related products. As of Sept. 2010 Spicer Memorial College (which was established in 1915) is active and doing well at their original location, Aundh Road, Ganeshkind. Pune–411 007, India.

Note: An article in this newspaper on 17 Aug. 1973 titled "Ten, plus two, plus three: Time and the educator, by V.V. John, states: "Spicer Memorial College in Poona does the four-year degree syllabus of Poona university in less than half the time, and devotes the rest of the time to vocational and enrichment courses." One of the vocational courses may well have been working in the school's food factory and making soyamilk.

A subsequent article in the same newspaper on 19 Nov. 1974, titled "Career education," also by V.V. John, stated: "In fact, the work of this college qualifies it to be acclaimed a pace-setter." Address: [Poona / Pune, Maharashtra state], India.

2024. Loma Linda University, School of Health. 1979. The exciting world of tofu. Loma Linda, California. 20 p. April. 22 cm. [4 ref]

• ***Summary:*** Compiled for the Loma Linda Market and its patrons. Contents: Introduction (from *Japanese Country Cookbook*). Nutritional composition. Recipes–Appetizers and dips. Dressings and spreads. Entrees. Vegetables. Recipes taken from: *Laurel's Kitchen, The Book of Tofu, The Farm Vegetarian Cookbook.* A simple black on white booklet, saddle stitched. Address: Loma Linda, California.

2025. *Times of India* (*The*) (*Bombay*). 1979. Classified ad: Wanted–Soya-Milk distributors. May 19. p. 15.

• ***Summary:*** A fairly small ad with a bold title and border: "A company manufacturing Soyabased products for the first time in India wishes to appoint Distributors in Bombay for Soyamilk–a 'Milk Substitute' for people allergic to regular milk and also for children with hyperallergenic conditions.

"Only parties with good financial standing and preferably experienced in distributing over-the-counter products need apply to Box W 809-S Times of India, Bombay 1."

Note: This ad was probably run by Spicer Memorial College, for several reasons: (1) They are located in Pune, southeast of Bombay. (2) On April 23 of this year (a little less than a month ago), their Spicer's Food Specialties ran a full page ad in this same newspaper advertising "Soya 'Milk Substitute.' Soyalac."

2026. Webster, Ian W.; Rawson, Graeme K. 1979. Health status of Seventh-day Adventists. *Medical J. of Australia* 1(1):417-20. May 19. [24 ref]

• ***Summary:*** A comparison of the health status was made between three groups from New South Wales: 779 Seventh-day Adventists, 8,363 persons referred by general practitioners, and 9,825 volunteers. The Adventists showed less impairment of systolic and diastolic blood pressures, of plasma cholesterol and plasma urate concentrations, and of lung ventilatory capacity; and less obesity at most specific ages. Depression, sleeplessness, and use of sedatives and tranquilizers was lower in Adventists. "It is concluded that the life style of the Seventh-day Adventists is conducive to lessened morbidity [illness], delayed mortality [longer life], and decreased call on health services in comparison

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with the general population." Address: 1. Head, School of Community Medicine; 2. Lecturer, School of Health Administration, The Univ. of New South Wales, Australia.

2027. Gori, Gio Batta. 1979. Dietary and nutritional implications in the multifactorial etiology of certain prevalent human cancers. *Cancer* 43(5):2151-61. Supplement. May. [100 ref]

• ***Summary:*** "It has been estimated that 80-90% of the cancer rate in the U.S. can be attributed to environmental factors. For the last 20 years the role of smoking has been recognized by the scientific community. However, it is only recently that the role of diet, i.e., food and beverages in carcinogenesis has begun to be recognized. It is likely that diet is more important than smoking in cancer causation. Both human and animal studies support this assumption. The study of special populations in the U.S. such as the Mormons and the Seventh Day Adventists also point to the potential of reducing U.S. cancer rates and individual risk factors through the modification of dietary habits."

Contents: Introduction. Epidemiologic studies: Migrant studies, special populations, worldwide high/low correlations, U.S. trends. Animal studies. Theories on the role of diet and nutrition in the causation of cancer: Bile acids, protease inhibitors, antioxidant deficiency, fiber, hormone production, excess nutrient and caloric consumption, deficient nutrient consumption, carcinogenic absorption, food-born carcinogens, dietary inducers of the mixed-function oxidase system, dietary guidelines. Address: Deputy Director, Div. of Cancer Cause and Prevention, National Cancer Inst., Bethesda, Maryland 20014.

2028. Midwest Natural Foods Distributors, Inc. 1979. Catalog 13. Spring, 1979. Ann Arbor, Michigan. iv + 290 p. Index by product category. Index of manufacturers. Index of advertisers. Illust. 28 cm.

• ***Summary:*** On the cover are two kites (colored orange and red) flying in the sky. This catalog, largely printed by a computer, contains many ads on numbered pages. Contents: Policies and terms. Catalog information. Packaged. Books. Refrigerated and frozen. Bulk. Literature and flyers. Indexes (3).

"One stop shopping... We are now a Full Line distributor." List of new lines. List of new products within existing lines. Symbols and abbreviations.

Suppliers are listed alphabetically: Arrowhead Mills, Balanced Brand [Balanced Foods, New Jersey], Bragg's (Liquid Aminos), Dr. Bronner's (with full page ad showing the doctor), Carmé (lecithin), Cedar Lakes, Cellu (Soy bean flour), Chico-San, A.A. Debole (Spaghetti sauce–soy conc), Dragon's Milk (Arica), Elam's (soy flour), El Molino, Ener-G–Jolly Joan, Erewhon (with "Erewhon West" full-page ad), Family Orchards (Tamari mixes, Trail mix), Fantastic Foods, Fantastic Falafel [Felafel], Fearn Soya Foods, Flavor Tree, Hain Pure Foods ("Cold pressed" vegetable oils, mayonnaise, nut butters), Hansen's juices, Health Valley (incl. Vegetarian Chili), Hi-Energy Foods (food bars), Hoffman's (protein powders, snack bars), Lact-Aid (p. 109, ad p. 118), Jack La Lanne, Lange's, R.G. Lecithin, Lifestream (p. 113, 251, ads p. 249-50), Malt-O-Meal, Maya Grainburgers (p. 119, ad p. 126–mix with tofu), Midland Lecithin, Miso Cup, Modern Products (Gayelord Hauser), Mus-L-On (MLO), NF Factors, Niblack ("Tamari toasted sunflower seeds," Tamari pumpkin seeds," raw or toasted wheat germ, unprocessed miller's bran), Old Stone Mill (soy), Orjene, Parkelp, Plus Produces (incl. Tiger's Milk), Richter Bros., Soken, Sovex, Viobin, Waring (blender, juicer), Westbrae.

Books, Talking Foods, Meats (nitrate and nitrite free), Poultry (no hormones or antibiotics), Soy Products (Health Valley soy milk, tofu), Soy Plant Tofu (nigari, and tofu sausage, p. 259-60), Tumaro's, Willow Run (Soybean spread [margarine]). Bulk–Beans, dry roasted soybeans, fruit & nut mixes (trail mix), nut butters, condiments, vegetable oils, pasta (with nomenclature), granola, teas & herbs. Literature & flyers. Indexes. Note: Many companies have a large selection of herbs. Address: 170 Aprill Dr., Ann Arbor, Michigan 48103. Phone: 313-769-8444 or in Area 313 1-800-552-6297.

2029. *Spectrum: Journal of the Association of Adventist Forums.* 1979. The Bible Conference of 1919. 10(1):23-57. May.

• ***Summary:*** This issue of *Spectrum* is titled "1919 Bible Conference." There is also a "special section" with the same title. However: (1) All of the copies of this issue except one (which the magazine will not sell) have been purchased, so it is not available from the publisher. (2) The 64-page issue appears to be available on the Andrews University website, however it takes about 90 minutes to download using a fast computer, whereas it would typically take 1-4 minutes. Very suspicious!

Contents: Introduction, by Molleurus Couperus (p. 23-26). The use of the spirit of prophecy in our teaching of Bible and history (p. 27-44). Inspiration of the spirit of prophecy as related to the inspiration of the Bible (p. 44-57).

The Bible Conference took place from July 1-21, 1919, in Takoma Park. The president of the General Conference at that time was Arthur G. Daniells. He and many other leaders of the church were present at that 3-week meeting. "The record of the 1919 Bible Conference was lost until December 1974, when Dr. F. Donald Yost found two packages wrapped in paper at the General Conference of Seventh -day Adventists in Takoma Park. The packages contained some 2,400 pages of typewritten material, transcribed from stenographic notes taken at the Conference. It seems a tragedy that this material was not made available to Adventist teachers and ministers after the Bible

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Conference, and that the message which the participants in that Conference wanted to share with the church membership never was transmitted" (p. 26). A.G. Daniells: "In Australia I saw 'The Desire of Ages' being made up, and I saw the re-writing of chapters, some of them written over and over and over again. I saw that, and when I talked with Sister Davis about it, I tell you I had to square up to this thing and begin to settle things about the spirit of prophecy. If these false positions had never been taken, the thing would be much plainer than it is today. What was charged as plagiarism would all have been simplified,..." (p. 51).

A.G. Daniells: "Yes; and now take that 'Life of Paul,'–I suppose you all know about it and know what claims were put up against her, charges made of plagiarism, even by the authors of the book, Conybeare and Howson, and were able to make the denomination trouble because there was so much of their book put into 'The Life of Paul' without any credit or quotation marks" (p. 51).

Note: A significant amount of material in Ellen G. White's the book, *Sketches from the Life of Paul*, published in 1883, was taken directly from the book *Life and Epistles of Saint Paul*, by W.J. Conybeare and J.S. Howson, written some 30 years earlier. Yet in the preface to the 1883 version of Mrs. White's book the following claim is made: "The writer of this book, having received especial help from the Spirit of God, is able to throw light upon the teachings of Paul and their application to our own time, as no other authors are prepared to do."

2030. Smith, Allan K. 1979. Re: History of soybean foods in the United States. Letter to William Shurtleff at New-Age Foods Study Center, June 3. 2 p. Typed, with signature. [1 ref]
• ***Summary:*** Gives a brief overview of the history. Discusses what Dr. Smith sees as the bright future of tofu and fermented tofu, and the work of Dr. Harry Miller.

"I do know from past experience that an excellent fermented cheese product can be prepared [from soybeans]. You will find a description of the use of soy milk in making cheese in chapter 10 and eleven in our book" [*Soybeans: Chemistry and Technology*]. Address: 4 Nacozari Lane, Hot Springs Village, Arkansas 71901.

2031. *Madison Survey & Alumni News* (*Madison, Tennessee*). 1979. Dr. Frances Linda Dittes: Obituary. June.
• ***Summary:*** Frances arrived at Madison College in 1910 from Monticello, Minnesota, and joined the faculty in 1912. She was the first Seventh-day Adventist to earn a PhD in nutrition, obtaining hers from Peabody College in August 1935. She was the 9th person in the USA to receive a degree in that field. From 1935 to 1955 she worked at Madison College and Hospital, expanding its nutrition department. "At the time of her retirement she had served 48 years, more than any other staff member at Madison College and Hospital, as teacher and head of the department of nutrition." Dr. Dittes was listed in *Who's Who Among American Women.* She also gave free dietetic service through a Nashville vegetarian restaurant.

She died in Nashville, Tennessee, at the Trevecca Health Center, on 7 April 1979 at age 88. "Following funeral services at Madison Funeral Home, Dr. Dittes' body was sent to Monticello, Minnesota, for burial. She is survived by several nieces and nephews, among them Dr. Albert Dittes of Portland, Tennessee, and William H. Dittes of Red Wing, Minnesota."

Note: Frances Dittes was born in 1891.

2032. Scharffenberg, John A. 1979. The meat debate (Sound recording). Health Leadership Seminar. *
• ***Summary:*** Dr. Scharffenberg, M.D., presents an account of a debate on the pros and cons of meat consumption held at the annual meeting of the American Association for the Advancement of Science. He cites numerous medical studies demonstrating the relationship between meat consumption and chronic diseases. Address: Assoc. Prof. of Applied Nutrition, Loma Linda Univ., Loma Linda, California.

2033. Shurtleff, William; Aoyagi, Akiko. 1979. Tofu & soymilk production: A craft and technical manual. Lafayette, California: New-Age Foods Study Center (Renamed Soyfoods Center in Sept. 1980). 336 p. Illust. by Akiko Aoyagi Shurtleff. Index. July. 28 cm. First published in Aug. 1977 as a rough photocopied manuscript with a yellow cover. [223 ref]
• ***Summary:*** Contents: Preface. 1. How to start a tofu shop or soy dairy. 2. Setting up shop; The community or village shop; The traditional caldron shop; The steam cooker plant; The pressure cooker plant; The soy dairy; The automatic steam cooker plant; The modern factory. 3. Ingredients. 4. Sanitation and safety. 5. Principles of tofu & soymilk production. 6. Tofu. 7. Firm tofu, pressed tofu & smoked tofu. 8. Foods made from tofu: Introduction, creamy tofu dressing, tofu chip dip, tofu mayonnaise, tofu cream cheese, cottage cheese, sour cream, tartare sauce, tofu eggless egg spread or missing egg salad, tofunafish spread or salad, tofu rice salad, tofu cheesecake (Sprucetree Baking Co. and White Wave), tofu pies, tofu creamies or tofu-coconut cream bars, tofu tarts, tofu turnovers, tofu puddings, fruit whips, custards and parfaits, tofu cinnamon rolls, tofu whipped cream, tofu icing and cream cakes, marinated tofu (fried or baked, p. 166), tofu jerkey [sic, jerky] (p. 166), teriyaki tofu, tofu teriyaki, savory baked tofu, savory pressed tofu (with five spice powder, *wu-hsiang toufu-kan*), nori rolls with brown rice & tofu, tofu & brown rice burgers, tofu baby foods, tofu in ready-made sandwiches. 9. Using okara, whey, curds & hulls. Deep-fried tofu (cutlets, cubes, burgers, treasure balls, burger balls, pouches, puffs). 11. Soymilk. 12. Dairylike products made from soymilk: Frozen soymilk

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desserts (soymilk ice cream, frozen soymilk yogurt, soymilk sherbets, soysicles, frozen soymilk custard, ice soymilk), fermented or cultured soymilks (soymilk yogurt, acidophilus soymilk, soymilk kefir, soymilk piima, soymilk buttermilk and other fermented milks), soymilk cheeses (unripened fresh, unripened soft {quark, queso blanco, panir, etc.}, ripened soymilk cheeses), soymilk mayonnaise, soy shakes and energy drinks, soymilk eggnog (soy nog), soymilk whipped cream, chip dips, puddings, custards. 13. Silken tofu & pressed silken tofu (Silken tofu is made from concentrated soymilk). 14. Lactone silken tofu (GDL). 15 Grilled tofu. 16. Fermented tofu. 17. Dried-frozen tofu. 18. Yuba. Appendix A: Resources. People & institutions connected with tofu & soymilk production. B: Weights, measures & equivalents. Bibliography. About the New-Age Foods Study Center.

See ¼-page ads in *East West Journal.* 1979. Dec. p. 4. 1980. Jan. p. 19.

Note 1. This is the earliest English-language book seen with the term "soymilk," spelled as one word, in the title.

Note 2. This is the earliest document seen (Feb. 2002) that mentions tofu jerky or any kind of soy jerky.

Note 3. This is also the earliest English-language document seen (April 2013) that uses the word "quark," or "queso blanco" in connection with soy cheese or tofu.

Note 4. This is the earliest English-language document seen (Sept. 2012) that contains the term "cultured soymilks" (or "cultured soymilk").

Note 5. This is the earliest English-language document seen (Sept. 2012) that contains the term "ripened soymilk cheeses" (or "ripened soymilk cheese").

Note 6. This is the 2nd earliest English-language document seen (April 2013) that uses the term "smoked tofu," but the first that uses it in its modern sense.

Note 7. This book contains the most detailed and complete descriptions seen to date (Oct. 2012) of how to make tofu, soymilk, and yuba on a commercial scale.

Note 8. This book was first printed on 1 Aug. 1977 in a photocopied and rough-typed edition with a yellow and black cover.

Note 8. Reviews of this book appeared in many publications: (1) Richard Leviton. 1980. *Soycraft* (Massachusetts). 2(1):63-64. Winter. "An indispensable operating manual for soyfoods entrepreneurs... The illustrations alone make the book a valuable reference tool... a sustained inspiration. The only book of its kind in English." (2) *Food Chain* (Intermediate Technology, England). 1997. No. 20. March. p. 6. Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.

2034. Simons, Leon; Gibson, J.; Jones, A.; Bain, D. 1979. Health status of Seventh-Day Adventists. *Medical J. of Australia* 2(3):148. Aug. 11. [5 ref]
• ***Summary:*** This letter states that the authors have recently assessed cardiovascular risk-factor profiles in a group of 97 healthy Adventist students, ages 18-35 years, residing at a College of Advanced Education conducted by the SDA church near Newcastle in New South Wales. The findings were compared with matched non-vegetarian control subjects. "Not one Adventist student had evidence of hypertension, hyperlipidaemia, or cigarette smoking." The Adventists also had lower serum cholesterol levels. Address: St. Vincent's Hospital, Darlinghurst, NSW 2010, Australia.

2035. Howes, Charles D. 1979. Re: Soymilk processes developed by Seventh-day Adventists. Letter to William Shurtleff at Soyfoods Center, Aug. 15–in reply to inquiry. 1 p. Typed, with signature on letterhead. [1 ref]
• ***Summary:*** "The microwave process of making soymilk was developed by Paul Allred who has had some past experience in soymilk production. For example, he established a soymilk plant in Mexico while he was an Adventist missionary and educator there. He has also been a moving force behind the plant in Egypt. The initial patent for the process (#3,941,890) is enclosed. This outlines the microwave process in some detail. Mr. Allred is located at the Loma Linda Foods plant in Riverside so if you would like to visit with him and perhaps see his cooker you might give him a call and arrange for a visit."

"I do not think that we will be using this process in the U.S. in the immediate future due to relatively low throughput and capital investment problems. However, as higher powered equipment becomes available this may well change." Address: Loma Linda Foods, 13246 Wooster Rd., P.O. Box 388, Mount Vernon, Ohio 43050. Phone: (614) 397-7077.

2036. *Pacific Union Recorder* (*Westlake Village, California*). 1979. At rest: Jones, Dorothea Van Gundy. Sept. 24.
• ***Summary:*** Born: 16 Feb. 1903, San Jose, California. Died: 30 Aug. 1979, Sedro Woolley, Washington. "Survivors: daughters, Lois Bower, Evelyn Mundall; sister, Dr. Mary Charlotte Holmes; niece, Sue Muff; cousin, Dr. Lloyd Waller; 14 grandchildren; 17 great-grandchildren. For 23 years Dorothea Van Gundy Jones was an internationally-known nutritionist for Loma Linda Foods where she developed the cooking classes and seminars that made her and Loma Linda Foods so well known."

2037. Stoia, Rose M. 1979. Vegetarianism: Cultural and nutritional aspects, a bibliography. Prepared for the Seventh-day Adventist Dietetic Assoc., Box 75, Loma Linda, CA 92354. 3 p. Sept. *
• ***Summary:*** Lists journal articles dealing with medical aspects of the vegetarian diet. Address: Loma Linda, California.

2038. *North Pacific Union Conference Gleaner* (*Portland, Oregon*). 1979. Obituaries: Jones, Dorothea Van Gundy. Oct.

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1. p. 31.
• ***Summary:*** "Dorothea Van Gundy Jones was born Feb. 16, 1903 in San Jose, California, and died Aug. 30, 1979 in Sedro Woolley, Washington. She leaves to mourn two daughters Lois Bower of Redding, California, and Evelyn Mundall of Belize, Central America; one sister, Dr. Mary Charlotte Holmes of Sulphur Springs, Arkansas; a niece, Sue Muff, Sedro Woolley; a cousin, Dr. Lloyd Waller of Chehalis, Washington. After graduating from Pacific Union College, she worked as a dietitian for the White Memorial Hospital, dietitian for La Sierra College for two years and taught three years at Walla Walla College. For 23 years, she was internationally known nutritionist for Loma Linda Foods. Her lectures on nutrition took her around the world; to India, Bangkok [Thailand], Indonesia, the Philippines, Japan, Australia, New Zealand as well as to most major cities in the U.S."

2039. *Adventist Review* (*Hagerstown, Maryland*). 1979. Deaths: Jones, Dorothea Van Gundy. Oct. 25. p. 31 (p. 1175).
• ***Summary:*** Born: 16 Feb. 1903, San Jose, California. Died: 30 Aug. 1979, Sedro Woolley, Washington. At Loma Linda Foods, "she developed the cooking classes and seminars that made her and Loma Linda Foods well known. Her lectures on nutrition took her around the world and to the major cities of the U.S.A. In 1964 she was invited to represent the United States Government as a lecturer in Tokyo, Japan, at the Soy Bean Seminar and Food Fair. Loma Linda University awarded her the Certificate of Commendation for her contribution in the field of nutrition. Survivors include her two daughters, Mrs. Lois Bower, and Mrs. Evelyn Mundall; one sister, Dr. Mary Charlotte Holmes; 14 grandchildren; and 17 great-grandchildren."

2040. **Product Name:** Morningstar Farms Scramblers (Cholesterol Free Egg Substitute) [Regular, or Institutional].
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1979 October.
Ingredients: Institutional: Egg whites, nonfat milk, soybean and/or corn oil, calcium caseinate, modified corn starch, flavorings (artificial flavors, monosodium glutamate, disodium guanylate, disodium inosinate), salt, lecithin, aluminum sulfate, mono- and diglycerides, lacto esters of propylene glycol, vitamins [D, calcium pantothenate, A palmitate, riboflavin (B-2), thiamine mononitrate (B-1), pyridoxine hydrochloride (B-6), B-12], iron (as ferric orthophosphate), zinc (as zinc sulfate), artificial color (beta-carotene).
How Stored: Frozen.
New Product–Documentation: Worthington Yesterday and Today. 1984. p. 10. Label. 1989. Sept. 7. Sold at Diablo Foods, a supermarket in Lafayette, California. The cholesterol-free egg-like product (12 oz., 3 cartons) retails for $1.95. "Half the fat of whole eggs. One-third fewer calories."

"Help yourself to a healthier heart: What you eat makes a difference" (Brochure, color). 1988. 18 p. Promotion for Morningstar Farms Scramblers.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2041. Scharffenberg, John A. 1979. Vegetarian diets. *American J. of Diseases of Children* 133(11):1204. Nov. [8 ref]
• ***Summary:*** This letter disputes the assumptions and conclusions of studies on rickets in strict vegetarian children. Address: M.D., MPH, Dep. of Community Health Education, San Joaquin Community Hospital, Bakersfield, California 93301.

2042. Worthington Foods, Inc. Div. of Miles Laboratories, Inc. 1979. Product catalog: Introducing the finest in vegetable protein foods. Worthington, Ohio. 8 panels. 24 cm.
• ***Summary:*** A brief description of each vegetarian product is given and one color photo shows all the packages and labels. The products are grouped as follows: Canned (20 products): Veja-Links, Non-Meat Balls, Sliced "Beef" Style, FriChik, Sliced "Chicken" Style, Diced "Chicken" Style, Worthington 209, Vegetable Steaks, Choplets, Cutlets, Veja-Bits, Super-Links, Chili, Saucettes, Vegetarian Burger, Vegetable Skallops, Protose, Numete, Prime Stakes, Sandwich Spread.

Dry (3 products): GranBurger, Soyamel (Regular, fortified, or lowfat), Kaffree Tea (Original, Mint, or Spicy Orange).

Frozen (20 products): Meatless "Chicken" Style, Chic-Ketts, "Chicken" Style Pie, "Beef" Style Pie, Tuno Pie, Wham, Stakelets, FriPats, Fillets, Tuno, Meatless Salami, Corned "Beef" Style, Smoked "Beef" Style, Smoked "Turkey" Style, Prosage, Vegetarian Egg Rolls, Stripples, Meatless "Beef" Style, Bolono, Croquettes. Address: Div. of Miles Laboratories, Inc., Worthington, Ohio 43085.

2043. Armstrong, Bruce; Clarke, H.; Martin, C.; Ward, W.; Norman, N.; Masarei, J. 1979. Urinary sodium and blood pressure in vegetarians. *American J. of Clinical Nutrition* 32(12):2472-76. Dec. [14 ref]
Address: 1. Univ. Dep. of Medicine, Queen Elizabeth II Medical Centre, Nedlands, 6009, Western Australia.

2044. Bachrach, Steven; Fisher, J.; Parks, J.S. 1979. An outbreak of vitamin D deficiency rickets in a susceptible population. *Pediatrics* 64(6):871-77. Dec. [17 ref]
• ***Summary:*** 24 cases of rickets were diagnosed in Philadelphia between Jan. 1974 and June 1978. Patients

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ages ranged from 4 to 58 months. All infants had been breast fed and were black. "Ingestion of vitamin D was limited by exclusion of meat and/or dairy products in 21, and no infants had consistently taken supplemental vitamins. Nineteen were members of [Black] Muslim or Seventh Day Adventist faiths." Address: Children's Hospital of Philadelphia, and the Dep. of Pediatricsd, Univ. of Pennsylvania Medical School, Philadelphia.

2045. Enstrom, James E. 1979. Cancer mortality among low-risk populations. *Ca–A Cancer Journal for Clinicians* 29(6):352-61. Nov/Dec. [27 ref]
• ***Summary:*** This article focuses on cigarette smoking as a cause of cancer. If all Americans did not smoke, it is estimated that the 390,000 cancer deaths that occurred in 1978 would be reduced by 26%. There would be a reduction of about 80,000 lung cancer deaths and 22,000 other cancer deaths. Table 2 summarizes studies that have been conducted on 5 large groups of non-smokers and 3 groups of healthy people. California Seventh-day Adventists, studied from 1958-1965, had the lowest rate of cancer at smoking-related sites, only 58% of the rate of U.S. whites. Address: Cancer Epidemiology Researcher, School of Public Health and Program Director for Cancer Control Epidemiology, Jonsson Comprehensive Cancer Center, Univ. of California, Los Angeles, California.

2046. **Product Name:** Granose Dinner Balls: Savoury Protein Balls in Sauce.
Manufacturer's Name: Granose Foods Ltd. (Distributor). Made in Denmark by Nutana Helsekost.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1979.
Ingredients: Textured soya protein, wheat protein, soya oil, bread crumbs, oat flakes, egg white powder, vegetable margarine, wheat flour, maize starch, salt, yeast, hydrolised vegetable protein, onion powder, herbs, celery powder, spices, monosodium glutamate.
Wt/Vol., Packaging, Price: 400 gm (14 oz) can.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. Label. 1980, undated. 9.5 by 4.25 inches. Full color, mainly beige, blue, and white. Photo shows balls in a casserole. "Ready to serve. Heat in a pan and serve with potatoes and other vegetables, or make into a casserole." Labels in Danish, Dutch, and Finnish.

Form filled out and Label sent by Granose Foods Ltd. 1990. June 13. States that the product, made by Nutana, was introduced in 1979. Can Label. 1990. 9.5 by 4 inches. Photo of the prepared dish with many meatlike balls on a plate atop a bed of rice, surrounded by green beans, against a brown background. Ingredients: Water, gluten, textured soya protein, vegetable margarine, soya bean oil, oat meal, wheat flour, egg white powder, vegetable stock, modified starch, union powder, celery powder, curry, marjoram, peanuts, rolled barley, sweet basil, sea salt. Serving suggestion: Granose Dinner Balls are ready to serve. Heat in a pan and serve with potatoes and other vegetables, or make into a casserole. Ideal for lunch and dinner. Send 9"x6" SAE for FREE recipe book.

2047. **Product Name:** Granose Frikaletts. Soya Rissoles in Onion Sauce.
Manufacturer's Name: Granose Foods Ltd. (Marketer). Made in Denmark by Nutana Helsekost.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1979.
Ingredients: Rissoles: Textured soya protein (textured soy flour), oat flakes, onion, egg white powder, hydrolised vegetable protein. Sauce: Onion, soya oil, wheat flour, maize starch, soya sauce, salt, hydrolised vegetable protein, yeast, spices, monosodium glutamate.
Wt/Vol., Packaging, Price: 425 gm (15 oz) can.
How Stored: Shelf stable.
New Product–Documentation: See next page. Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. Label. 1980, undated. 9.5 by 4.25 inches. Full color, mainly beige, blue, and white. Photo shows 2 burgers or rissoles with peas and carrots. "Ready to serve. Granose frikaletts need only to be heated in their own sauce. Serve with potatoes and other vegetables for an easily prepared meal." Labels in Danish, Dutch, and Finnish.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Nutana, was introduced in 1979. It has been discontinued.

2048. **Product Name:** Loma Linda Linketts, Little Links, Big Franks (Meatless Hot Dogs).
Manufacturer's Name: Loma Linda Food Co.
Manufacturer's Address: 11503 Pierce Place, Arlington, California.
Date of Introduction: 1979.
New Product–Documentation: Recipe booklet. 1979. Big Franks now made with textured soy protein. Enhanced versions of these products with the same names were introduced in 1963, 1963, and 1966, respectively.

Note: This product was first introduced in 1953, but did not contain textured soy protein at that time.

2049. **Product Name:** Loma Linda i-Soyalac (Non-Dairy Infant Formula Based on Isolated Soy Protein) [Concentrated Liquid].
Manufacturer's Name: Loma Linda Foods.

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Second best.

We formulated i-soyalac to provide your baby a nutritionally balanced food that is

complete with the vitamins, minerals and essential amino acids all infants need. At least 100% of the U.S. RDA.

Also i-soyalac is entirely free from both cow's milk and corn derivatives and very low in soy carbohydrates.

In addition, our two-piece 14-ounce cans contain no soldered seams, thereby reducing the possibility of contamination from environmental exposure to lead.

We also make Soyalac, the only soy-based infant formula made from an extract of the whole soybean. That means Soyalac retains the natural goodness of the soybean for complete nutrition, yet it is still a completely milk-free product.

Loma Linda infant formulas are available in concentrate, ready-to-serve or powder form.

So as you can see, both i-soyalac and Soyalac have been formulated to provide complete nutrition for all babies. In fact, because it simulates it nutritionally, i-soyalac is the next best thing to mother's milk.

Loma Linda®

For further information, write Loma Linda Foods, 11503 Pierce Street, Riverside, CA 92515, or ask your pediatrician.

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Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1979.
New Product–Documentation: Thomson. 1979. *Journal of the American Oil Chemists' Society.* March. p. 386-88; Leaflet (8½ by 11 inches, color. Single sided). 1983. i-Soyalac. Second best [to breast milk]. A similar leaflet (published about 1981) in Spanish has the title *"Lo mejor: despues de leche materna."*

2050. **Product Name:** Loma Linda Sizzle Links (Meatless Frankfurters).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1979.
New Product–Documentation: Recipe booklet. 1979.

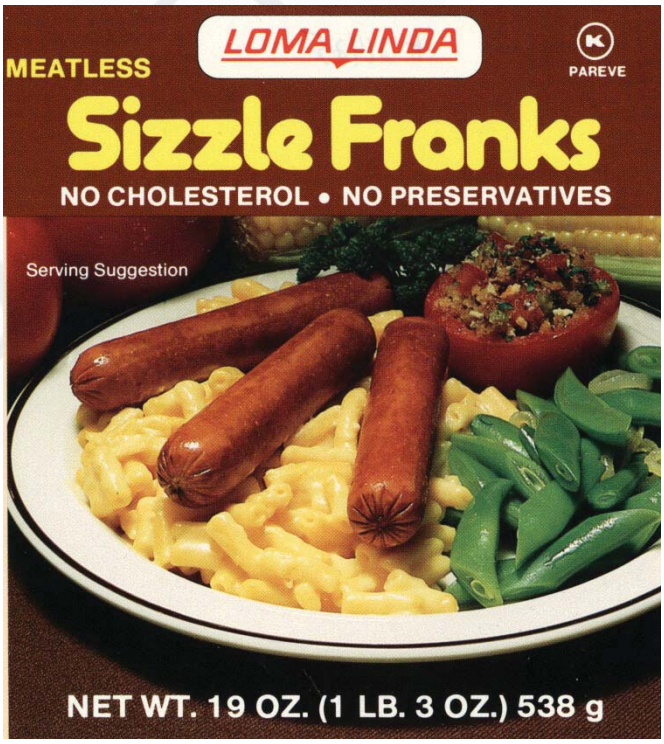
2051. **Product Name:** Loma Linda Salami (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1979.
Ingredients: Wheat gluten, soy protein isolate, water, corn oil, egg whites, corn starch, salt, dried yeast, natural (vegetable) flavors, soy protein concentrate, dextrose, onion, artificial flavors, garlic, guar gum, caramel color, soy lecithin, spices, artificial colors, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
How Stored: Frozen.
New Product–Documentation: Recipe booklet. 1979, dated.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2052. **Product Name:** Loma Linda Tender Cuts?
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1979.
New Product–Documentation: Recipe booklet. 1979, dated.

2053. **Product Name:** Loma Linda Breakfast Sausage (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1979.
New Product–Documentation: Recipe booklet. 1979, dated.

2054. **Product Name:** Loma Linda Sizzle Franks (Meatless Hot Dogs Based on Spun Soy Protein Fiber).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92505.
Date of Introduction: 1979.
Ingredients: Frank: Water, soy protein concentrate, wheat gluten, corn oil, vegetable shortening, egg whites, natural (vegetable) flavors, dried yeast, corn starch, dextrose, salt, artificial flavor, onion powder, carrageenan, caramel color whole wheat flour, garlic powder, artificial color, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). Broth: Water, salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 2 franks (2.4 oz–70 gm): Calories 170, protein 10 gm, carbohydrate 3 gm, fat 13 gm, cholesterol 0 mg, sodium 340 mg, potassium 100 mg.



New Product–Documentation: Sold frozen or canned.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1979.

2055. **Product Name:** Loma Linda Redi-Burger (Meatless Hamburger).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce Place, Arlington, California.
Date of Introduction: 1979.

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New Product–Documentation: Recipe booklet. 1979. Now made with textured soy protein. Soybean Blue Book. 1955. p. 104. "Meat substitutes." Address given as Arlington, California. *Soybean Digest Blue Book.* 1972. p. 108. "Burger, soy loaves and slices (chicken, turkey, beef, and hamlike flavors)." Listing is now Loma Linda Foods, 11503 Pierce St., Riverside, CA 92505. A more sophisticated version of the same product with the same name was introduced in 1963.

Note: This product was first introduced in 1953, but did not contain textured soy protein at that time.

2056. **Product Name:** Loma Linda Soyalac (Non-Dairy Infant Formula) [Ready to Serve, Concentrated Liquid, Powdered].
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1979.
Ingredients: Ready to serve: Water, soybean solids, corn syrup, sugar, soy oil, calcium carbonate, soy lecithin, sodium citrate, dicalcium phosphate, calcium citrate, dipotassium phosphate, potassium chloride, salt, calcium carrageenan, ascorbic acid,...
Wt/Vol., Packaging, Price: Canned. 32 fl oz. (1 qt).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Three labels sent by Loma Linda Foods. 1980.

2057. **Product Name:** Millstone Burger-Like: A Vegetable Protein Product–Imitation Ground Beef.
Manufacturer's Name: Millstone Foods Inc.
Manufacturer's Address: P.O. Box 323, Penryn, CA 95663.
Date of Introduction: 1979.
Ingredients: Water, soy flour, textured vegetable protein, salt, hydrolyzed vegetable protein, onion, garlic, spices, tomato, caramel color, natural flavorings.
Wt/Vol., Packaging, Price: 19 oz (538 gm). Can.
How Stored: Shelf stable.
New Product–Documentation: Ad in Tom Riker and Richard Roberts. 1979. *The Directory of Natural & Health Foods.* p. 222-23. A photo shows the label.

Label sent by Millstone. 1981. March 1. Label reads as shown at product name. Brown and yellow lettering on white background. With recipe for Burger Patties (with eggs). The company also makes Tender Cuts (basically wheat gluten but with soy flour and TVP), and Nut Meat (mainly peanuts with corn and soy flour).

2058. **Product Name:** Millstone Tender Cuts (Meatless Gluten Patties).
Manufacturer's Name: Millstone Foods Inc.
Manufacturer's Address: P.O. Box 323, Penryn, CA 95663.
Date of Introduction: 1979.
Ingredients: Water, wheat protein, wheat by-products (bran, shorts, middlings, wheat germ), soy flour, oat flour, hydrolyzed vegetable protein, salt, onion, garlic, spices, tomato and celery powder, natural flavorings.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 2 slices (3.6 oz–102 gm): Calories 80, protein 14 gm, carbohydrate 3 gm, fat 1 gm, cholesterol 0 mg, sodium 410 mg, potassium 50 mg.
New Product–Documentation: Ad in Tom Riker and Richard Roberts. 1979. *The Directory of Natural & Health Foods.* p. 222-23. A photo shows the label. Tender Cuts are a vegetable protein product, "delicate and tender slices of gluten precooked in a broth. Tender Cuts are a convenient and easy way to fix your next entree. Serving suggestions: Roll Tender Cuts in Millstone Breading Meal and fry lightly in oil until golden brown. Serve immediately."

Loma Linda took over the Millstone line in 1985. Label sent by Loma Linda Foods. 1988. Oct. 5. 11 by 4.25 inches. Green, yellow, black, and white. A color photo of the ready-to-serve dish is on the front panel. Ingredients: Tender Cuts: Wheat gluten, wheat flour, water, soy flour, oat flour. Broth: Water, natural (vegetable) flavors, seasoning, (salt, onion powder, garlic powder, celery powder, thyme).

2059. **Product Name:** Millstone Wheat Fries (Meatless Gluten Chunks).
Manufacturer's Name: Millstone Foods, Inc.
Manufacturer's Address: Box 323, Penryn, CA 95663.
Date of Introduction: 1979.
Ingredients: Wheat gluten, water, hydrolyzed vegetable protein, salt, onion, garlic powder, spices, tomato and celery powder.
Wt/Vol., Packaging, Price: 16 oz can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Ad in Tom Riker and Richard Roberts. 1979. *The Directory of Natural & Health Foods.* p. 189-90. A photo shows the label. Millstone Wheat fries are "a vegetable protein product... delicate and tender chunks of gluten prepared the way grandmother used to in her kitchen... And save the can liquid. The broth is an excellent base for gravy and flavoring for stews and soups. Serving suggestions: Cut Wheat Fries into bite size pieces, roll in Millstone Breading Mix and fry in oil until golden brown."

2060. **Product Name:** Morningstar Farms Grillers (Meatless Hamburger Patties).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.

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Date of Introduction: 1979.
Ingredients: Textured vegetable protein (soy protein isolate, concentrate and isolate, wheat gluten), soybean and/or corn oil, egg whites, partially hydrogenated soybean and cottonseed oil, flavorings (artificial flavors, monosodium glutamate, spices, disodium guanylate, disodium inosinate), calcium caseinate, modified tapioca starch, onion powder, emulsifiers (mono- and diglycerides, glyceryl lacto esters of fatty acids), caramel color, sugar, garlic powder, ascorbic acid, vitamins [niacinamide, thiamine mononitrate (B-1), pyridoxine hydrochloride (B-6), riboflavin (B-2), B-12], iron (as ferrous sulfate).
Wt/Vol., Packaging, Price: 9 oz (256 gm). Four patties in paperboard box.
How Stored: Frozen.
New Product–Documentation: Ad. 1980. "No cholesterol. No kidding." Label reads: "Cholesterol Free Patties. Artificial Hamburger Flavor. Textured Vegetable Protein. No Animal Fat. Protein Rich." Label. 1989. Sept. 7. Sold at Diablo Foods, a supermarket in Lafayette, California. The cholesterol-free meatless hamburger patties (9 oz., 4 patties) retail for $2.45.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

Product with Label purchased at Lucky Foods supermarket in Lafayette, California. 1993. June 1. 8 by 4 by 1¼ inch box. Dark green, light green, tan, red, and blue on white. Color photo of a patty with lettuce and tomato between two buns. Morningstar Farms logo in top left corner. "Artificial hamburger flavor. No animal fat. Microwaveable. Zero cholesterol. Keep frozen." Ingredients: Textured vegetable protein (Soy protein concentrate and isolate, wheat gluten), egg whites, corn oil, calcium caseinate, partially hydrogenated soybean and cottonseed oil, artificial and natural flavors from non-meat sources, modified food starch, onion powder, sucrose, caramel color, emulsifiers from vegetable sources (mono- and diglycerides, glyceryl lacto esters of fatty acids), garlic powder, black pepper, methylcellulose, disodium inositate, disodium guanylate, vitamin C (ascorbic acid), niacin, celery, iron (as ferrous sulfate), vitamin B-1 (thiamine), vitamin B-6, vitamin B-2 (riboflavin), vitamin B-12. Note: The package design and ingredients of this product are somewhat different from those of the product launched in 1979.

Ad (full-page, color) with coupon in Vegetarian Times. 1993. July. p. 29. "A delicious way to cut down on meat without cutting down on your options." Shows new label designs for 4 Morningstar Farms meatless products.

Talk with Dick Leiss, Director of R&D for Worthington Foods. 1993. June 30. This product never contained spun soy protein fiber.

Product (Meatless Grillers) with Label (new design) purchased at Safeway supermarket in Lafayette, California. 1994. May 18. Price: $2.59. Frozen. 9 oz (256 gm). A huge color photo of a burger, with all the trimmings, is at the center of the front panel. "Artificial hamburger flavor. No animal fat."

2061. **Product Name:** Morningstar Farms Luncheon Slices (Meatless Ham or Sausage Slices).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1979.

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New Product–Documentation: Shurtleff & Aoyagi. 1983. History of Worthington Foods. p. 10.

Talk with Dick Leiss, Director of R&D for Worthington Foods. 1993. June 30. This product never contained spun soy protein fiber. It was a reformulation of reformulated version of Morningstar Farms Breakfast Slices first launched in 1974.

2062. **Product Name:** Morningstar Farms Leanies (Meatless Hot Dogs–Links or Frankfurters or Wieners).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1979.
Ingredients: Textured vegetable protein (soy protein concentrate and isolate, wheat gluten and flour), egg whites, soybean and/or corn oil, sodium caseinate, water, partially hydrogenated soybean and cottonseed oil, flavorings (artificial flavors, monosodium glutamate, onion and garlic powder, spices, disodium guanylate, disodium inosinate), salt, corn syrup solids, dextrose, sodium phosphates (tripolyphosphate, pyrophosphate, hexametaphosphate, monophosphate), artificial colors, calcium chloride, niacinimide [niacinamide], iron (as ferrous sulfate), vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12.
How Stored: Frozen.
New Product–Documentation: Shurtleff & Aoyagi. 1983. History of Worthington Foods. p. 10.

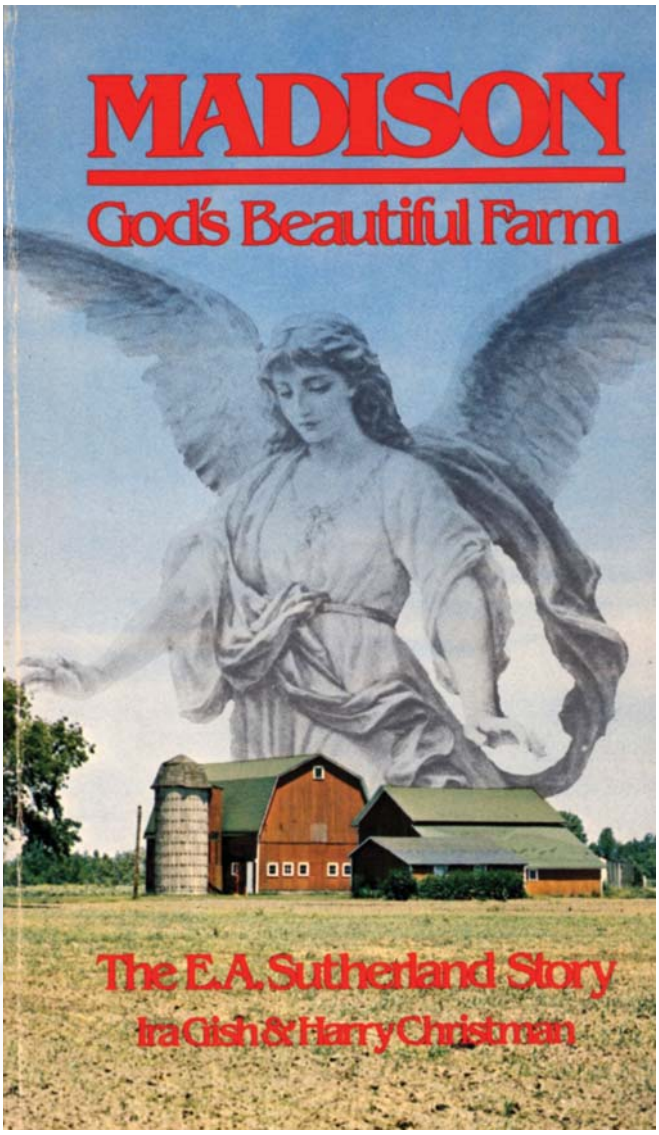
Manufacturer's catalog. 1984, undated. Frozen Products.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

Talk with Dick Leiss, Director of R&D for Worthington Foods. 1993. June 30. This product never contained spun soy protein fiber.

2063. Berkel, Johannes. 1979. The clean life: Some aspects of nutritional and health status of Seventh-day Adventists in the Netherlands. Amsterdam, Netherlands: Drukkerij Insulinde. 183 p. *

2064. Gish, Ira; Christman, Harry. 1979. Madison–God's beautiful farm: The E.A. Sutherland story. Mountain View, California: Pacific Press Publishing Assoc. 187 p. Illust. No index. 17 cm.
• ***Summary:*** An outstanding history of Madison College in Madison, Tennessee, focusing on the founding and early years. Contents: Crisis in the Cumberland. Battle of the angels. Trailblazing. Years of decision. A college in the northwest. Changing times. Prisoners of hope. The little people. Out on the land. Men of great faith. The Madison School. Strengthening the stakes. Health evangelism joined



to educational progress. With undiminished faith. God's plan unfolds. World response. At evening time–light. After fifty years. Portrait of a heroic leader. Epilogue.

Note: Page 105 states that in 1930 the name of the school was changed to Madison College from Nashville Agricultural and Normal Institute. Others (Sandborn 1953, p. 67; Neufeld 1976, p. 830) give the date as 1937.

A portrait photo (p. 39) shows "Sally and Edward Sutherland shortly after their marriage."

The 1989 edition of this book states on p. 186: "Mrs. Ellen G. White had a leading part in the founding of Madison College. It was she who selected the spot–'the beautiful farm,' as she called it–upon which the school was built. She became a charter member of the N.A.N.I. board and remained on the board until the year before her death in 1915. This was the only College board she ever served on. During all these early years she continued in active support of the work at Madison.

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"'It was presented to me that this was a place where an all-round education could be given advantageously to students who should come from the North and the South for instruction.'–The Madison School, Special Testimonies, Series B, #11, p. 31

"'Every possible means should be devised to establish schools of the Madison order in various parts of the South.' Ibid, p. 35."

Photos near the end of the 1989 edition (not in the 1979 edition) show: (1) A portrait of Ellen G. White. (2) The Madison College Board in 1904: Standing–C.C. Crisler, P.T. Magan, Minnie Hawkins, Nellie Druillard, E.A. Sutherland, Sarah McInterfer. Seated–W.C. White, Mrs. E.G. White, Mr. and Mrs. J. Edson White. Address: USA.

2065. Heaton, Kenneth W. ed. 1979. Dietary fibre: current developments of importance to health. Kellogg Symposium, December 1977. Westport, Connecticut: Technomic Publishing Co., Inc.; London: John Libbey. 158 p. Index. 30 cm. [600+* ref]

• ***Summary:*** "The contents of this book are the edited proceedings of the third Kellogg Nutrition Symposium presented at the Royal Society of Medicine, London, by Kellogg Company of Great Britain Limited." This same book was published in 1978 in London by Libbey.

The first Kellogg symposium was held in 1974. Contains 17 papers by various authors. Editor's preface. Recent developments in dietary-fibre hypotheses, by H.C. Trowell. The definition, analysis and properties of dietary fibre, by D.A.T. Southgate. Critical evaluation of some suggested methods of assay of dietary fibre, by N-G. Asp. The digestion and metabolism of polysaccharides by man and other animals, by J.S.D. Bacon. Mechanical effects of fibre, with reference to appendicitis, hiatus hernia, haemorrhoids and varicose veins, by D.P. Burkitt. Dietary fibre from cereals and incidence of coronary heart disease, by J.N. Morris, Jean W. Marr and D.G. Clayton. Dietary fibre and asymptomatic diverticular disease of the colon, by J.S.S. Gear. The treatment of diverticular disease with dietary fibre, by A.J.M. Brodribb. Epidemiology of diverticular disease, by Martin Eastwood. Diet and transit through the gut, by J.H. Cummings. Effect of bulk additives on constipation and in diverticular disease, by A.N. Smith. Effect of different types of dietary fibre on plasma lipids, by A. Stewart Truswell (discusses soy). The effects of dietary fibre on mineral availability, by N.T. Davies. Maintenance of remission in ulcerative colitis with sulphasalazine or a high-fibre diet: a clinical trial, by P.S. Davies and J. Rhodes. Effects of dietary fibre on intestinal absorption, by M.S. Losowsky. Fibre, satiety and insulin–a new approach to overnutrition and obesity, by K.W. Heaton. Practical experience in fibre, by C. Latto. Address: Consultant Senior Lecturer, Univ. of Bristol; Honorary Consultant Physician, Bristol Health District, Bristol Royal Infirmary, Bristol BS2 8HW, England.

2066. Loma Linda Foods. 1979. 27 Meal-Maker recipes. 11503 Pierce St., Riverside, CA 92505. 16 p. 21 cm.

• ***Summary:*** See next page. This color booklet shows how to use the following Loam Linda products in recipes: Sizzle Burgers, Meatless Fried Chicken, Meatless Turkey, Breakfast Sausage, Sizzle Franks, Meatless Bologna, Little Links, Meatless Salami, Vege-Burger, Meatless Roast Beef, Chili Beans, Meatless Chicken Roll, Proteena, Meatless Fried Chicken with Gravy, Vita-Burger Chunks, Linketts, Nuteena, Big Franks, Redi-Burger, Dinner Cuts, Vegelona, Tender Rounds, Sandwich Spread, Vita-Burger Granules, Green Soybeans, Tender Bits, Loma Linda foods hors d'oeuvres [not a commercial product]. A small photo shows each product and label. Address: Riverside, California.

2067. NV Vandemoortele. 1979. Soyamel: A new source of proteins. NV Vandemoortele, Protein Division, Prins Albertlaan 12, B-8700 Izegem, Belgium; NV Befico, Marsveldplein 5–bus 28, B-1050 Brussels–Belgium. 9 p. 30 cm. [Eng]

• ***Summary:*** Contents: Soya: A source of proteins. Agronomy of soya (a hectare of land planted to soya will yield 500 kg of protein; this is more than any other plant or animal. Beef makes least efficient use of the land). Nutrition (soy proteins are high in quality). Soyamel: A new protein source ("The industrial process developed by the Vandemoortele Group yields as high-quality soya bean-based drink" containing

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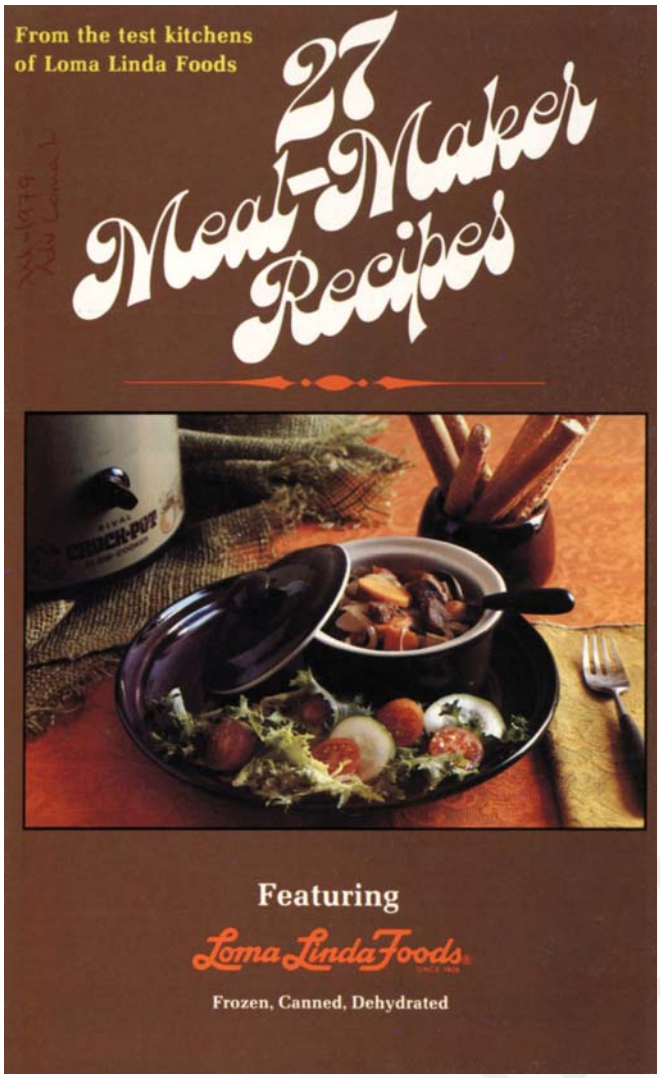

3.3% protein and 44 calories per 100 gm. An illustration (line drawing) shows imaginary (never commercially produced) 1-liter and 500 ml Tetra Brik Aseptic cartons of Famalac energy drink in chocolate and vanilla flavors. A child is shown drinking the product from a glass with a straw). Soyamel: A reliable production process (shows the equipment and a flowchart of the process).

Vandemoortele, your partner: "The industrial concept of the Soyamel processing plant has been developed by the Protein Division of the Vandemoortele Group. Established in 1879, the Belgian Food Group Vandemoortele ranks among the most important food processing industrial companies of Europe in the field of edible oils and fats, and protein foods. The Group operates wholly-owned manufacturing and marketing subsidiaries in Belgium, the Netherlands, France, Great Britain, and the Federal Republic of Germany... The group employs over 1,700 persons and achieved a total turnover of $600 million (US) in 1978." Photos show three large Vandemoortele plants.

A foldout on the last page shows a cutaway view of a large soymilk plant. "Standard production capacities: 4,000 liters/hour or 20 million liters/year; 6,000 liters/hour or 30 million liters/year; 8,000 liters/hour or 40 million liters/year. The Vandemoortele Group has developed a compact installation.

"Yield: 1 kg soya beans produces an average of 5 to 8 liters [= 6½ quarts] soya bean milk and some residues for animal feeding. Vandemoortele is also willing to assume the technical management of the plant for a limited period of time. In this way Vandemoortele will be able to guarantee the best plant start-up in relation to local circumstances."

Note 1. Talk with Philippe Vandemoortele. 1990. June 4. This booklet, published before Alpro was established, was designed to sell turnkey soymilk plants. The protein division of N.V. Vandemoortele started the company's soymilk research. As long as it was only doing research and losing money there was no need to start a new company. Alpro started when it was clear that there would be income from the sale of the first turnkey plant. At that time, the protein division of N.V. Vandemoortele turned into Alpro, and the former then ceased to exist. Soyamel was a term that was coined for future soymilk products. Alpro first began to actually sell Soyamel in March 1981. In about 1983 it looked as if a company named Soyamel Nigeria Ltd. would buy a turnkey plant, but the deal never went through.

Note 2. This is the earliest document seen (July 2013) concerning Alpro or its predecessors in Belgium.

Note 3. The term Soyamel, a registered trademark of Worthington Foods Inc., was first used in about 1954 to refer to a powdered soymilk made by Worthington. Address: Izegem, Belgium. Phone: (051) 30 22 22.

2068. Riker, Tom; Roberts, Richard. 1979. Directory of natural and health foods: A sourcebook for dietary revolution. New York, NY: Putnam (A Paragon Book). 320 p. Index. 37 cm.

• ***Summary:*** The first part of this book (p. 7-49) consists of essays on natural foods and nutrition (some reprinted). Part two is a commercial catalog/directory of natural foods available in 1979; it lists and describes (with may photos and labels) products from most of the major U.S. natural foods manufacturers. An Index (p. 293-308) lists participating companies alphabetically.

Soy-related products include: Hain Super-E Soy Oil and Crude [unrefined] Soy Oil (Los Angeles, California, p. 55). Health Valley Soy Moo (Montebello, California, p. 56). Edward & Sons Miso-Cup (Union, New Jersey, p. 57). Family Orchards Fruit & Nut mixes, incl. Back Packer+*, Hi-Fiber Mix+, Hi-Iron Mix+, Hi-Protein Mix+*, Hiker's Helper, Mixed Nuts*, Mountain Munchies*, Tamari Mixed Nuts* (+ = contains Soy Nuts; * = contains Tamari Peanuts) (Berkeley, California, p. 60-61). Niblack Tamari Pumpkin Seeds (Pepitas), Tamari Roasted Sunflower Seeds, Liquid Lecithin, Granular Lecithin (Rochester, New York, p. 72-73).

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Arrowhead Mills Unrefined Soybean Oil (Hereford, Texas, p. 75). Good Morning New England Granola incl. Cashew-Raisin Bran-ola (with okara soy fiber), Happy Trails Mix (with roasted soynuts) (Amherst, Massachusetts, p. 79). Elam's Soy Flour (Broadview, Illinois, p. 81).

A long section on Erewhon and its products (p. 84-108) is probably the reproduction of an Erewhon catalog. Erewhon is now located at 3 East Street, Cambridge, MA 02141. Following several pages about the company and its philosophy and standards, each of its major products is discussed in detail, often with nutritional analyses. A label for Soy Flour (organically-grown stone-ground, 24 oz.) is shown; the main recommended use is for making soy milk! A major part of the presentation is titled "Japanese food guide." Products described include: Umeboshi (2 pages): Plums pickled in brine (umeboshi). Umeboshi paste. Plum concentrate (*bainiku ekisu*). Miso (2 pages): Hatcho, waka-Hatcho, soybean, barley, brown rice, rice, and natto miso varieties. Tekka (made with Hatcho miso). Sweets made from mizu ame [rice syrup]. Nigari. Gomashio. Koji starters for various types of miso or shoyu. Goma-muso (60% barley miso and 40% whole sesame seed butter). *Gomamiso furikake* (with barley miso, whole roasted sesame seeds, and shredded nori seaweed). Kombu candy. Kokkoh. Dried tofu (*Kohya-dofu*). Brown rice sake. Mirin. Gluten cakes (*Kuruma-fu*). Seitan (Gluten cooked in shoyu). Rice crackers seasoned with tamari soy sauce. Kuzu (3 pages). Tamari and shoyu (4 pages; Johsen Shoyu is made in Sendai and tamari is made by San-jirushi Co.). Seaweeds (4 pages): Kanten, arame, hijiki, kombu, ne-kombu, nori, seasoned nori, kanten, kanten flakes, wakame, and mekabu.

Good Food brand Soy-Millet Bread (Austin, Texas, p. 120). Arrowhead Mills Bulgur-Soy Grits (p. 121). Erewhon Morning Cereal, and Infant Cereal (each containing soy beans). Chico-San Black Soybeans (imported), and Azuki Beans (Dainagon imported small red), and Lima Soy Sauce (Chico, California, p. 126-27). Arrowhead Mills 7 Grain Cereal, and Deaf Smith Crunch (granola-type cold cereal) (each contains soybeans, p. 130).

The section on pages 188-197 is titled "Soy." It lists Farm Foods Tempeh Kit, Tempeh Starter, Natural Nigari for Curding Tofu, Soyflour, Whole Cleaned Soybeans, Good for Ya Textured Vegetable Protein (Summertown, Tennessee, p. 189). New England Soy Dairy Tofu (with many tofu recipes, Greenfield, Massachusetts, p. 192-96).

The Redwood Sprouter Co. sprouter containing Soy Sprouts (1976, Austin, Texas, p. 202-04). Worthington Foods (a photo shows their line of 38 products). Millstone Burger-Like (with soy flour and TVP), Wheat Fries (with wheat gluten), Tender Cuts (with wheat protein and soy flour) (Penryn, California, p. 222-23). Sunrise Health Products Lecithin Granules (p. 274-75).

2069. Scharffenberg, John A. 1979. Problems with meat. Santa Barbara, California: Woodbridge Press Publishing Co. 110 p. No index. 22 cm. Based on a presentation at an annual meeting of the American Assoc. for the Advancement of Science. [93 ref]

• ***Summary:*** Contents: List of tables and figures. Preface. Introduction: Meat- Dangerous and difficult. Potential health hazards in the use of meat: Meat and atherosclerosis, meat and cancer (incl. benzopyrene), longevity, kidney disorders, salmonellosis, osteoporosis, trichinosis, meat inspection. Population growth and economics. Nutritional problems of meat. Complete protein not required at every meal. Vegetable sources of protein. Good nutritional status of non-meat users. A rating of health hazards. A final word. References.

Dr. Scharffenberg, M.D., presents excellent data on Seventh-day Adventist longevity. Address: M.D., Assoc. Prof. of Applied Nutrition, Loma Linda Univ., Loma Linda, California.

2070. Schwarz, Richard W. 1979. Light bearers to the remnant: denominational history textbook of Seventh-day Adventist college classes. Mountain View, California: Pacific Press Publishing Assoc. *

• ***Summary:*** This college-level text is perhaps the best scholarly history of the Seventh-day Adventist church. Address: Andrews Univ., Berrien Springs, Michigan 49104.

2071. Theobald, Robin. 1979. The Seventh-day Adventist movement: A sociological study with particular reference to Great Britain. PhD thesis, University of London (School of Economics). 437 p. *

2072. Trowell, H.C. 1979. Recent developments in dietary fibre hypotheses. In: Kenneth W. Heaton, ed. 1979. Dietary Fibre: Current Developments of Importance to Health. Kellogg Symposium, December 1977. Westport, Connecticut: Technomic Publishing Co., Inc. 158 p. See p. 1-8. [40 ref]

• ***Summary:*** Contents: Summary. History of dietary fibre. Definitions of dietary fibre and edible fibre. Western diseases. Essential hypertension. Diets, Western and developing. Supporting evidence. Thrombosis. Prospective studies.

"Summary: Kellogg (1923) and others stimulated the study of 'fibre' in the United States 1925–1940; he preferred 'whole cereal foods.'" "Some of the early basic research on bran and fibre in the United States in the 1930s owed much to his [Kellogg's] interest and financial support."

Starting in about 1969 interest in dietary fiber suddenly quickened. Now about 150 articles are published each year on the subject. "Over 100 of these are in journals cited in the Cumulative Index Medicus, although dietary fibre was not one of the listed subjects until 1977." Trowell has assembled some 600 citations on dietary fiber for the modern period 1935-1977, and is preparing these for publication. "Many of these refer to the wholemeal versus brown bread controversy

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so well summarised by McCance & Widdowson (1956). In that prolonged controversy almost everyone argued in terms of value of the absorbed nutriments, for fibre, often called roughage, was considered to be a gastro-intestinal irritant."

One pioneer in this field was A.R.P. Walker, who knew about the U.S. studies on fibre. He "started conducting his experiments on the high-fibre South African Bantu diets early in World War II and spoke to me about them in 1947. He has been writing many articles on fibre each year ever since. Without him and the stimulus of Surgeon Captain Cleave (1974) many of us would not be here to-day."

"My recent attempt to compile a bibliography of dietary fibre convinced me that Godding (1976) was right when he suggested that some 'terminological umbrella' was necessary to include a large group of allied substances. (1) Dietary fibre derived exclusively from plant foods of man (plantix) is almost rhe only source of fibre in the food of mankind. (2) Special groups such as Eskimos and Masai may derive most of their 'fibre' from undigested aminopolysaccharides of animal connective tissues, liver, lung and blood. Carnivorous animals eat this form of 'fibre.'..." Address: Woodgreen, Fordingbridge, Hampshire SP6 2AZ. Formerly: Dep. of Medicine and Paediatrics, Makerere Univ. and Uganda Government, Uganda.

2073. U.S. Department of Agriculture. 1979. The annual report on activities carried out under Public Law 480, 83d Congress, as amended, during the period October 1, 1977 through September 30, 1978. Washington, DC: U.S. Government Printing Office. 51 + [38] p. See table 18. 27 cm.

• ***Summary:*** Table 18 is titled "Title II, Public Law 480–total commodities shipped by program sponsor, fiscal year 1978." The main program sponsors and distributing agencies, listed alphabetically, are AJJDC (American-Jewish Joint Distribution Committee), CARE, CRS (Catholic Relief Service), CWS (Church World Service), LWR (Lutheran World Relief), SAWS (Seventh-day Adventist World Service), UNICEF, UNRWA (United Nations Relief and Works Agency), and WRC (World Relief Commission). All of these are Private Voluntary Organizations (PVO/PVOs), registered with USAID. The following foods containing soy protein were distributed: Soy fortified corn meal (SFCM), soy fortified sorghum grits (SFSG), CSM (corn soya mix), WSB (wheat soya blend), and small amounts of soya flour. The vegetable oil which was shipped to many countries was soybean oil; it is not recorded here.

Foods containing soy protein were distributed to the following countries or areas: Near East: Bhutan, Egypt, Gaza, Jordan, Jordan West Bank, Morocco, Tunisia, Yemen.

Latin America: Bolivia, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Panama, Paraguay, Peru.

Africa: Benin, Botswana, Burundi, Cameroon, Central African Empire, Chad, Comoro Islands, Congo, Djibouti, Ethiopia, Gambia, Ghana, Guinea Bissau, Ivory Coast, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Rwanda, Sao Tome & Principe, Senegal, Seychelles, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Togo, Upper Volta, Zaire, Zambia.

Asia: Bangladesh, India, Indonesia, Nepal, Philippine Islands, Sri Lanka.

Note: This is the earliest document seen (Aug. 2009) concerning soybean products (soy flour) in Djibouti, or Guinea Bissau. This document contains the earliest date seen for soybean products in Djibouti, or Guinea Bissau (1978); soybeans as such had not yet been reported by that date. Address: Washington, DC. Phone: 703-875-4901 (1991).

2074. Loma Linda Foods. 1979? To your health, naturally! Recipes and catalog. Riverside, California. 10 panels. Undated. Front and back. Each panel: 16 x 10 cm.

• ***Summary:*** The cover of this very informative catalog is dark brown and orange-brown on beige, with a rustic illustration of a man and a woman with two horses and a plow in front of a small barn. Loma Linda Foods–Since 1906." Contents of the front panels: The Loma Linda story (history). Names of vegetarian products made by Loma Linda with a recipe for each: 1. Stew-Pac, Dinner Cuts, Tender Bits (canned). 2. Meatless Fried Chicken (frozen in carton). 3. Sandwich spread (canned). 4. Soybeans–Boston Style, Chili Beans, Green Soybeans (canned). 5. Savorex (plastic tub). 6. Tender Rounds (meatless meatballs) with Gravy. Fried Chicken with Gravy (canned). 7. Soyalac. i-soyalac (canned). 8. Meatless Breakfast Sausage (chub). 9. Redi-Burger. Vege-Burger (canned). Vita-Burger (Chunks or Regular; dry in box). 10. Nuteena (with peanuts and soy flour). Proteena (nut loaf). Vegelona (canned). 11. Gravy Quik (Meatless Gravy–Chicken Style, Brown, Mushroom, Onion, Smoky Bits, Country Style). Spaghetti Sauce Mix (foil pouches). 12. Long Links. Linketts. Big Franks. Little Links (canned). 13. Meatless Slices (Roast Beef, Bologna, Chicken, Turkey, Salami; frozen in carton). 14. Soyagen (soy beverage; Carob, All Purpose {liquid}, Carob, All Purpose, No Sucrose {dry in canister}).

The back is divided into 14 rectangles of various sizes, one for each family of products described on the front. A color photo and description accompanies each of the 46 products. Address: Riverside, California.

2075. Loma Linda Foods. 1979? Recipes from around the world to break the monotony of meat, meat, meat, meat, meat, meat (Leaflet). 11503 Pierce St., Riverside, CA 92505. 5 panels each side. Each panel: 17.8 x 13 cm. Front and back. Undated,

• ***Summary:*** This glossy color leaflet shows how to use the following Loma Linda meatless products in recipes: Proteena, Little Chunks, Sizzle Burgers, Linketts, Sizzle

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Franks, Chicken, Meatless Bologna, Redi-Burger / Rediburger, Dinner cuts, Nuteena, Fried Chicken. A large photo shows each prepared dish. A photo on the last panel shows each of these products in its package on a wooden table with flowers, utensils, and vegetables. All are canned, except for Meatless Bologna and Sizzle Burgers. The slogan running across the bottom of the first and last panel is: "The people who believe food should not only taste good–it should be good for you." Address: Riverside, California.

2076. White, Jim. 1980. Close encounter of the tofu kind: A white custardy thing zooms out of the Orient onto your lunch counter. *Toronto Star* (*Ontario, Canada*). Jan. 18. Family section.

• ***Summary:*** This full-page feature states: "Brace yourself, Toronto, for the experience, because there's every indication tofu's going to do more than hover on the horizon like a fleet of sci-fi spacecraft." Victor Food Products in Scarborough [a suburb of Ontario] says that sales of tofu have nearly tripled in one year, from 720 lb/day to more than 1,900 lb/day. Shoppers can now buy tofu in selected Dominion, Lowlaws, Miracle Mart, and A&P outlets. "When the big boys take a bite of the action, you know something is cooking."

The article includes a listing of tofu makers and retailers in the Toronto area. Makers: (1) Pyung Hwa Co., 2139 Dundas St. W. Jhasun Koo. Phone: 534-0237. Korean-style tofu. Firm, 10-oz. cakes cost $0.55. (2) Wah Chong Co., 88 Ossington. Phone: 532-0841. Chinese style. $1.20/dozen. (3) Yet Sing Co., 11 Baldwin St. Phone: 863-0818. Custardy tofu. $0.70/dozen. (4) Victor Food Products. A photo shows Stephen Yu, standing with has packaged tofu and soymilk products.

Paul Smith, owner of Baldwin St. Natural Foods, runs a small night class once a month on making tofu. Branson Hospital (Seventh-day Adventist) has been serving vegetarian meals to patients for 22 years. Much of the protein comes from soyamilk, soya curd, and other soya products. Interest in tofu has been spread by the publication of *The Book of Tofu*, by William Shurtleff and Akiko Aoyagi. Address: Star Food Writer.

2077. **Product Name:** [GranoVita Soja Drink, and Carob Drink].
Foreign Name: GranoVita Soya Drink, Caroba Drink.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH (Marketer). Made in Belgium by Alpro.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1980 January.
Wt/Vol., Packaging, Price: 500 ml Tetra Brik Aseptic carton.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Shurtleff & Aoyagi. 1984. Soymilk Industry & Market. p. 123; STS. 1985. Containers for Soymilk. Shows color photo of 500 ml Tetra Brik carton. Orange and green on white. "Made purely from plants. Free of cholesterol. Rich in protein (Rein pflanzlich. Cholesterinfrei. Eiweissreich)." Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products. Retail price is DM1 for 0.5 liter. R. Leviton. 1983. Report on trip to Europe with American Soybean Assoc. Oct-Nov. p. 17. Product seen in Reformhaus health food store in Zurich, Switzerland. Sold for F1.75/500 ml.

Form filled out by Alpro. 1990. May 30. Alpro began making this product (2 flavors) in Jan. 1980 in 500 ml cartons.

2078. Kalish, Jon. 1980. Let 'em eat tofu. *Soho Weekly News.* Feb. 6. p. 5.

• ***Summary:*** "This spring a dozen schools with heavy populations of Seventh-day Adventists, observant Jews and Muslims (all of whom follow strict dietary laws regarding meat) will be served meals prepared with tofu. Initially the experiment will involve about 2,000 kids. The New England Soy Dairy has already begun teaching school lunch

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personnel how to prepare tofu burgers, tofu fish cakes, tofu egg salad, and tofu Parmesan." Tofu is also served in schools in Rochester, New York, and Santa Barbara, California.

2079. Leviton, Richard. 1980. Soycrafters Conference: The birthing of a new industry. Director's report: Missed all the meals. *Soycraft* (*Colrain, Massachusetts*) 1(2):16-23. Winter.
• ***Summary:*** A report on the Second Soycrafters Conference, held 26-29 July 1979 at Hampshire College, Amherst, Massachusetts. Over 50 workshops and lectures were presented on all phases of the soyfoods industry. "Miraculously, the $19,000 conference broke even financially, and attracted significant national press in the following three months."

The section titled "The view from the guests" (p. 20-23) contains brief statements (all positive) about the conference from the following attendees: Luke Lukoskie (Island Spring), Rebecca Uchida (Mu Tofu Shop), Michelle Ajamian (Amesville, Ohio), Shag Kiefer (Redbud Creek Tofu), Will Truslow (Jamaica Plain, Massachusetts), Dr. Joseph Rakosky (Rakosky Services, Melrose, Illinois), Marvel Huffman (Lecanto Tofu), Francine Watanabe (La Soyarie, Hull, Quebec, Canada), Dr. Charles Howes (Loma Linda Foods, Mt. Vernon, Ohio), Timothy Metzger (Dannon Milk Products, Long Island City, New York), Lee Cunningham (Wonder Life Corp., Des Moines, Iowa), Joseph Jaffer (Waymart, Pennsylvania), Chico Wagner (Yaupon Soyfoods), Dr. Malcolm Bourne, Frank Pilotte (Golden Key Farm, Grant Park, Illinois), David Patten (Brightsong Tofu, {Redwood Valley}, California), Patti Smith (Erewhon, Cambridge, Massachusetts), Larry Needleman (Bean Machines, Bodega, California), Peter Driscoll, Goodhart Foods (Petosky, Michigan), Bill Shurtleff (New-Age Foods Study Center), George Strayer (Agricultural Exports, Hudson, Iowa), David Blumberg (San Francisco, California), Dr. Keith Steinkraus (Cornell Univ., Ithaca, New York), Bob Bergwall (Nasoya Foods, Leominster, Massachusetts).

Photos show: (1) Overview of the conference registration hall incl. Richard Leviton talking with George Strayer. (2) Kathy Leviton adding finishing touches to large trays of tofu cheesecake. (3) A woman preparing scrambled tofu and fried soysage patties in the Hampshire College kitchens. (4) Members of Okita Enterprises and the Tennessee Farm: Charles Ishigawa, Robert Dolgin, Eddie Okita, and Michael Moorman. (5) Dr. Walter Wolf (Northern Regional Research Center, Peoria, Illinois). (6) Robert Rodale, Rodale Press, Emmaus, Pennsylvania. (7) Dr. Malcolm Bourne, Cornell University, Geneva, New York. (8) Michael Cohen, holding a baby and talking with Dr. Clifford Hesseltine.

Note: This is the earliest publication seen (Feb. 2003) that mentions Brightsong Tofu. Address: Colrain, Massachusetts.

2080. Marsh, Alice G.; Sanchez, T.V.; Mickelsen, O.; Keiser, J.; Mayor, G. 1980. Cortical bone density of adult lacto-ovo-vegetarian and omnivorous women. *J. of the American Dietetic Association* 76(2):148-51. Feb. [21 ref]
• ***Summary:*** The lacto-ovo-vegetarians were Seventh-day Adventists, who have reduced risk of osteoporosis. They lost 18% of bone mineral mass while omnivorous women lost 35%. It is concluded that a lacto-ovo-vegetarian diet may be beneficial in extended protective health care in terms of defense against, or control of, bone mineral loss in the later years of a woman's life. Address: Dep. of Home Economics, Andrews Univ., Berrien Springs, Michigan; Depts. of Medicine and Surgery, Michigan State Univ., East Lansing.

2081. Strayer, George M. 1980. The battle of the coconut cow. The early days of the American soybean industry and its surprising similarity with today's soyfoods movement. *Soycraft* (*Colrain, Massachusetts*) 1(2):50-53. Winter.
• ***Summary:*** Contains an excellent history of Strayer's work with soybeans, and an early history of the American Soybean Association. So far as George has been able to determine, his father, Bert Strayer, "was the first man west of the Mississippi River to use a combine on soybeans." One had been used successfully the year before by the Garwood brothers in Illinois. "We worked with the International Harvester Company and bought the first of their combines to be used on soybeans. It was a power take-off drive machine with a folding platform. The outer end of the cutting platform folded up so that the combine could be driven through farm gates. It was a machine designed for farm use on grains and for a one-man operation. We soon learned that on soybeans the operation was a two-man job–one man driving the tractor and keeping the cutting platform in the right position on the rows, while the other man controlled the cutting height while riding on the tractor platform.

"For a period of several years, we had the only combine being used on soybeans in this entire area. The combine carried a tank, the top of which held about twenty-five or thirty bushels that could be removed from the tank by driving a wagon or truck under the edge of the tank and pulling a lever which opened four holes along the tank bottom and allowed the soybeans to run out."

In Sept. 1927 George Strayer attended his first meeting of the American Soybean Association, held at the University of Illinois. "One thing that sticks indelibly in my mind is a statement made by W.K. Kellogg, of Kellogg's cereals, Battle Creek, Michigan. He said: 'Some day people in the U.S. will realize how foolish it is to feed one hundred pounds of soybeans to livestock and get back a very small poundage of meat products which have a protein inferior to the protein fed to the livestock."

The "Battle of the coconut cow," as Strayer calls the margarine-butter controversy, was the battle to get margarine legalized in America. First they had to work on the federal

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level, which took six years of cooperative work by the soybean, cotton and the margarine industries. Then we went into fourteen different states to change the state laws. We were successful in getting a small tariff placed on coconut oil in favor of soybeans at the federal level."

Describes how the *Soybean Digest* was started with Strayer as the first editor, the huge expansion of U.S. soybean acreage during World War II as a source of edible oil, the soybean in Germany during and after World War II, Strayer's 1955 trip to Japan to study whether American growers ought to be looking at Japan as a market for their soybeans (prior to World War II the U.S. was not generally an exporter of soybeans), his 1956 trip to ten countries of northern Europe, the worldwide potential of soy protein as the most nearly complete of all known vegetable proteins, the importance of the work of the Soyfoods Association and of the books written by Shurtleff and Aoyagi in providing accurate information soy protein foods.

Photos show: (1) George Strayer, happily lecturing. (2) A $75,000 grain combine, used to harvest soybeans. (3) Harvested soybeans being discharged into a waiting truck at a small New England farm. Note: This is the earliest document seen (Oct. 2003) that contains the term "soyfoods movement." Address: President, Agricultural Exports, Hudson, Iowa.

2082. Phillips, Roland L. 1980. Cancer among Seventh-day Adventists. *J. of Environmental Pathology and Toxicology* 3(4):157-69. March. [34 ref]

• ***Summary:*** "Considerable evidence has accumulated over the past decade that various lifestyle characteristics are associated with an increased risk of some of the major cancer sites in humans... Seventh-day Adventists are a small, conservative, evangelical religious denomination with about 100,000 members in California, 400,000 in the rest of North America, and 3 million worldwide, many of whom follow a unique lifestyle. By Church proscription, they completely abstain from smoking and the use of alcoholic beverages. The Church highly recommends, but does not require, that its members follow other unique dietary practices. For example, many follow a lacto-ovo-vegetarian diet, which is free of any type of meat, poultry or fish but does contain milk products and eggs. Virtually all Adventists abstain from pork products and other biblically defined unclean meats. In addition, they avoid the use of coffee, other caffeine-containing beverages, hot condiments and spices, and highly refined foods. As a natural consequence of these restrictions, they make abundant use of fruits, whole grains, vegetables, and nuts in their diets. These dietary habits have been recommended by the Church for over 100 years."

"Hopefully, our ongoing prospective study of 75,000 Seventh-day Adventists (SDAs) which is collecting detailed information regarding lifestyle and dietary habits, in addition to site-specific cancer incidence rates, will definitively establish whether SDAs are indeed at low risk of acquiring cancer, as well as dying from cancer. This study should also be able to provide the explanation for the reduced risk among SDAs of cancers unrelated to smoking or alcohol use, as well as providing additional evidence regarding the possible role of dietary habits in the etiology of bowel and breast cancer." Address: Dep. of Biostatistics and Epidemiology, School of Health, Loma Linda Univ., Loma Linda, California 92350.

2083. Granose Foods Ltd. 1980. Granose–Britain's leading health foods: Product information. Stanborough Park, Watford, Herts., WD2 6JR, England. 5 p. April. Unpublished typescript.

• ***Summary:*** The name of each product is given, usually with a basic description and ingredients. Product categories include: Breakfast cereals. Protein foods–soya based: Soya beans in tomato sauce, Goulash, Curry sauce, Bolognese sauce, Chicken flavoured pie filling, Chicken flavoured savoury pudding, Ravioli, Cannelloni, Soyapro wieners, Soyapro slices, Beef like, Chicken like, Ham like. Dried foods–soya based: Vegex (Chunks and Mince), Sausfry, Granogen, Granolac. Dried foods–nut based: Rissolnut (with soya nuts). Address: Watford, Hertfordshire (Herts.), England.

2084. Monte, Tom; Machta, Phyllis; Hausman, Patricia. 1980. 'Miracles' of Pritikin diet fail to spur federal scientists. *Nutrition Action* 7(4):3-7. April. [2 ref]

• ***Summary:*** In 1976 Nathan Pritikin, along with a team of physicians, opened what has become known as the Longevity Center, which now makes its home in Santa Monica, California. The team has been treating patients suffering from cardiovascular disease with a diet composed of 10% calories from fat, about 10% from protein, and the remaining 80% from complex carbohydrates. It prohibits foods high in fat and cholesterol, such as beef and eggs, and also prohibits simple sugars and caffeine. Coupled with the diet is an exercise program that includes walking and jogging.

"More than 3,000 patients have completed the 4-week program since the Longevity Center opened its doors, and by now the stories of patient recovery have become so legendary that they rival those emanating from Lourdes, France...

Nearby Loma Linda University–which did a statistical analysis on the center's first 900 patients–reported an average drop in blood cholesterol of 25%. Half of the people who were taking insulin for diabetes when they arrived left insulin-free. Of the 218 patients who had been treated by their local doctor with anti-hypertension drugs, 186 [85.3%] left the Longevity Center with normal blood pressure and weaned of the medication. But the American medical establishment has largely ignored the Pritikin team's results. The American Medical Association believes that the "are no dietary diseases in the U.S. today."

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2085. **Product Name:** [Soyalac {Soymilk} (New Plain Type)].
Foreign Name: Soiyarakku Neo Sutoreeto Taipu.
Manufacturer's Name: San-iku Foods.
Manufacturer's Address: 1-1 Nagaurataku, Sodegaura-machi, Kimizu-gun, Chiba-ken 299-02, Japan.
Date of Introduction: 1980 May.
Wt/Vol., Packaging, Price: 250 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: K. Tsuchiya. 1982. Dec. *Tonyu* [*Soymilk.* 2nd ed.]. p. 74. States that Neo Sutoreeto Taipu was introduced in May 1980 by Saniku Fuuzu in a 250 gm can and distributed nationwide.

2086. Shurtleff, William; Aoyagi, Akiko. 1980. Soyfoods America Tour: May 5 to June 10; July 25 to Aug. 3, 1980 (Log and trip report–unpublished, including Itinerary with map). Lafayette, California: New-Age Foods Study Center. Unpublished log.
• ***Summary:*** This trip had five purposes: (1) To introduce tempeh to America; (2) To promote the authors' newly published *Book of Tempeh.* Harper & Row, the publisher, paid most of the trip expenses; (3) For William Shurtleff to attend the University of Illinois Short Course in Soybean Processing; (4) To visit and study soyfoods companies in America; (5) To introduce people to the many advantages of a meatless / vegetarian diet.

A photo shows: Shortly before the trip, Akiko (left) and Valerie Robertson (right) (working in the Shurtleff's small home kitchen) "canned" many quart Mason jars of Tempeh Cacciatore to serve at the intermission of each lecture / presentation.

Includes the name and address of 37 people and organizations visited. Many of these were pioneers in the soyfoods and natural foods movement: April 25–Optimum Foods (Napa, California). April 27–David Burns (Sebastopol, CA). May 5–Jeremiah Ridenour of Monterey Bay Soyfoods (Santa Cruz, CA). May 6–Thelma Dalman, Foodservice Director for the Santa Cruz City Schools, *Monterey Peninsula Herald,* Ted & Marie Fehring (Carmel), Paula Welch Terui of Jack and the Beanstalk (Carmel Valley, CA). May 8–Al Jacobson of Garden of Eatin', Mr. Kaye Dunham of Tumaro's, Hugh Roberts of Meals for Millions. May 9–Eddie Okita of Okita Enterprises, and Noritoshi Kanai of Mutual Trading Co. (Los Angeles, CA). May 10–Kay Glass (La Cañada, CA). May 11–Frazier Farms natural foods supermarket (Escondido, CA), Bill Walton vegetarian and basketball star (San Diego, CA; we stay with Craig Wright and Andrew Solony of TriLife; they hope to market Bill Walton's tofu under the TriLife brand). May 12–Clare Quinn of The Farm (Tucson, Arizona; her check bounced so we never got paid). May 13–Kathryn Bennett of Southwest Soyfoods (Santa Fe, New Mexico), Tracy McCallum, Taos. May 14–Leslie Wertz (Alamosa, Colorado). May 16–Stay with Christie and John Baker (Boulder, Colorado). May 17–Steve Demos of White Wave Soyfoods and Good Belly Deli. May 18–Sanford and Rebecca Greenwood of East West Center (Boulder, Colorado). May 19–Judson Harper and the low cost extrusion cooker program at Colorado State Univ., Carol Hargadine of Nupro Foods & Soywaze Tofu (Fort Collins, CO). May 21–Gale Randall of the Indonesian Tempeh Co. (Palmyra, Nebraska). May 22–David Tucker of New Pioneer Co-op Society (Iowa City). May 23–George Strayer of Edible Soy Products (Makers of Pro-Nuts, May 23) and Agricultural Exports (Hudson, and Cedar Falls, Iowa). May 24–Cedar Falls (Iowa) and Minneapolis media. May 25–Pat Aylward and Jamie Stunkard of Joy of Soy Tofu (Minneapolis, Minnesota). May 27–Richard Cihoski (Duluth, MN). May 28–Chris Burant of Bountiful Bean Plant and Jehan Ziegler of Higher Ground Cultured Foods (Madison, Wisconsin). May 29–Danji Fukushima of Kikkoman Foods (Walworth, Wisconsin), Diane Loomans of The Magic Bean Co-op (Milwaukee, Wisconsin). May 30–Susan Dart (Lake Forest, Wisconsin), Research staff of Kraft Foods (Glenview, Illinois), Brian Schaefer of It's Natural (Evanston, Illinois). May 31–Paul Obis of *Vegetarian Times* magazine (with Brother Ron Pickarski) (Oak Park, Illinois). June 2–Lou Richard of Fearn Soya Foods, Leonard and Irene Stuttman of INARI, Ltd. June 3–John Gingrich of The Soy Plant. June 4–Tim and Carol Ann Huang of Yellow Bean Trading Co. (Detroit, Michigan). June 5–Glen Blix and Charles D. Howes of Loma Linda Foods (Mt. Vernon, Ohio; furthest point east on tour). June 6–Warren Hartman of Worthington Foods (Worthington, Ohio). June 7–Mick Vissman and Bill Lutz of Hip Pocket Tofu Deli and Rain Star (Columbus, Ohio), Ed Willwerth of Soya Food Products (Cincinnati, Ohio). June 8–Jay McKinney of Simply Soyfoods (Bloomington, Indiana). June 9–Lynn Adolphson and Bob Thompson of Archer Daniels Midland Co., and Grant Smith of A.E. Staley Mfg. Co. (Decatur, Illinois). June 10-11–Les Karplus of Corn Country Foods and Strawberry Fields. June 11–William Thompson and John Santa of INTSOY (Champaign, Illinois).

During the INTSOY Short Course: July 6–We did a program hosted by Patricia Mutch at Andrews University (Berrien Springs, Michigan). July 9-13–Third Annual Soycrafters Association of North America conference was held at the University of Illinois, produced by Richard Leviton. There were 270-285 attendees, and it made good money.

People at the University of Illinois we met during the course: Dr. William Thompson, Frances Van Duyne, Harold Kauffman, John Erdman, L.S. Wei, A.I. Nelson, M.P. Steinberg, Munir Cheryan, Ted Hymowitz, Woody Yeh.

Return trip after course: July 28–Bob Davis of Light Foods (St. Louis, Missouri). July 30–James Lowrie of Iowa State University (Ames, Iowa). Aug. 2–Lake Tahoe. Aug. 4–

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Home in Lafayette, CA.

At most of the public classes/lectures on this trip, Shurtleff and Aoyagi served their favorite tempeh and tofu dishes. They wanted to find out how Americans liked tempeh, so they asked for a show of hands as to which the attendees liked best. The tempeh dish was usually Tempeh Cacciatore, and the results were, on average, that the tempeh was preferred by a ratio of 2 to 1 over the tofu.

On this trip, Shurtleff and Aoyagi did 27 public programs, had 28 media interviews and appearances, traveled 9,000 miles, earned $13,000 gross income and $8,500 net income. Address: P.O. Box 234, Lafayette, California 94549.

2087. Blix, Glen. 1980. Dr. Harry Miller and his International Nutrition Laboratory (Interview). *SoyaScan Notes.* June 4. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Shurtleff and Aoyagi drove their large white Dodge van to visit the Loma Linda Foods plant in Mt. Vernon, Ohio. As they were welcomed by Glen Blix (super guy) and invited to be seated at his desk, the first thing they noticed with a sign, about 15 inches long and triangular in cross section, which stated clearly: "Do unto others as you would have them do unto you." Wow!

History: Dr. Harry W. Miller was born north of Dayton, Ohio. He returned from China after the Chinese occupation of 1937, to Mount Vernon, a lovely remote rural area, where he had attended secondary school (Adventist). While building his soy dairy building, he taught at the local secondary school; also bought a local hospital with his brother and served as a physician. He lived in the big white house by the plant.

He bought a 120-acre farm for $7,000. He got free bricks from a demolished schoolhouse. He and his son collected these, hired academy students to clean the bricks, then he and his son built the original building for the soy dairy about 1937-38. It was called the International Nutrition Laboratory.

Here he set up the soymilk process he had developed in China. He also set up a plant to can fresh green soybeans; this paid his way. And he developed a gluten meat analog, Miller's Cutlets, a gluten patty with flavorings added, based on research done by Dr. John Harvey Kellogg. It contained no soy; he later sold it to Worthington Foods. Dr. Kellogg was Dr. Miller's professor in a small class at Battle Creek Sanitarium; Dr. Kellogg taught the class lots about nutrition. All students in the class lived past the age of 80. Miller lived to 97½. In 1951 Miller sold his soy dairy at Mt. Vernon, Ohio, to Loma Linda Foods and went back to Hong Kong. He returned to America in 1972.

When he sold the plant he felt he could not sell the soymilk process, which he felt had been taught to him directly by God, who spoke to him and told him to try certain ideas that had eluded him. Thus he gave this process to the Adventist church, but sold the building to Loma Linda Foods and loaned them the money to buy it. They paid him in installments and he used this income to set up the International Nutrition Research Foundation in 1951.

One product he developed and felt he perfected here was Acidophilus soymilk. but it couldn't be canned or the organism would be killed. Oliver Miller, no relation to Harry, is a top director in Loma Linda; he is a poor correspondent, so best to phone him.

Loma Linda Foods started in 1906 in Southern Calif 20 miles from Riverside. Kellogg in the early days had a philosophical / ideological split with the Adventist church and took back for himself the Battle Creek Sanitarium, whole wheat bread bakery, and breakfast cereal operation/plant (no soyfoods). The Loma Linda Riverside plant was built about 1936. It started making meat analogs, pressed wheat flakes, rusket biscuits. Now only two Adventist plants in the world make soymilk. Ohio and Saniku in Japan. The method now used is an improved variation on the Cornell method. The Ohio plant used the method patented by Miles Laboratories from 1968-69. Blix thinks that the Illinois whole-bean method has poor mouthfeel and problems with flatulence. Their claims were overexaggerated. Dr. Miller found / felt that the highest percentage of oligosaccharides were located just under the soybean hull. The present hot soak leaches them out. A high fiber diet may cause more gas than usual, so maybe some flatulence in fiber itself explains why whole soybeans cause more gas than soymilk. Most now use the word "lipoxydase" rather than lipoxygenase. More comments on Illinois whole-bean method. Chalky mouthfeel, corrosive on the homogenizer. Best to use stellite for homogenizer valve seats. At Loma Linda they also homogenize whole beans, then extract soymilk, and rehomogenize the soymilk etc. Loma Linda sells two types of soymilk products. Soyalac is for infants and Soyagen is for adults. About 75-80% of their sales are the infant Soyalac, so flavor is not so crucial. Nutritional properties are more important. Concerning protein quality: Rats have a large demand for sulfur-containing amino acids since they have lots of hair, for which these amino acids are largely used. Commercial cystine is hydrolyzed hair protein, so its not vegetarian.

Loma Linda started making isolate soymilk out of pressure from salesmen since all other infant formula makers have an isolate soymilk. They feel it is inferior to their regular Soyalac since it is less natural (has less all-natural ingredients) and has poorer flavor. But it is lighter colored, It is acceptable to Feingold hyperactive kids since it contains no additives, and it gives lower flatulence since it contains no carbohydrates (but this is not a significant problem), and the stools do not smell bad, i.e. different from the stools from animal milks. Loma Linda non-isolate soymilk sells best by 2:1 among the Loma Linda products. LLF makes 8 basic soymilks. (1) i-soyalac is the isolate and Soyalac is the natural. Both come in concentrate, ready to

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feed, and powdered. Soyagen, the adult preparation, comes in powdered, with either all purpose or no cane sugar (it uses corn syrup as a sweetener), Also carob. All Soyagen brands are powdered. The number 1 best seller is Soyalac concentrate, #2 is isolate concentrated, #3 is ready to feed Soyalac, #4 is powdered Soyalac. Their only competitor is Worthington Soyamel, sold powdered in Pure Pak cartons in health food stores.

Dorothea Van Gundy Jones died in 1979.

Soymilk regulatory problems: Lots of hassle from FDA. (1) Cook time in cans. (2) waste disposal.

Do old soybeans cause low protein extractability? They feel extractability is more directly affected by the hardness or pH of the water. Alkaline pH gives good extractability; that's why some people cook beans with baking soda. In late summer as the water table falls, the pH rises to pH = 8 in late summer, then drops to 6.3 in the spring.

Loma Linda soymilk has 65 employees. They grow much of their own beans on 500 acres of nearby land. They use field-type soybeans. Best is Williams, which has good flavor and extractability. Beeson and Amsoy are also good. Beans are not strictly organically grown but use less and milder herbicides so herbicides residues are near the lower limits of detectibility. They use 30,000 bu per year = 900 tons/yr of dry beans. Beans are stored in silos by the plant and dried there to 12% moisture. If lower moisture, they crack and split. (Honey is not acceptable in baby formulae). Botulism problem; also it gets very dark when sterilized in cans. Babies can't digest starch. So LLF uses corn and beet sugars.

The process: Weigh beans in a dry batch, wash, and run over stainless steel "stone pans" that look like a sloping scrub board to pick up metal and stones. Float off stems and sticks. Spray wash beans over a screen. Run into a large Rietz screw cooker (open top, 3 feet diameter by 20 feet long) and blanch beans at a little above 80*C for about 1 hour to draw off oligosaccharides, deactivate lipoxydase, and hydrate to double weight. This is a key innovation in the process. Drain. Mix with hot water (but no steam) and run into a Rietz disintegrator to do a hot grind at over 80ºC. Repump some of the slurry back into the hopper of the Rietz as the hot "water" for the hot grind. When the batch has been ground, do a semi-high-temperature short-time cook for sterilization in a pressure cooker; this prevents subsequent bacterial growth in the holding vats. Then run through a high pressure Gaulin homogenizer at 5,000 psi to get high soymilk extractability; it works like a colloid mill to break up the cooked beans to particles of 20 microns diameter. This is essential if you do a hot pre-soak. Continued. Address: General Manager, Loma Linda Foods, Mt. Vernon, Ohio.

2088. Blix, Glen. 1980. Dr. Harry Miller and his International Nutrition Laboratory (Interview) (Continued, Document part II). *SoyaScan Notes.* June 4. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Continued: Then run through a Scharppel (best maker) horizontal axis decanter centrifuge, specially made for soymilk. The okara (they call them "soy fines") have "tenacious water binding capacity." Used in vegeburgers almost causing them to gel. Some soy fines (okara) are spray dried but this is expensive. Dehulling has been found to make soymilk with a worse flavor so don't dehull. In a "formulation tank" mix soymilk, oil, syrup, sugar, and micronutrients, and dairy flavoring. Set the amount for each batch. Soymilk contains 6% sugar on a ready to feed basis. Now rehomogenize in 2 stages at 2,500 pounds each, run into a vertical vacuum pan evaporator to concentrate the soymilk to double strength (26-22% solids) while also removing some volatiles. Cool in a plate-cooler to 35ºF, then run into a refrigerated storage tank that holds 10 batches. All milk in one such tank is marked with one code. Refrigerate in the tank at 38ºF. Try to can or spray dry within 12 hours, usually immediately.

Soy fines (okara) contain 20% protein in a dry basis. Wanted to market as a bran to the bakery industry; also gives soy protein complementarity.

The canner is a continuous retort. Sterilize for 12 minutes at 257ºF, especially for botulism. Then run thru a continuous cooler, for 8 minutes to cool to 100ºF. Discharge and pack in cartons. See that there is a vacuum in each can so less rancidity. Check for leaks. The milk has a 2 year shelf life. Some vitamin loss takes place during storage, as well as some separation of oil, and some protein coagulation. To spray dry, spray in the concentrated form into a chamber 50 feet high. The soymilk falls through air whose maximum temperature is 400ºF for 2-3 seconds dwell time. The discharge temperature, maximum for the product, is 200*F. Then can and label.

Daily dry soybean usage at this plant is 5.7 tons. They work 4 days a week. The equipment in the plant is worth $3 million plus $1.5 million for the building.

Evaluation of products: Fresh Soyalac is best of all; 3.8% fat and 2.1% protein. Reconstituted powdered Soyalac is also excellent when it's new. Powdered Soyagen is salty and has a cereallike, haylike flavor. Not as good. Corn syrup sweetener. All powdered soymilk is best if mixed and allowed to stand overnight. Diluted canned concentrate is very close to the fresh Soyalac but slightly inferior from heat of sterilization. Powdered Soyagen is not so hot (see above). 2.6% fat but only about 1/3 as much oil added per vat-batch.

Basically the product is sold by "detailing" = educating doctors who recommend it to the 2% of infants who are allergic to cow's milk. Methionine has a bad, slightly fishy aroma. Of the infant formula market, 75% is dairy based, 25% is soy based. About 25-30% of all US mothers are now breastfeeding their babies–a big recent increase. Soyalac is also used as a weaning food after 3 months breastfeeding, for 6 more months. Some infants are allergic to lactose in

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mother's milk, or use Soyalac is used when the mother smokes, drinks, etc. and should not breast feed.

The chemicals in Loma Linda soymilk are there for nutrient fortification. They try to use only "natural" sources but the chemical methionine is preferred to animal based methionine.

In Worthington analogs the chemicals serve various functions: functional, organoleptic, caramel coloring, and nutritional (equivalency of product being replaced).

Note: if a coloring or flavoring is added, it must be called an "artificial" coloring or flavoring, even if it is natural ("natural artificial coloring"). Loma Linda is uncomfortable with mono- and diglycerides. In MSG, the problem may be with the sodium, especially in the case of headaches. Glen Blix and most people at Worthington use MSG discreetly at their homes. Address: General Manager, Loma Linda Foods, Mt. Vernon, Ohio.

2089. Ruchi Pvt. Ltd. 1980. Display ad: Soya–The high-protein food. *Times of India* (*The*) (*Bombay*). June 11. p. 15.
• ***Summary:*** This large ad is for Nutrela, a "high protein soya food," which Ruchi will soon be introducing. Below the title, in large bold letters, is this quotation: "'Soyabeans are the only natural food in the vegetable kingdom which contain higher protein nutritive value than meat, milk and eggs'–Jethro Kloss; from his million-copy bestseller, 'Back to Eden.'"

To the right of this quotation is a portrait illustration of Jethro Kloss.

The text of the ad begins: "A summer leguminous plant, soyabean has been the major source of proteins for millions of people in the Orient. Cultivated in China and Japan long before written history (some records date back to 2207 B.C. [sic]), its popularity has rapidly spread to the western world. Today the U.S. alone accounts for nearly 60% of the world production!

The rest of the ad contains these heads: "Soya. Higher protein nutritive value than meat, milk, eggs." "Soya vs. other items." "Soya. Vitamins and minerals too!" "Soya. Essential for everybody." "Soya. The most versatile food." Soya. Delicious economy." "Ruchi's. Pioneers of soya foods in India."

Photos show the front and right side of two packages of Ruchi's Nutrela, in tasty granules and tasty chunks.

A coupon at the lower right is titled: "I am interested in knowing more about soya: the food of the future." It is designed to be clipped, filled out, and sent to Ruchi's address across the bottom.

Note 1. This is the earliest document seen (Sept. 2010) concerning Nutrela or Ruchi Pvt. Ltd.

Note 2. This is the earliest article or ad seen (Sept. 2010) in *The Times of India* that contains the term "soya food" (or "soya foods," regardless of hyphenation). Address: 214, Tulsiani Chambers, Nariman Point, Bombay 400 021.

2090. *Consumer Reports.* 1980. Vegetarianism: Can you get by without meat? 45(6):357-61. June.
• ***Summary:*** Large sidebars include "Soybeans–the 'meat' that grows on vines," two sample menus for one day–one vegan and one with milk and eggs, and "The vitamin B-12 brouhaha" (tempeh is listed as a source). See also "Meatless meats" in this same issue.

"According to a recent survey, some seven million people in the U.S. now consider themselves vegetarians–nearly three times the number estimated a generation ago." Health is the reason most often cited by U.S. vegetarians. They believe that foregoing meat is better for them. The word "vegetarian" was coined in 1842 by English vegetarians to describe people, such as themselves, who ate no meat, fish, or fowl. Address: Mt. Vernon, New York.

2091. *Consumer Reports.* 1980. Vegetarian meats. 45(6):362-65. June.
• ***Summary:*** Many meatlike commercial soy products are shown or described including Worthington Vegetarian Fillets (which got the highest entree ratings), Worthington FriChik, Worthington Vegetable Skallops, Loma Linda Foods Vege-burger, Hain Soy Oil, Cedarlake Meatless Sloppy Joe. Of the meat analogs, most were quite low in iron and protein, and high in sodium, compared with red meat. A table shows analyses of ten products in terms of their cost per package and per serving, serving size, protein PER, nutritional composition per serving, and sensory comments.

Samples of meatlike products showed considerable variation in nutritional labeling, the addition of some food additives in some products, and little taste correlation with meat.

2092. **Product Name:** Granose Sausalatas (Meatless Sausages Canned in Brine) [Plain, or Smoked].
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1980 June.
Ingredients: 1980: Water, wheat protein, rusk, peanuts, soya flour, vegetable fat, onion, hydrolised vegetable protein, spices, herbs, oat flour, textured soya protein comprising defatted soya flour, niacin, calcium pantothenate, iron, vitamins B-6, B-2 and B-12, salt, yeast, soy isolate.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Manufacturer's catalog. 1980. April. Shurtleff. 1981. "Delicious when fried, grilled, or baked."

Form filled out and Label sent by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1948. It is still on the market. Label. 1990. 8.5 by 4 inches. Brown, beige, and black on tan. Color photo

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of three sausages on a dish with vegetables. "Vegetable protein sausages containing no animal products whatsoever. Delicious when grilled, baked or fried. Ingredients (1990): Water, wheat protein, rusk, peanuts, soya flour, vegetable shortening, seasoning (comprising dehydrated onion, hydrolised vegetable protein, spices and herbs), oat flour, textured soya protein (comprising de-fatted soya, niacin, calcium, pantothenate, iron, vitamin B-6, B-2 and B-12), salt, yeast, soy isolate." Address is now Newport Pagnell, Bucks.

Color photo of package in *Linda McCartney's Home Cooking.* 1990. p. 18. The label is black, brown, and white on tan.

Note: This product was first introduced in 1948, but did not contain textured soy protein at that time.

2093. Hartman, Warren. 1980. History of Worthington Foods' development of soyfoods (Three interviews). Conducted by William Shurtleff of Soyfoods Center; June 6, Oct. 29, Nov. 3. 6 p. transcript.
Address: Worthington Foods, Worthington, Ohio.

2094. Schwarz, Richard W. 1980. Re: Early work of Dr. John Harvey Kellogg with soyfoods. Letter to William Shurtleff at Soyfoods Center, July 30–in reply to inquiry. 2 p. Typed, with signature on letterhead. [1 ref]
• ***Summary:*** Dr. Kellogg first became interested in food uses of soybeans in about the early 1930s. "I suspect that the first soy acidophilus milk also dates from the early 1930's... According to my records, his earliest paper on food uses of soybeans was one entitled 'Special Health Values of the Soybean,' which was presented before the food and nutrition section of the American Public Health Association on October 5, 1937." The paper is probably in "Michigan Historical Collections, Kellogg Papers, at the University of Michigan in Ann Arbor."

"Kellogg's original meat analogs depended heavily upon wheat gluten and peanuts." Dr. Schwarz encloses one of the last available copies of his book *John Harvey Kellogg, M.D.*
Address: Vice President, Andrews Univ., Berrien Springs, Michigan 49104. Phone: 616-471-7771.

2095. Blix, Glen. 1980. The story of Dr. Harry Miller, soyfoods evangelist. Paper presented at the Third Annual Soyfoods Conference. 4 p. Held in 13-19 July at Univ. of Illinois, Urbana, Illinois.
• ***Summary:*** No notes of this speech survive. For an expanded version of the talk see: Shurtleff, William. 1981. "Dr. Harry Miller: Taking soymilk around the world." *Soyfoods* 1(4):28-36. Winter. Address: Loma Linda Foods, Mt. Vernon, Ohio.

2096. Shurtleff, William. 1980. Microwave cooked dairylike soymilk. *Soyfoods* 1(3):4-5. Summer. [1 ref]
Address: New-Age Foods Study Center, P.O. Box 234, Lafayette, California 94549.

2097. Recchia, Camille. 1980. Takoma Park changing: Influence of Seventh-day Adventists wanes before influx of newcomers. *Washington Post.* Aug. 10. p. B1.
• ***Summary:*** Takoma Park, Maryland, has long been the world headquarters of the Seventh-day Adventist Church. Thousands of Adventists, a group that is largely vegetarian and known to eat a healthy diet, live in the area. But today at a local health food store, "Adventist grandmothers buying soy bean curd and organically grown cantaloupes are outnumbered by young people who are only dimly aware of the church's connection with Takoma Park."

In addition, "the influence of the Adventists, who were once a dominant force in the town's politics, real estate, and commerce, is beginning to wane." Church leaders are becoming more sensitive to community issues and more willing to solicit and listen to the views of others. Address: Staff writer.

2098. Conte, Mary. ed. 1980. Balanced Foods' 40th anniversary. Ads. *Health Foods Retailing* 44(8):99-226. Aug. Special supplement / section.
• ***Summary:*** Continued: There are ads (mostly full page) from the following companies: Balanced Foods: A family of [five] companies (p. 100). KAL (Canoga Park, California, p. 102). Nature's Gate Herbal Cosmetics (Chatsworth, CA, p. 103). Arrowhead Mills, Inc. (Hereford, Texas, p. 104-05). Hoffman's Food Products (York, Pennsylvania, p. 107). Schiff (p. 109). Loma Linda Foods (Riverside, CA, p. 110-11). Bima Industries–The Sprout People, Sprout-Ease sprouting seeds (Seattle, Washington, p. 112). American Dietaids–Acerola Plus (p. 113). Mill Creek Natural Products–Elastin, Keratin (Rolling Hills, CA, p. 114-15, 119). Hain–"pure cold-pressed vegetable oils" (incl. soy oil, sesame oil, safflower oil, p. 116). Plus Products–Torula and brewer's yeast (Irvine, CA, p. 117). Hair Trip (p. 120). Health Valley Natural Foods (Montebello, CA, p. 121). MLO–Fillmore Foods (Hayward, CA, p. 123). Holistic Products Corp. (East Rutherford, New Jersey, p. 129). Office of Monopoly–Korean Red Ginseng (p. 130). Imedex–Siberian ginseng products (p. 132). Nature's Way (herbs, p. 133-35). L&A Juice Company (p. 136). NuLife (Long Beach, CA, p. 137). Chico-San (Chico, CA, p. 139). Joyva Corp.–Sesame tahini (Brooklyn, New York, p. 140). Para Laboratories, Inc.–Queen Helene natural health and beauty aids (Hempstead, New York, p. 141). Balanced Foods–private label products (p. 160). Viobin Corp. (A subsidiary of A.H. Robins Co.) Wheat germ oil (Monticello, Illinois, p. 170). Tom's of Maine roll-on deodorant (p. 173). Miller's Honey Co. (p. Colton, CA, p. 174). Para Labs–Footherapy natural mineral foot bath for corns and calluses (p. 176). Alacer Corp.–Ora-Pops, Super-Gram II (p. 178, 194). Pacific Trends, Inc.–Korean ginseng and Oriental herb products

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(Canoga Park, CA, p. 180). Sovex Natural Foods without sugar–incl. 5 Granolas (Collegedale, Tennessee, p. 182). Larchmont Books–from the publishers of Better Nutrition, Health Foods Retailing (p. 183, 208). Pet Care Inc. (Miami, Florida, p. 185). American Dietaids–Bran n' Honey, Papaya enzyme (p. 186, 188, 190, 192). Advance Laboratories, Inc.–Prostex (Cambridge, Massachusetts, p. 187). Worthington Foods (Worthington, Ohio, p. 189). Loanda Products Corp.–Beyond Soap (Novato, CA, p. 191). Alvita Products Co.–Herb teas (Huntington Beach, CA, p. 193). Fearn Soya Foods–cakes mixes (p. 195). CellLife–selenium powder (San Diego, CA, p. 200, 247). The Food Supplement Co.–Propolis from England (West Palm Beach, Florida, p. 201). Plantation Molasses (p. 203). Bio-Strath from Switzerland (p. 204). SugarLo Company–LactAid (Atlantic City, NJ, p. 205). Sterling Cider Co., Inc. (Sterling, MA, p. 206). Natural Aloe Vera soap (p. 206). Ener-G (formerly Jolly Joan, for wheat, egg and milk-free diets)–Soyquik (Seattle, Washington, p. 207). Jonathan Green's sprouting seeds (p. 208). Nu Age Laboratories Ltd.–Silica, Biochemic way (St. Louis, Missouri, p. 210). Food Science Laboratories, Inc.–Aangamik, Freedom (Burlington, Vermont, p. 211). San Francisco Herb & Natural Food Co.–Herb teas (p. 212). Nature de France–Pierre Cartier (New York, NY, p. 213). Food for Health, Inc. (p. 215). Larchmont Books (p. 216, 221, 223). Hoffman's and York Barbell (p. 216). Dynamic Natural Products (Theradophilus–the pure Lactobacillus acidophilus, p. 217). Acme Juicer Mfg. Co. (Lemoyne, PA, p. 217). Merit Publications–health food books (North Miami, Florida, p. 218). Carris Candy (Riverside, CA, p. 219). Golden California (Chatsworth, CA, p. 219). R.W. Knudsen–Natural fruit juices (p. 219). Richter Bros. Inc. (Carlstadt, NJ, p. 220). Jones Manufacturing–Foods of Nature pet food (Covina, CA, p. 221). Barbara's Bakery (p. 223). Celestial Seasonings (Iced Delight herb tea, p. 224). Lion Cross (Ridgefield, NJ, p. 225). Balanced Foods (Ridgefield, NJ, p. 226). Solgar (Lynbrook, NY, p. 227, 235). Canasoy's Soya Lecithin Spread–Non-hydrogenated margarine (Snohomish, Washington, p. 234, 237). Niblack (Rochester, NY, p. 234). Solgar Co. (Lynbrook, NY, p. 11563). Bioforce of American, Ltd.–Herbamare herb seasoning, Trocomare (Westbury, NY, p. 236). Canasoy High-Protein Soya Macaroni–Shells, alphabets, elbows (p. 237). The Fibertone Co. (Los Angeles, CA, p. 246). Nature's Best–Distributor (Torrance, CA, p. 246). Jumbo's Jumbos–Vacuum packed peanut butter stock (Edenton, North Carolina, p. 247). Joyva Corp.–Sesame Tahini, Halvah, Sesame Candies (Brooklyn, NY, p. 258). Hoffman's Products–Hi-Proteen Powder (York, Pennsylvania, inside rear cover).

2099. Loma Linda Foods. 1980. What could be more appetizing than Loma Linda advertising? (Ad). *Health Foods Retailing* 44(8):110-11. Aug.
• ***Summary:*** A two page ad. A large photo shows a full page Loma Linda ad for Swiss Steak in a magazine on a dish on the dinner table, with two forks and a napkin to the left. "Loma Linda's been making great tasting vegetable protein foods for almost 75 years. Foods that... contain absolutely no cholesterol, preservatives or added MSG. Today, there are 59 Loma Linda brand food products available–proof of our growing popularity.

"In 1980, our advertising will deliver 22,000,000 reader impressions!" Below the company logo, photos show cans of: Swiss Steak, Breakfast Cup, and Sizzle Franks. Address: Riverside, California 92515. Phone: (714) 785-2444.

2100. Patel, A.A.; Waghmare, W.M.; Gupta, S.K. 1980. Cultured soymilk and related products. *Indian Food Packer* 34(4):47-56. July/Aug. [55 ref]
• ***Summary:*** This is an excellent and very useful review of the literature (with 55 references) on fermentation of soymilk with lactobacilli, mostly to make soy yogurts, lactic fermented soy beverages, or soy cheeses. As long ago as the 1930s, Dr. John Harvey Kellogg popularized soy acidophilus milk, and the first systematic studies of the growth of lactic cultures in soymilk were conducted by Gehrke in the 1940s. Yet only in the last two decades has lactic fermentation of researchers interested in soybean utilization. "Scientists at the University of Wisconsin, Cornell University [Ithaca, New York], and the Northern Regional Research Laboratory of the USDA [at Peoria, Illinois] have made valuable contributions in this field.

Contents: Introduction. Soymilk as a substrate for the growth of lactic cultures: Effect of heat treatment, effect of other processing parameters, effect of the presence of fermentable carbohydrates, effect of certain additives. Other culturing conditions affecting the growth of lactic cultures in soymilk: Incubation time, temperature. Quality of cultured soymilk: Flavor, texture. Growth of aroma bacteria and development of flavor compounds in soymilk. Special products from lactic-fermented soymilk: Soy yogurts, soy cheeses (with or without the use of coagulants). Conclusion. Address: National Dairy Research Inst., Karnal–132001.

2101. Phillips, Roland L.; Kuzma, J.W.; Beeson, W.L.; Lotz, T. 1980. Influence of selection versus lifestyle on risk of fatal cancer and cardiovascular disease among Seventh-day Adventists. *American J. of Epidemiology* 112(2):296-314. Aug. [13 ref]
• ***Summary:*** Mortality from coronary artery disease is lower in vegetarians than in nonvegetarians. Address: Dep. of Biostatistics and Epidemiology, School of Health, Loma Linda Univ., Loma Linda, California 92350.

2102. Reddy, Bandaru S.; Sharma, C.; Darby, L.; Laakso, K.; Wynder, E.L. 1980. Metabolic epidemiology of large bowel cancer. Fecal mutagens in high- and low-risk population for colon cancer: A preliminary report. *Mutation Research*

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72(3):511-22. Aug. [36 ref]
• ***Summary:*** The low-risk population was vegetarian Seventh-Day Adventists whose diet was relatively low in fat and high in vegetables. "The incidence of fecal mutagen activity was higher in volunteers from New York consuming a high-fat, high-meat diet compared to low-risk rural Kuopio [Finland] population. None of the vegetarian Seventh-Day Adventists showed any mutagenic activity." Address: Naylor Dana Inst. for Disease Prevention, American Health Foundation, Dana Rd., Valhalla, New York 10595.

2103. Reddy, Bandaru S.; Sharma, C.; Wynder, E. 1980. Fecal factors which modify the formation of fecal co-mutagens in high- and low-risk population for colon cancer. *Cancer Letters* (*Shannon, Ireland*) 10(2):123-32. Aug. [21 ref]
Address: Naylor Dana Inst. for Disease Prevention, American Health Foundation, Valhalla, New York 10595.

2104. Sovex Natural Foods. 1980. From Sovex Natural Foods–Without sugar (Ad). *Health Foods Retailing* 44(8):182. Aug.
• ***Summary:*** A half page black and white ad. "No sugar. Good Shepherd cereals–6 varieties. Sovex granolas–5 varieties. Honey sweetened natural cookies–6 varieties. Prothins–5 varieties. Bulgur wheat. Miller's bran. Corn germ flakes. Sovex flavor concentrate. New! Veg-Pats–vegetable burger, vegetable sausage." Address: Collegedale, Tennessee 37315.

2105. Worthington Foods. 1980. Play it again Sam! (Ad). *Health Foods Retailing* 44(8):189. Aug.
• ***Summary:*** A full page black and white ad, with the Worthington logo. "Let's have another prosperous 40 years. Congratulations to Sam Reiser and all the fine people at Balanced Foods." Address: Worthington, Ohio 43085.

2106. Pinnick, Sinclair. 1980. Re: Dr. Harry Miller and his work with soyfoods. Letter to William Shurtleff at Soyfoods Center, Sept. 10. 1 p. Typed.
• ***Summary:*** "Dr. Miller was always the first one to start the day's work at his Mount Vernon plant. One morning he climbed into the starch tank and was overcome by the fumes. Another worker came in and found him and pulled him out thus saving his life. Another time he was experimenting with a new formula and cut the end of his finger off in the food grinder. He calmly picked up the severed part, walked into his office and sewed it back on.

"In 1948 he sent me to the Philippines to set up the plant there. He and his second wife came over during my stay there. In Manila he was treated as a very important person. In Mt. Vernon he was just Dr. Miller, a friend of all.

"In 1972 the Southern Asia division asked me to go to Poona [Pune, southeast of Bombay, in Maharashtra state], India and set up a plant at Spicer Memorial College. In March of 1973 Dr. Miller flew over from Hong Kong to get us started in production. He would work all day with us at the food factory and then spend nearly every evening speaking to some group on healthful living. There seemed to be no limit to his endurance."

Note: Dr. Harry W. Miller was a life-long vegetarian. Address: 16042 Bivelbliss, Mt. Vernon, Ohio. Phone: 614-397-8213.

2107. Thalman, Margaret Morse. 1980. Memories of her father, William J. Morse (Interview). Conducted by William Shurtleff of Soyfoods Center, Sept. 18 and Oct. 3. 1 p. transcript.
• ***Summary:*** William Morse, her father, as born on 10 May 1884 in Lowville, New York (upstate). His father was a butcher. W.J. Morse's wife, Edna, went on the trip to East Asia, as did Margaret, who was an only child. Edna kept diaries for her daughter and wrote down what happened every day–in child's language such as "Played in the park."

William Morse wrote much of the book about soybean foods that he hoped to publish. He wrote it by hand on yellow lined paper; it was never published and she has sent the manuscript to the American Soybean Association.

During World War II W.J. Morse was under a great deal of pressure. A great many people called on him for information. He first became aware that he had an ulcer in about 1943, and this affected his diet. He lost a lot of weight (you can see it in the photos of him from that period) and he had to go on a "baby food diet." He ate soft, bland foods including soymilk, tofu and acidophilus soymilk and yogurt. He bought soyfoods at the Seventh-day Adventist health food store in Takoma Park, Maryland–including the soy ice cream he loved. She does not recall that he ever made tofu or soymilk at home.

After returning from their two years in East Asia, he and his wife used soyfoods regularly in their diet. He liked very much to make sukiyaki for dinner, especially for guests or special occasions. He had a low sukiyaki table made by having the legs cut of a regular table. Everyone would sit on cushions on the floor, with an electric hot plate on the table. His sukiyaki recipe always included tofu.

He and his wife liked to put soy flour in homemade breads and waffles. He did not eat a lot of meat but neither was he a vegetarian. He ate Boston baked soybeans when his wife fixed them.

William Morse bought the house in Tacoma Park, DC, in 1917 and lived there until he retired, shortly after which he and his wife moved to Eastchester New York, where he lived the rest of his life.

He spent the last ten years of his life writing his book (from time to time she typed up his notes), doing lots of gardening and reading, and writing many letters. He kept in touch with the world of soy.

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His office, where he had shelved with packaged soyfoods, was in Washington, DC. He did not move his office to Beltsville until about 1939–when all of USDA moved there.

Note: P.H. Dorsett was born on 21 April 1862. So at the time the expedition first arrived in Japan he was age 67. Dorsett had a grown daughter.

"William Morse was a gentle, soft-spoken person, who liked others and they liked him. He liked to tease, and the secretaries at his office all loved it. He was a very easy person to get along with; he was slow to anger and never cursed. He wasn't aggressive; where some might push, he would give in. He was intelligent. His work came first. He was not financially ambitious." He was a rather heavy cigarette smoker. His daughter remarked that "If anything upset him, he didn't let it out on his fellow workers."

"His friends and co-workers called him "Bill." His family called him "Will."

She still has her diaries and some of her father's small notebooks of the trip plus many photographs glued into scrapbooks. She has no files of his left; she sent them all to the American Soybean Association.

Verna Donavan was W.J. Morse's secretary at USDA starting not long before he went to the Orient to study soybeans. After Morse returned, when the Bureau of Home Economics became interested in soybeans, the two of them were often asked to come over and to taste the soybean dishes they had prepared.

Update. 2004. April 14. She has a book that was given to her father when he retired from USDA. In it are letters from many companies (cereal companies, oil companies, etc.) praising his work. It also has letters of praise from his co-workers and his superiors. Address: 22 Interlaken Rd., Eastchester, New York 10709. Phone: 914-632-2508.

2108. Blix, Glen. 1980. Soymilk and soy-based infant formula in America (Interview). *SoyaScan Notes.* Sept. 26. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** In 1979 Loma Linda made 2.24 million gallons of ready-to-use Soyalac infant formula, and 1.0 million gallons of Soyagen (soymilk for adults, plus small amounts [400-500 per year] of Granolac and Granogen which are sold in the United Kingdom), for a total of 3.24 million gallons. Some of the Soyalac (named i-Soyalac) is made with isolated soy protein. In 1979 Loma Linda used 1.5 million lb of soybeans to make soymilk, working 190 days a year.

Only two companies in America make soymilk for adults. Loma Linda has 60% of the market and Worthington Foods has 40%.

Market shares in the soy-based infant formula market are approximately: Ross Laboratories 50% (Isomel; 14,720,000 gallons ready to serve), Mead Johnson 40% (Prosobee; 14,080,000 gallons), Loma Linda 7% (Soyalac; 2,240,000 gallons), and Wyeth Laboratories (in Pennsylvania) 3% (Nursoy; 960,000 gallons). Syntex is now out of business. Note that Worthington Foods does not make any infant formula. Ross and Mead Johnson originally entered the infant formula market with dairy-based products, then later added soy-based products. Glen thinks that ProSobee, which is made in the USA, is a powdered product sold only outside the USA. Loma Linda sells infant formula in a 32-ounce can. It is given a UHT short time sterilization at Pet Milk in Coldwater, Ohio, then packed. Address: Loma Linda Foods, Mt. Vernon, Ohio.

2109. **Product Name:** [Soymilk].
Manufacturer's Name: Alimentos Colpac.
Manufacturer's Address: Apartado 134 Navojoa, Nuevo Leon, Mexico.
Date of Introduction: 1980 September.
New Product–Documentation: Soyfoods Center. 1980. Sept. Tofu shops and soy dairies in the West (2 pages, typeset). "COLPAC, Apartado 134, Navojoa, Nuevo Leon, Mexico. Owner: Jose Farrara. A Seventh-day Adventist soy dairy."

2110. Myers, Steve. 1980. [Farm Foods' original soy Ice Bean is on the market again (News release)]. Summertown, Tennessee: Farm Foods. 1 p. Undated.
• ***Summary:*** "Dear People, Our plant moves are complete and Farm Foods' original soy 'Ice Bean' is back. It is now available in these flavors: carob, vanilla, and strawberry, and comes in pints, 5 oz. cups, and 3 gallon tubs.

The original soy 'Ice Bean' is similar in flavor and texture to ice cream, but contains no milk products and no cholesterol. "Ice Bean" is completely vegetarian and contains all natural ingredients: soy powder, pure honey, soy oil, natural fruit and flavors, lecithin, guar gum, and salt. But best of all it tastes great and it's good for you."

To help understand this news release, we will quote from *Tofutti and Other Soy Ice Creams,* by Shurtleff and Aoyagi (1985, p. 46-47). "In 1980 Ice Bean was America's best known non-dairy soy-based frozen dessert, though its following was still relatively small, and concentrated in California. In February or March of that year, Farm Foods moved its operations from San Francisco to headquarters in Tennessee, signaling a commitment to expand Ice Bean's market from regional to national. Farm Foods realized that they had a virtual monopoly on soymilk ice cream, for which national demand was growing faster than they could supply. The company was also aware of the huge potential market on the East Coast from kosher Jews and natural foods devotees. Moreover, the landlord had tripled the rent on their building in San Francisco. So they sold their big ice cream freezer to a frozen dairy yogurt maker and pulled up roots.

"Back on the land in rural Tennessee, Farm Foods' directors reformulated Ice Bean and had it manufactured at a dairy ice cream plant in Nashville, later in Memphis. The

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Farm Foods' crew made the soy ice cream there with the help of a plant technician. They applied to register the name Ice Bean as a trademark in 1980 and were granted this in October 1982. When they applied for kosher certification in New York with the oldest and largest certifier (O-U), the rabbi told them that this was the first non-dairy frozen dessert that he had ever certified as kosher and pareve. 1980 was the year that Ice Bean really began to go national, and in December Farm Foods started its first national advertising campaign, with full-page color ads in at least four national health food, counter culture, and vegetarian magazines."

"Initially the reformulated Ice Bean was made using powdered soymilk produced by Loma Linda Foods (at the plant in Mt. Vernon, Ohio, built by Dr. Harry Miller); the vacuum-pan deodorization process reduced volatile beany flavors found in typical soymilk. But in about 1983 Farm Foods switched to fresh soymilk made by Dr. Miller's son, Willis Miller, at nearby Miller's Soy in Tennessee, using a special patented process. Starting in mid-1984 (after Miller's Soy went out of business) all of the soymilk was produced in Summertown, Tennessee, at The Farm's own soy dairy." Address: President, Farm Foods, 156 Drakes Lane, Summertown, Tennessee 38483.

2111. Goodbrad, John. 1980. Re: Soy products made by Sovex Natural Foods, Inc., "The Granola People." Letter to William Shurtleff at New-Age Foods Study Center, Oct. 23. 1 p. Typed, with signature.

• ***Summary:*** "A couple of months ago, we received a form letter from you indicating interest in what we produce primarily from soy products.

"Under separate cover we are sending you a package of our Prothin Snack Chips, Vege-Pat Sausage flavor, Vege-Pat Burger flavor, and Chili.

"If these meet with your definition of soy foods, please drop us a line and we will give you additional information about these products. Yours truly, John Goodbrad, President." Address: President, Sovex Natural Foods, Inc., Box 310, Collegedale, Tennessee 37315. Phone: 615-396-3145.

2112. Boyer, Robert A. 1980. Work with Henry Ford and soybeans. II (Interview). Conducted by William Shurtleff of Soyfoods Center, Oct. 30. 2 p. transcript.

• ***Summary:*** It seems very possible that soyfoods were being sold in the Ford stores in 1923–though Boyer has no firsthand knowledge of this. Dr. Edsel Ruddiman started his research on food uses of soybeans in the late 1920s, about 2 years before Boyer started his work with soybeans. Ford converted an old residence into a lab for Ruddiman, his boyhood pal.

Boyer attended the Henry Ford Trade School, located at the Rouge Plant, from 1927 to 1929. It was a work-study program and he spent one month in each of the major departments at the plant. Then he went to the Edison Institute of Technology Lab. It was both a school and a research lab. Boyer was part of the first class of students. The idea was to learn by doing. It was a "school for inventors." Over the door was a sign that read "Place for Damn Fool Experiments." Consultants were sometimes brought in to help with research projects and answer questions. "In 1930 we started building the soybean laboratory." Boyer knew John Harvey Kellogg, but he does not think Henry Ford knew him.

Boyer uses some meat analogs in his daily diet but he is disappointed in the quality so they are not a regular part of his diet. Manufacturers have to make compromises in equipment and to keep costs down. He can make a much better flavor and texture in the laboratory, but it takes time and hand work. One major problem is that all isolates are made from defatted soybean meal which already has a strong beany flavor. There is no way to control the off-flavors that far back in the process. Boyer prefers the meat analogs made by Worthington to those made by Loma Linda. Boyer uses both tofu and Bacon Bits quite a bit in his daily meals.

Concerning the plastic car: The importance of soy decreased as the researchers got farther into the project since they could not make soy 100% waterproof no matter how much resin they mixed with it. So in the 1941 car body, soy was only a very minor component–but the popular notion that it was a major component persisted; that was a distortion. Soy was, however, a major component in non-structural car parts. The real importance of the soybean was as a renewable resource. When the "plastic car" made its debut in 1941, an all-soy luncheon was served.

When Ford struck the trunk of his car with an axe, he used the back/blunt side of the axe, and it was covered with a plastic guard to help cushion the blow. Once Walter Chrysler hit the body with an ax and fractured it slightly. Boyer drove the plastic car. The whole white body of the car was plastic, but it contained little soy.

The idea of using spun soybean fibers in food occurred to Boyer while he was working for Ford in about 1942. He left Ford in 1943 and applied for his first spinning patent in 1949. It was allowed in 1951. He abandoned this first application since everyone realized it was a much broader patent. So the 1954 patent application was the best and most important one that everyone worked under. "No one can use a man-made fiber in a food without violating that claim."

The industry that makes spun soy protein fibers for food use reached a plateau starting in early 1979. He is now aware that there are 2 companies in Europe very actively spinning soy fibers and advertising their products. Two are Dutch and one is in Belgium. The patents are now public property. Dawson Mills bought General Mills' soy protein fiber spinning equipment. In an article in the *Journal of Textural Studies* Boyer explained why the spinning part of the program has now grown as much as expected. "This is still a product whose time has not yet arrived. It was mushroom

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when meat prices become 10-20% high than soy. The danger is that some of the techniques we've developed in the past 2-3 years for improving texture and flavor might get lost if they are not actively pursued. Worthington is in a state of change and Bayer may try to sell it. All the work is secret." Boyer may someday write a book about it, but his eyes are very bad now.

Boyer felt Ford was a great man, great to work with and for. He knew how to judge men and he always picked the right men for the job. Ford would drive the 4-5 miles up from the Rouge Plant and be in Boyer's office by about 8:00 every morning for years and years. He was always very generous money and essentially gave Boyer a blank check to pursue any research project he wanted. But he could be pretty tough with some guys, especially if they did not produce results. Ford was a real thinker, always trying to find the basic reasons behind what was going on.

Worthington bought the patent rights for the health food industry. Loma Linda started spinning soy protein fibers after Boyer's patents expired. He did not known that Loma Linda made soy meat analogs; he thought they used only gluten.

Note: This is the earliest English-language document seen (Dec. 2004) that uses the term "spinning soy protein fibers." Address: 632 Edgewater Dr., Apt. 731, Dunedin, Florida 33528. Phone: 813-734-2415.

2113. Boyer, Robert A. 1980. Work with Henry Ford and soybeans. III (Interview). Conducted by William Shurtleff of Soyfoods Center, Nov. 3. 3 p. transcript.

• ***Summary:*** Floyd Radford was head of Ford's soy farms. At the Chicago World's Fair the Ford exposition was producing soybean oil by solvent extraction of soybeans. The soybean oil was the sole fuel used to power a diesel engine, which ran an electric generator, which produced all of the electricity for the exhibit. It was very neat.

Boyer developed the first plant protein fiber in about 1938. That year the Ford Motor Co. had a machine to spin soy protein fibers at the World's Fair in New York. He was aware of work in Italy spinning casein into fibers from reading technical journals prior to 1936. He used the term "spinning" because the textile industry uses that term to describe how rayon is produced. In both cases, a more correct term would be "extruding," since the dope is extruded through spinnerettes.

Ford's soybean fiber spinning pilot plant had a capacity of 1,000 pounds of fiber a day, but they probably produced less than that. They would send the fiber to the mill, where 1 part of soy fiber would be blended with 3 parts wool to make sidewall (not seat) upholstery, which got less wear and wouldn't mark like cotton.

When making soy protein isolates, the fiber (insoluble cellulose) is removed during clarification by centrifugation; no one had ever been successful in removing it by filtration, which would be better. After dissolving the soybean meal in alkali, it is clarified by centrifugation, then precipitated. Practically the same process is still used to make soy protein isolates.

Just a few plastic trunk lids were ever made, and they were used only on demonstration or experimental cars; they were never part of commercial Ford vehicles.

When Boyer left Ford Motor Co. he went to work for The Drackett Co., which bought Ford's soy protein operations. Mr. Drackett sold [actually shut down] his soy fiber spinning operation in 1949. Drackett later sold all its soybean operations to ADM. After Boyer left Drackett in 1949 he filed for his first edible soy fiber spinning patent the same year; it may have been granted in 1951. He applied for a new, expanded patent, with much broader claims to a food product manufactured form man-made protein fibers, in 1951; it was granted in 1954.

In Aug. or Sept. 1949 Boyer paid his first visit to Worthington Foods. Worthington was the first company to whom he disclosed what he was doing, and showed a sample of a prototype product (pork chops) made from spun soy protein fiber. He did not go to Swift initially because he had been advised to keep away from meat companies, which might buy then bury his patents. If Worthington hadn't been interested in his spinning process when he first visited them, he might have just given up then. He wasn't sure if it was a screwball idea or not. Moreover, he had been out on his own for almost a year and was running out of money. Worthington was excited with Boyer's idea but they needed a source of fiber.

So Boyer went to the Virginia Carolina Chemical Co. (VCCC) in Taftville, Connecticut. They were spinning fibers for cloth and they allowed him to use their spinning pilot plant in 1949 to produce the first edible spun soy protein fibers for research purposes and prototypes; he was not employed by them. VCCC was interested enough to call in Corn Products Corp. (CPC), which was interested–but they said they wanted to use corn gluten instead of soy protein. Boyer said "Fine." After the first successful run, using the VCCC pilot plant, CPC got very interested. Fibers were spun from casein, corn gluten, and soy. CPC bought the first license to his soy fiber spinning process for food use in 1949. They took an exclusive option on the license for 9 months. The first sale of edible protein fiber was made by CPC to Worthington Foods; the fiber was made of corn gluten. After working for a year with CPC, everyone in the project realized that the flavor of corn gluten was so horrible that it would never work in foods. So CPC converted to a non-exclusive license. Boyer, now a bit desperate and against the advice he had been given, decided to approached a meat company. He chose Swift & Co., which took an option immediately; they were the second company to license his patent and from 1950 to 1954 they retained exclusive rights to his patent. In about 1955 Swift converted to a non-exclusive, and Boyer immediately went back to Worthington

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to see if they were interested in a license yet. They were.

So after having waited 7 years, Worthington finally purchased a spinning license in 1956. At that time, Boyer began to spend 50% of his time at Worthington for a year after they took the license. Initially Worthington did not spin their own soy fibers since it was too expensive for them and they did not have much money at the time. Ralston Purina was well equipped to make these fibers for them. It was not until the mid-1960s that Worthington started to spin their own fibers.

By 1977 seven large food companies had licenses on the patent: Swift & Co., Unilever/Lever Brothers in England, General Foods, Nabisco, General Mills, Ralston Purina, and Worthington.

The original Bac*O's were made from spun soy protein fibers. Today he thinks they are made from textured extruded soy flour. General Mills took a license from Boyer. They got 25% of his consulting time, Ralston Purina got 25% and Worthington got 50%. Bac*O's came on the market in about 1965 and were a real sensation. It was the biggest thing that had happened with Boyer's idea to date.

Loma Linda is now spinning soy protein fibers, as is some company in Japan–or at least they used to be.

How big is the market for foods made from spun soy protein fibers? Boyer would guess at least $30 million a year. Worthington's total sales was $20 million including gluten. Miles got Worthington a new plant shortly after they bought Worthington. Now Bayer owns Miles and Worthington. The Morningstar Farms line is not making the profits they would like it to make.

Note: This is the earliest English-language document seen (Dec. 2004) that uses the term "spin soy protein fibers." Address: 632 Edgewater Dr., Apt. 731, Dunedin, Florida 33528. Phone: 813-734-2415.

2114. Shurtleff, William; Aoyagi, Akiko. 1980. Henry Ford and Robert Boyer: History of work with soya. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 25 p. Nov. 3. Unpublished typescript. Available online at www.soyinfocenter.com.

• ***Summary:*** A comprehensive history of the subject. Contents: Introduction: Ford. Early research with soybean oil and meal: 1928 chemurgic movement (joining of farm and industry), setting up Edison Lab, Dec. 1931 soybean chosen as most promising crop for use in industry and as a food, 1931 encouragement of farmers to grow soy, biographical sketches of Boyer and Ruddiman, soy oil (used in car paints and pioneer work in solvent extraction), meal, isolates, molded parts, plastic pilot plant, cottage industries, barn solvent mills, 1934 World's Fair. Ford, Ruddiman, and soyfoods: Soyfoods press luncheons (not all were impressed), 50 recipe cookbook, soymilk (commercial and personal), personal interest in soyfoods, Greenfield Village (soy flour and green vegetable soybeans), Ford's views on health. Development of the plastic car: Glidden first commercial plant for industrial soy protein isolates (1935), Ralston's food use plant in 1960, Ford built 3 small oil plants 1937-39, grew own soybeans, connection with American Soybean Association, soybean plastic car (trunk lid unharmed when hit by ax), jokes, soy a minor element in later structural plastics, idea lost in files, General Motors' plastic Corvette introduced 1953, lots of plastic by 1980 (but not from renewable resources like soy). Boyer's soybean wool and edible protein fibers: Soybean wool and history of fibers, wool pilot plant, how to make edible soy fibers, discovery of food protein idea. Henry Ford's passing: Death in 1947, his contribution (quotes), actually not much soy used in Ford's auto and tractor factories. Boyer's development of meat analogs: Drackett purchase of Ford protein spinning operation, first visit to Worthington (Sept. 1949), Corn Products Company purchase of first license on edible protein fiber patent, Swift purchase of exclusive rights from 1950-54, 1951-52 Unilever license for production outside U.S., Worthington purchase of license 1956, advantages and limitations, licenses after Worthington, royalties and consulting, Boyer's quality evaluation, the future. Address: Lafayette, California. Phone: 415-283-2991.

2115. Harding, George, Sr. 1980. Early days of Worthington Foods (Interview). Conducted by William Shurtleff of Soyfoods Center, Nov. 5. 2 p. transcript.
Address: Worthington Foods, Worthington, Ohio.

2116. Miller, Oliver H. 1980. Work with Loma Linda Foods and Dr. Harry Miller (Interview). *SoyaScan Notes.* Nov. 5.

• ***Summary:*** Oliver worked with Dr. Harry Miller for about 3 years before he died; Dr. Miller taught Oliver how to make tofu. Dr. Miller took the money from the sale of his soymilk business in Ohio and turned around and gave (or loaned) it to Loma Linda Foods (LLF) to build a research center now named the International Nutrition Research Foundation. Harry co-signed a note so that they could borrow the money to buy it from him. Harry told Oliver that. Loma Linda Foods is an integral part of the Seventh-day Adventist (SDA) church, not "an Adventist firm."

There is a stone and a plaque on Dr. Harry Miller's birth site in Ludlow Falls, Ohio. Harry was about age 12 when his parents became Adventists. Harry was reluctant to take up the religion. He was embarrassed because he could not work on Saturdays–so he had to work on Sundays. Harry went to the academy at about age 15. That same year he went to a SDA camp meeting.

Mary Miller, Dr. Miller's wife, now lives about half a mile from Loma Linda Foods, at 11384 Norwood. Riverside, CA 92505. She has photos and she might like to read this manuscript.

Frank Bateman has been very keen on building an archives and museum on the history of Loma Linda Foods.

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Pauline Mostert, the president's secretary, is now in charge of the project. Oliver has a collection of old products with old labels. Another key man is George Chapman, who was with LLF for many years. He was the general manager from 1938 to 1960. He is now age 80, lives in southern California, and is still very alert and clear of mind. He claims that in 1937, when he first went to Loma Linda Foods, they were already making their own soymilk. He thought it was better than Dr. Miller's, so there was a little friction over that.

Dorothea Van Gundy was the dietitian at LLF for many years. She often presented nutrition and diet lectures at church camp meetings. Oliver felt irritated by her dogmatism. There were only two ways to do something; her way and the wrong way. She died 1½-2 years ago. Oliver knew her well; she married late in life and had no children.

Suggests I contact Dr. Alice Marsh at Andrews University in Michigan. She is a retired Home Economics Teacher; very well read and intelligent. She is now professor emeritus at Andrews in the Home Economics Department. She has a book, a treasure, a vegetarian recipe book written by Dr. J.H. Kellogg's wife. Address: PhD, Vice-President, Research & Development, Loma Linda Foods.

2117. Pugh, Mary Jo. 1980. Re: The John Harvey Kellogg archives at the University of Michigan. Letter to William Shurtleff at Soyfoods Center, Nov. 6. 2 p. Typed, with signature on letterhead.
• ***Summary:*** "The John Harvey Kellogg Collection here consists of some 22 feet of correspondence, notebooks, drafts of speeches and lecture notes, newspaper clippings, scrapbooks and topical files. In addition we also have some 15 feet of published materials–books, pamphlets, periodicals. We have a 14 page inventory of the manuscript materials and a 15 page inventory of the published materials." Address: Reference Archivist, Bentley Historical Library, The Univ. of Michigan, 1150 Beal Ave., Ann Arbor, MI 48109. Phone: (313) 764-3482.

2118. Chapman, George. 1980. Work with Loma Linda Foods (Interview). *SoyaScan Notes.* Nov. 13.
• ***Summary:*** George (who speaks with an Australian accent) came from Australia in 1937 to take over the business of Loma Linda Foods (LLF); they were making soymilk at that time and had been for a year or more–say 1936. George was the general manager of LLF for 26 years, from 1937-1963. He is now age 84. He is not aware of any history of the company.

Dr. Harry Miller wanted to sell LLF his soymilk process and formulation, but LLF felt theirs was as good or better than his.

George thinks LLF was pressure canning by 1937, when he arrived. LLF was not making any meat analogs at that time. In 1937 LLF's main products were several breakfast cereals, and several meat substitutes (such as Proteena / Proteina and Nuttena) made from gluten and/or peanuts.

George met T.A. Van Gundy in 1933 in his little factory in La Sierra, California, near Riverside. He was a Seventh-day Adventist. He had a soybean butter [soynut butter] that resembled peanut butter. He does not remember the product name or the company name.

Dorothea, his daughter, was a dietitian and a food demonstrator for LLF for many years.

All products sold by LLF kept being made in Ohio; none were or are being made in California. Address: Retired; Former General Manager of Loma Linda Foods.

2119. Watanabe, Hidekazu. 1980. Re: Early work by San-iku Foods in Japan with tofu and soymilk. Letter to William Shurtleff at Soyfoods Center, Nov. 20. 5 p. Handwritten, with signature on letterhead. [Jap; eng]
• ***Summary:*** Starting in about 1955 Dr. Harry Miller began to recommend that the Saniku school in Japan serve soymilk instead of dairy milk to its students. But the school decided not to do this because they thought the taste of the soymilk was not very good and it was considered less nutritious than cow's milk; moreover, it would cost a lot of money to buy soymilk equipment.

In 1957 Mr. Hanzo Ueda (who had previously worked at the post office in Hachioji and was a Seventh-day Adventist) was running a tofu shop. He and Mr. Hidekazu Watanabe were making soymilk at the tofu shop, packing it in 180 ml bottles, and selling it around Hachioji–under Dr. Miller's guidance.

In 1959 people from the Saniku school visited the tofu shop and gained confidence. They bought similar (but not identical) equipment, and started to produce soymilk at the school. They bottled it in 180 ml containers and started to serve it to 500 students at every meal.

Ten years later, in 1969, they started to produce Soyalac infant formula soymilk with help from Loma Linda Foods in America. They produced it at College Health Foods–a separate organization from the Saniku school.

Dr. Miller gave us helpful advice on technical and nutritional matters, and furthermore he always supported our spirit and spirituality as we developed the soymilk plant (1959) and the infant formula (1969). In 1969 Luppy Kôsan began to make Luppy soymilk. This was the first really serious commercial soymilk product in Japan.

Note: See also Mr. Watanabe's follow-up letter of July 1981. Address: San-iku Foods, Sodegaura-machi, Chiba-ken 299-02, Japan.

2120. Goodbrad, John. 1980. History of Sovex Natural Foods, Inc. and other small Adventist food companies (Interview). Conducted by William Shurtleff of Soyfoods Center, Nov. 26. 1 p. transcript.
• ***Summary:*** Sovex is a private company. John and his wife are Seventh-day Adventists, as are many of the company's

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employees. John worked at the Boulder Sanitarium (also called the "San," in Boulder, Colorado) from 1947 to 1953; the Sanitarium owned 8 health food stores and he was in charge of them. During the time he was in Boulder, the Sanitarium did not manufacture any foods; they had already gotten out of that business.

Then he went to work for Collegedale Distributors (in Collegedale, Tennessee), which was owned by Southern Missionary College. They made, and still make, granola.

Sovex was founded in 1953 by the Hurlingers in Holly, Michigan. The company's original product was Sovex, a flavor concentrate paste, made from a mixture of brewer's yeast and soy sauce. In 1964 John bought the business and moved it to Collegedale, Tennessee, where he worked.

In 1981 Sovex products containing soy include Prothin Snack Chips, Vege-Pat (textured soy flour, in sausage, burger, and chili flavors), and Granola (their main product line, in nine flavors, many of which contain soy grits).

Sovex had no relationship with Madison Foods (of Madison, Tennessee). Madison was one of the pioneers in the meat substitute field. They were purchased by Worthington Foods, which phased out the Madison products. John has eaten Madison products on and off for over 50 years, but has had no direct contact with them for a number of years. John has a copy of *Back to Eden*, autographed by Jethro Kloss.

A Mr. White, who was a grandson of Ellen G. White, had a super soymilk recipe about 20 years ago. He started with soy flour, ran it through an homogenizer, then sweetened it with honey. People loved the flavor; it was fresh, not canned. He called it Nu-Milk and made it on the sly at the Southern Missionary College dairy in Collegedale, Tennessee. It was illegal because there are laws against putting anything but milk in a milk processing plant.

John just talked with Frank Miller (phone: 817-641-8343), who used to work for Madison Foods and who now owns Texas Protein Products, a company that sells TVP in Texas. Another key man was Bruce Stepanske, who made soymilk at Madison until it was discontinued. Address: President, Sovex Natural Foods, Inc., Box 310, Collegedale, Tennessee 37315. Phone: 615-396-3145 (or 2111).

2121. Miller, Oliver H. 1980. Use of soya proteins in the vegetarian market. Paper presented at World Conference on Soya Processing and Utilization, Acapulco, Mexico. Nov. 4 p.

• ***Summary:*** "Vegetarians can usually be divided into two groups: Strict vegetarians, who use no animal products, and lacto-ovo vegetarians, who use milk and egg products along with plant products... The lacto-ovo segment appears to comprise the largest portion of the Loma Linda Foods market... 'Better Health' appears to be the largest single motive for altering former eating habits."

"The Loma Linda Foods product line appears to have limited appeal to the strict vegetarian, who wants no flesh and wants nothing that resembles flesh in their diet. Canned Green Soybeans and Boston Style Soybeans are two products that have some appeal to the strict vegetarian."

"Loma Linda Foods produces approximately 60 different products." Address: PhD, Vice-President, Research & Development, Loma Linda Foods.

2122. Patel, A.A.; Waghmare, W.M.; Gupta, S.K. 1980. Lactic fermentation of soymilk–A review. *Process Biochemistry* 15(7):9-10, 12-13. Oct/Nov. [55 ref]

• ***Summary:*** This excellent article is identical on one published earlier this year (July/Aug. 1980) by the same three authors in *Indian Food Packer* (p. 47-56). Address: 1. Indian Dairy Assoc.

2123. Phillips, Roland L.; Garfinkel, L.; Kuzma, J.W.; Beeson, W.L.; Lotz, T.; Brin, B. 1980. Mortality among California Seventh-Day Adventists for selected cancer sites. *J. of the National Cancer Institute* 65(5):1097-1107. Nov. [10 ref]

• ***Summary:*** Mortality from cancer is lower in vegetarians than in nonvegetarians. "In previous reports concerning cancer among Seventh-Day Adventists (SDA), comparisons were made only with the general population. This report compared California SDA to a sample of non-SDA who were demographically similar to SDA. The study consisted of 17 years of follow-up (1960-76) on 22,940 white California SDA and 13 years of follow-up (1960-72) on 112,725 white California non-SDA. Both groups completed the same base-line questionnaire in 1960. Deaths were ascertained by annual contacts with each study member and by computer-assisted record linkage with the California State death certificate file. Results indicated that, with the exception of colon-rectal cancer and smoking-related cancers, the difference in risk of fatal cancer between SDA and non-SDA was substantially reduced when SDA were compared with a more socio-economically similar population. The persistence of the low risk for colon-rectal cancer can probably be attributed to some aspect of the diet or life-style of the SDA."

The Seventh-Day Adventists (SDA) are a conservative religious denomination that was founded in 1863 and currently has about 3 million members worldwide, 600,00 in North America and 120,000 in California. By Church proscription, virtually all SDA abstain from the use of tobacco and alcohol. Presently, about 54% of SDA follow a vegetarian diet that includes milk and eggs, and 41% rarely or never use caffeine-containing beverages. They also tend to abstain from sweets, other highly refined foods, hot condiments, and spices. Regularity in vigorous exercise, adequate rest, and conservative social mores are strongly encouraged. Address: 1&3-5. Dep. of Biostatistics and Epidemiology, School of Health, Loma Linda Univ., Loma Linda, California 92350; 2. American Cancer Society, Inc.,

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777 Third Ave., New York, NY 10017.

2124. Miller, Frank. 1980. Madison Foods (Interview). Conducted by William Shurtleff of Soyfoods Center, Dec. 3. 1 p. transcript.
• ***Summary:*** Reminiscences on his years as a salesman with Madison Foods, Madison, Tennessee. Address: Texas Protein Sales.

2125. Miller, Frank. 1980. History of Texas Protein Sales and other Adventist food companies (Interview). Conducted by William Shurtleff of Soyfoods Center, Dec. 3. 1 p. transcript.
• ***Summary:*** Texas Protein Sales was founded in 1972 in Keene, Texas, by Frank Miller. The company is privately owned and Frank is a Seventh-day Adventist. He was formerly in the sales department at Madison Foods. Frank buys textured soy flour from Cargill, Staley, and Central Soya, then distributes it to meat plants. Texas Protein Sales also handles survival or disaster foods, but is not an actual manufacturer. Address: Texas.

2126. Allred, Paul. 1980. Re: Work with soymilk and Loma Linda Foods. Letter to William Shurtleff at Soyfoods Center, Dec. 2 p. Typed, with signature on letterhead.
• ***Summary:*** "I became interested in the soybean potential at the World's Fair in Chicago in 1934 when Henry Ford displayed all of the parts that he made from the soybean. They... made gear shift knobs to sell. This made quite an impression on me and I bought one of the knobs. Later around 1940 I learned of the work Harry Miller was doing and followed his work through the years and became personally acquainted with him. I began to experiment with soy milk as early as 1940 and at present am with Loma Linda Foods still experimenting." Address: California.

2127. *Madison Survey & Alumni News* (*Madison, Tennessee*). 1980. Obituaries: Ella Mae Webber. Dec.
• ***Summary:*** Ella (Verney) Webber was born 17 June 1886 in southern Michigan, and died 22 Oct. 1980, at age 94, at Dunlap, Tennessee. In 1912 she was married to Perry A. Webber. In 1913 they were appointed by the General Council (G.C.) Foreign Missions Board to go to Japan, where they pioneered Seventh-day Adventist educational work in that country. From a very small beginning in the crowded compound in Ogikubo, a suburb, the school has grown into Japan Missionary College with hundreds of students.

Their two sons, Alfred B. Webber and Harry V. Webber, were born in 1919 and 1923 respectively. After a year in Hawaii, the Webbers were sent back to Japan in 1925 to move the college into the country. The buildings were erected by the teachers and students. Industries were started and farm work carried on. The Food Factory, small in its beginnings, grew into a major industry.

Feeling the need for more education, in 1928 the Webbers enrolled in Michigan State University. After 3 years of training, several years were spent at Madison College, where they taught and Ella earned her B.S. degree in 1935. Also in 1935 the G.C. Mission Board again asked the Webbers to return to Japan to carry on the school program of the Japan Missionary College.

In 1953 the Webbers started a self-supporting work at Mount Akagi, Japan. This pioneering program included educational, industrial, and medical work.

Before retiring, Ella again taught at Madison college. Before Perry's passing in January, 1973, much of Ella's time was spent in his care. Her later years were spent in Lodi, California, with her son, Alfred, until he received his appointment to return to Japan, then she moved to Wildwood [Wildwood Sanitarium, a self-supporting Seventh-day Adventist convalescent home and health care facility in Wildwood, northern Georgia].

They returned again to Madison in 1959, and worked there for about ten years until Perry's health failed. He died at Wildwood Sanitarium and was buried in their cemetery.

The last 5 months of her life were spent at Stone Cave Institute, Dunlap, Tennessee. She died in a hospital in Dunlap and was buried in Wildwood Cemetery Hill. She is survived by her two sons–Dr. Alfred B. Webber, missionary in Tokyo, Japan; Dr. Harry V. Webber of Modesto, California; and 5 grandchildren.

2128. **Product Name:** [Granix Pizza with Soya and Tomato].
Foreign Name: Granix Masa Precocida con Soja para Pizza con Tomate.
Manufacturer's Name: Alimentos Granix.
Manufacturer's Address: Av. San Martin 4625 (C.P. 1602), 1602–Florida, Prov. de Buenos Aires, Argentina.
Date of Introduction: 1980.
Ingredients: Incl. wheat flour, soy flour, tomato.
Wt/Vol., Packaging, Price: 300 gm plastic bag.
How Stored: Refrigerated.
New Product–Documentation: Letter and label sent by Jorge Manrique of Alimentos Granix. 1990. July 13. This product was introduced in 1980. Label. 15 inches square. Plastic bag. Red, black. blue, and white on clear plastic. No ingredients are listed. This is masa that is meant to be stored refrigerated, then baked for pizza.

2129. **Product Name:** [Granix Soy Nuggets {Chunks of Textured Soy Flour}].
Foreign Name: Granix Porotos de Soja.
Manufacturer's Name: Alimentos Granix.
Manufacturer's Address: Av. San Martin 4625 (C.P. 1602), 1602–Florida, Provincia de Buenos Aires, Argentina. Phone: 760-7292/0307.
Date of Introduction: 1980.
Ingredients: Textured soy flour.

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Wt/Vol., Packaging, Price: 500 gm plastic bag.
How Stored: Shelf stable.
New Product–Documentation: Letter and label sent by Jorge Manrique of Alimentos Granix. 1990. July 13. This product, which was introduced in 1980, apparently consists of chunks or balls of textured soy flour. Label. 5.4 by 8 by 2.5 inch plastic bag. Red, white, blue, and yellow. One side of the bag, titled "protein equivalents," shows with cartoon illustrations that 1 kg of soya equals 2 kg of beef, 5 kg of rice, 1.5 kg of cheese, 5 dozen eggs, and 12 liters of milk. The other side describes the product and gives directions for use.

2130. Chaij-Rhys, S. 1980. A diet pattern for total vegetarians. *Adventist Review* (*Hagerstown, Maryland*) 157:1014-15. *
• ***Summary:*** This food guide was prepared specifically for vegans, especially vegan Seventh-day Adventists. An attractive feature of this guide is its use of a simple numerical formula to help the user remember serving recommendations. The plan calls for 1 daily serving of nuts, seeds, or legumes; two servings of fortified protein-rich foods such as fortified soymilk or meat analogs; three servings of vegetables; four servings of fruit; and five servings of grains and cereals.

2131. **Product Name:** [GranoVita Cutlets].
Foreign Name: GranoVita Phag-Schnitten.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1980.
Wt/Vol., Packaging, Price: 270 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: DE-VAU-GE leaflets. 1980? Rezepte aus der GranoVita Versuchskueche. And Neue Rezepte mit Soja-Goulasch. Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p.

Form filled out and Label sent by DE-VAU-GE. 1990. June 11.

Note: This product was first introduced in 1958, but did not contain textured soy protein at that time.

2132. **Product Name:** Soy Ice Bean (Named Soy Ice Bean from mid-1979 to early 1982. Honey Sweetened) [Honey Vanilla, Carob, Strawberry, Orange, Banana, Chocolate, Wildberry, Mocha, or Peanut Butter Carob Chip].
Manufacturer's Name: Farm Foods.
Manufacturer's Address: 156 Drakes Lane, Summertown, TN 38483.
Date of Introduction: 1980.
Ingredients: Almond Espresso: Water, soy powder [powdered soymilk], honey, soy oil, almonds, pure coffee concentrate, soy lecithin, locust bean gum, guar gum, Irish moss.
Wt/Vol., Packaging, Price: 16 fluid oz (1 pint) carton.
How Stored: Frozen.
New Product–Documentation: Labels. Brown and white on orange wood motif. "Serve soft for full flavor. Non dairy frozen dessert."

Ad in *Whole Foods.* About 1980-81. p. 69. "Farm Foods Soy Ice Bean. The completely vegetarian frozen dessert." Note: The powdered soymilk in this product was made by Loma Linda Foods in Mt. Vernon, Ohio.

Talk with Robert Dolgin of Farm Foods. 1981. Dec. 26. In San Rafael, The Farm made soy ice cream with a batch Emery Thompson ice cream machine. Most of it was sold as [soft serve] cones over the counter or in pints in the freezer, but a little was distributed locally. Strawberry was the favorite flavor. Farm Foods expanded operations after moving into their soyfoods manufacturing plant on King Street in San Francisco. At least a year passed between the time that the San Rafael soy deli closed and the King Street plant opened. Robert is now working with David Burns; they have capital and a warehouse. They plan to do secondary soyfoods manufacturing and distribution.

Shurtleff and Aoyagi. 1985. *Tofutti and Other Soy Ice Creams.* p. 46-47.

2133. **Product Name:** Granose Chicken Flavoured Savoury Pudding.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1980.
Ingredients: Wheatmeal flour, vegetable fat, textured soya protein, maize starch, soya flour, salt, onion, hydrolised vegetable protein, milk powder, leek, mushroom, yeast, vegetable oil, herbs, silica, spices, natural monosodium glutamate.
New Product–Documentation: Manufacturer's catalog. 1980. April. "Chicken flavoured pie filling in the same delicious pastry case as the original Granose Savoury Pudding."

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1980. This product has been discontinued.

2134. **Product Name:** Granose Soya Oil.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1980.
Ingredients: Soya oil.
Wt/Vol., Packaging, Price: Bottled.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog.

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1980. April. "High grade, 100% Soya oil suitable for all culinary purposes."

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1980. It has been discontinued.

2135. **Product Name:** Granose Swiss Cup.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1980.
Ingredients: Rye, oats, millet, barley, figs, chicory.
New Product–Documentation: Manufacturer's catalog. 1980. April. "An instant cereal beverage. A substitute for coffee. Contains no caffeine or tannin." Note that it also contains no soy.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1980. It has been discontinued.

2136. **Product Name:** Granose Chicken Flavoured Pie Filling.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1980.
Ingredients: Textured soya protein, maize starch, wheat flour, salt, onion, hydrolised vegetable protein, milk powder, leek, mushroom, yeast extract, vegetable oil, herbs, silica, spices, monosodium glutamate.
New Product–Documentation: Manufacturer's catalog. 1980. April. "A tasty soya protein pie filling flavoured with mushrooms and other vegetables. Bake in a pastry case, or serve as a casserole with other vegetables or as a snack on toast." Shurtleff. 1981. Overseas Adventist Food Companies. p. 6. They imported some of these meat analogs under their own brand from Nutana, and also imported soymilk from Loma Linda in Ohio, and packaged it under their Granose brand.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1980. It has been discontinued.

2137. **Product Name:** Granose Bolognese Sauce.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1980.
Ingredients: Tomato puree, textured soya protein, maize, starch, onion, hydrolised vegetable protein, salt, wheat flour, oregano, garlic, bay.
New Product–Documentation: Manufacturer's catalog. 1980. April. "Italian style Bolognese sauce with seasoned, minced soya protein. Serve hot with spaghetti or vegetables."

Rombauer's "The Joy of Cooking" (1975 ed., p. 353) has a recipe named Bolognese Pasta Sauce, which contains the following ingredients in descending order of predominance: Chopped lean beef, beef stock, dried mushrooms, dry white wine, and butter.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in 1980. It has been discontinued.

2138. Kondo, A.T. 1980. Belief systems and health status. Ph.D. thesis, University of Texas at Galveston, 1980. *

2139. **Product Name:** Loma Linda Ocean Fillets (Vegetarian Fish Fillets, Based on Spun Soy Protein Fiber).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1980.
Ingredients: Soy protein concentrate, soy protein isolate, water, wheat gluten, corn oil, soy flour, artificial flavors, egg whites, natural (vegetable) flavors, corn starch, oat flour, onion powder, whole wheat flour, salt, guar gum, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 10 oz paperboard box.
How Stored: Frozen.
Nutrition: Per 1 fillet (2.0 oz–57 gm): Calories 130, protein 13 gm, carbohydrate 5 gm, fat 10 gm, cholesterol 0 mg, sodium 280 mg, potassium 340 mg.
New Product–Documentation: See next page. Ad. 1980. "Two new ways to nourish your business. The meatless meals they'll be asking for." Label reads: "Meatless. Tantalizing Fish Flavor. Cholesterol Free. 8 Fillets." Sold frozen. Soya Bluebook. 1982. p. 60.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was said to be introduced in 1981.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2140. **Product Name:** [Meatless Soya Quenelles, or Dumplings].
Foreign Name: Sojanelles.
Manufacturer's Name: Pural.
Manufacturer's Address: 15 rue Leon Blum, 92113 Clichy cedex, France. Phone: 731.25.75.
Date of Introduction: 1980.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Pur-Aliment Food Factory in France was founded in 1928. Pural Booklet. About 1980 (undated).21 cm. Black on yellow paper. A new product is Sojanelles épicées.

Ad in Le Compas. 1986. March-April. Inside front cover. "Le No. 1 de la proteine vegetale vous propose une

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gamme complete de produits a base de soja [The Number One in Vegetable Protein Offers You a Complete Line of Soyfoods].” Canned.

2141. **Product Name:** Sanitarium Health Foods Soyalac Double Strength Liquid (Soymilk).
Manufacturer’s Name: Sanitarium Health Food Co.
Manufacturer’s Address: 148 Fox Valley Rd., Wahroonga, N.S.W. 2076, Australia.
Date of Introduction: 1980.
Ingredients: Water, soy oil, sucrose, soy isolate, corn syrup, dextrin, dicalcium phosphate, potassium citrate, lecithin, potassium chloride, calcium carbonate, magnesium phosphate, L-methionine, carrageenan, salt, ascorbic acid, ferrous sulphate, choline, inositol, zinc sulphate, d-alpha-tocopherol, vitamin A palmitate, niacinamide, cholecalciferol, calcium pantothenate, manganese sulphate, cupric sulphate, thiamine HCL, riboflavin, pyridoxine HCl, folic acid, potassium iodide, vitamin K, cyanocobalamin, biotin.
Wt/Vol., Packaging, Price: 375 ml can.
How Stored: Shelf stable.
Nutrition: Diluted 1:1: Protein 2.1%, fat 3.8%, carbohydrate other than lactose 6.6%, ash 0.5%.
New Product–Documentation: See next page. Soya Bluebook. 1980. p. 51. Letter from Sanitarium Health Food Co. 1981. Label. 10 by 3.5 inches. Full color with yellow background. Photo shows baby drinking from a bottle. “Specially formulated for milk allergies.”

2142. **Product Name:** Sovex Chili (Meatless Dry Mix).
Manufacturer’s Name: Sovex Natural Foods, Inc.
Manufacturer’s Address: Collegedale, TN 37315.
Date of Introduction: 1980.
Ingredients: Soy flour, coconut oil, tomato powder, minced onions, tamari soy sauce (made from water, soybeans, wheat, sea salt), chili powder (made from oregano, chili peppers, salt, cumin, garlic).
Wt/Vol., Packaging, Price: 17 oz In a 1 quart Pure-Pak carton.
How Stored: Shelf stable.
New Product–Documentation: Label. 1980. Label reads: “Sovex. The Granola People. Contains No Animal Products. No Preservatives. No Artificial Colors or Flavors. No MSG. No Sugar.” Two recipes and serving suggestions.

2143. **Product Name:** Sovex Vege-Pat (Vegetable Burger Dry Mix).
Manufacturer’s Name: Sovex Natural Foods, Inc.
Manufacturer’s Address: Collegedale, TN 37315.
Date of Introduction: 1980.
Ingredients: Rolled oats, soy flour [textured soy flour], sesame seeds, oat flour, miller’s wheat bran, soy grits, potato flour, sunflower seeds, minced onion, tamari soy sauce, food yeast, sage, garlic, onion.
Wt/Vol., Packaging, Price: 15 oz 1 quart Pure-Pak carton.
How Stored: Shelf stable.
New Product–Documentation: Label. Undated. Label

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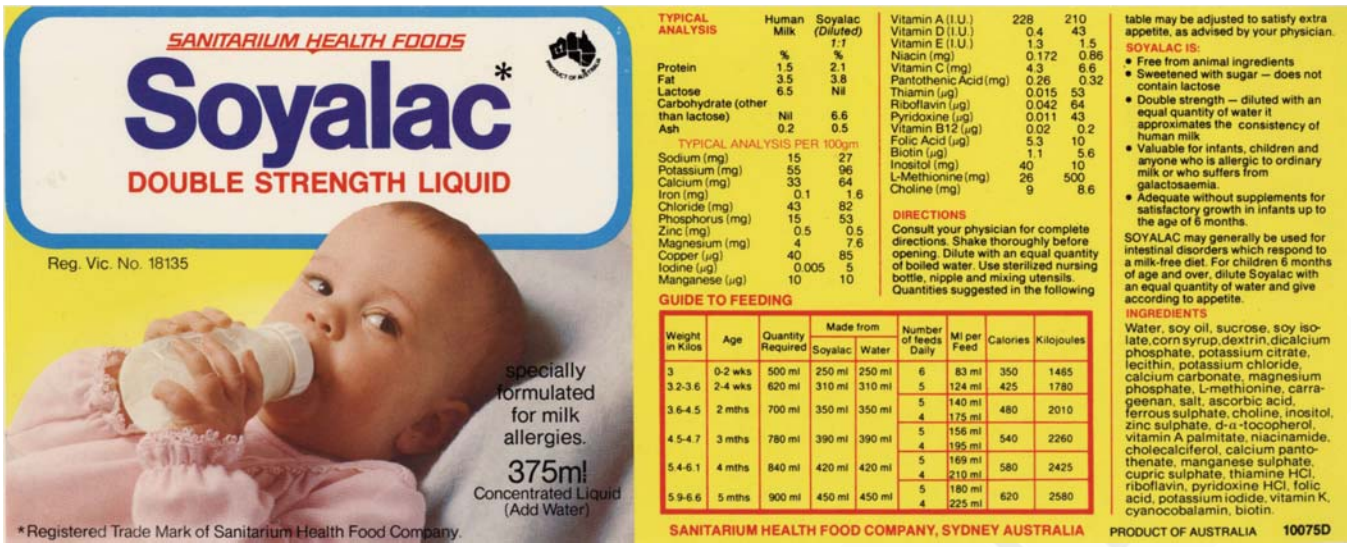

reads: "Sovex. The Granola People. Hamburger Flavor–Without Meat. Makes 16–3.5 inch patties. Contains No Animal Products. No Imitation Ingredients. No Artificial Colors or Flavors. No MSG. No Sugar." Two recipes.

2144. **Product Name:** Sovex Vege-Pat (Vegetable Sausage Dry Mix).
Manufacturer's Name: Sovex Natural Foods, Inc.
Manufacturer's Address: Collegedale, TN 37315.
Date of Introduction: 1980.
Ingredients: Soy flour [textured soy flour], unhulled [dehulled] sesame seeds, miller's wheat bran, oat flour, rolled oats, tamari soy sauce, potato flour, food yeast sage, crushed red pepper.
Wt/Vol., Packaging, Price: 15 oz In 1 quart Pure-Pak carton.
How Stored: Shelf stable.
New Product–Documentation: Label. Undated. Label reads: "Sovex. The Granola People. Sausage Flavor–Without Meat. Makes 18–2.5 inch patties. Contains No Animal Products. No Imitation Ingredients. No Artificial Colors or Flavors. No MSG. No Sugar." Two recipes.

2145. **Product Name:** Sovex Chili (Dry Mix; Meatless Chili).
Manufacturer's Name: Sovex Natural Foods, Inc.
Manufacturer's Address: Collegedale, TN 37315.
Date of Introduction: 1980.
Ingredients: Soy flour [textured soy flour], coconut oil, tomato powder, minced onions, tamari soy sauce (made from water, soybeans, wheat, sea salt), chili powder (made from oregano, chili peppers, salt, cumin garlic).
Wt/Vol., Packaging, Price: 15 oz 1 quart Pure-Pak carton.
How Stored: Shelf stable.
New Product–Documentation: Label. Undated. The front panel reads: "Sovex. The Granola People. Meatless Chili Mix. Contains no animal products." Other panels read: "No Preservatives. No Artificial Colors or Flavors. No MSG. No Sugar. Contains protein granules made from soy flour and tamari soy sauce." Recipes are given for Hay Stacks and Chili Casserole.

2146. **Product Name:** Westico Vege-Steak (Beef-Flavored Textured Vegetable Protein).
Manufacturer's Name: Westico Foods.
Manufacturer's Address: West Indies College, Mandeville, Jamaica.
Date of Introduction: 1980.
How Stored: Shelf stable.
New Product–Documentation: Letter from Robert Folkenberg. 1983. Feb. 15. "This company, organized in 1970, is presently a fairly small operation, producing about 2 tons of TVP each week. We fully expect this rate of production to increase dramatically in the near future."

Form filled out and labels sent by Westico. 1990. June 28.

Note: This is the earliest known commercial soy product (one of two products) made in Jamaica.

2147. **Product Name:** Westico Vege-Mince (Beef-Flavored Textured Vegetable Protein).
Manufacturer's Name: Westico Foods.
Manufacturer's Address: West Indies College, Mandeville, Jamaica.
Date of Introduction: 1980.
New Product–Documentation: Letter from Robert Folkenberg. 1983. Feb. 15. "This company, organized in 1970, is presently a fairly small operation, producing about 2 tons of TVP each week. We fully expect this rate of production to increase dramatically in the near future."

Form filled out and labels sent by Westico. 1990. June 28. Also in about 1980 Westico Foods started selling Loma Linda Vita-Burger Chunks, Redi-Burger, and Linketts. The label for each, which is basically the Loma Linda label,

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states that each food is "Processed by Westico Foods."

Note: This is the earliest known commercial soy product (one of two products) made in Jamaica.

2148. **Product Name:** Dinner Roast (Meatless Roast Beef).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1980.
Ingredients: Textured vegetable protein (soy protein concentrate and isolate, wheat gluten), egg whites, soybean and/or corn oil, partially hydrogenated soybean and cottonseed oil, flavorings (hydrolyzed vegetable protein, onion, monosodium glutamate, turmeric, artificial flavor, extracts of spices), disodium guanylate, disodium inosinate, modified corn starch, calcium caseinate, dextrose, sodium caseinate, yeast extract, lecithin, salt, carrageenan, niacinimide [niacinamide], caramel color, iron (as ferrous sulfate), vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12.
How Stored: Frozen.
New Product–Documentation: Label copyrighted 1980. Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2149. **Product Name:** Pizza Italiana (Meatless).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1980.
Ingredients: Topping: Water, textured vegetable protein (wheat gluten, soy protein concentrate and isolate), calcium and sodium caseinate, partially hydrogenated soybean and cottonseed oil,...
Wt/Vol., Packaging, Price: 15 oz (424 gm) paperboard box.
How Stored: Frozen.
New Product–Documentation: Label. 1980, dated. "Completely Meatless. Contains Vegetable Protein."

2150. **Product Name:** Vegetarian Lasagna.
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1980.
Ingredients: Water, cooked lasagna noodles, dry curd cottage cheese, tomato paste, flavorings (artificial flavors, garlic and onion powder, spices, onion disodium guanylate, disodium inosinate), textured soy protein concentrate, modified corn starch, corn syrup solids, calcium caseinate, partially hydrogenated soybean oil...
Wt/Vol., Packaging, Price: 18 oz (510 gm) paperboard box.
How Stored: Frozen.
New Product–Documentation: Label. 1980, dated. "Deliciously Blended with Vegetable Protein."

2151. **Product Name:** Veelets Parmesano (Meatless).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1980.
Ingredients: Textured vegetable protein (wheat gluten, soy protein concentrate and isolate), water, tomato paste, flavorings (artificial flavors, onion and garlic powder, spices, disodium guanylate, disodium inosinate), soybean and/or corn oil...
Wt/Vol., Packaging, Price: 14 oz (398 gm) paperboard box.
How Stored: Frozen.
New Product–Documentation: Label. 1980, dated. "A Meatless Vegetable Protein Delicacy in Rich Tomato Sauce."

2152. **Product Name:** Stakes Au Sauce (Vegetarian Beefsteak).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1980.
Ingredients: Water, textured vegetable protein (soy protein concentrate and isolate), wheat gluten, flavorings (artificial flavors, onion and garlic powder, onion, spices, disodium guanylate, disodium inosinate), soybean and/or corn oil...
Wt/Vol., Packaging, Price: 14 oz (398 gm) paperboard box.
How Stored: Frozen.
New Product–Documentation: Label. 1980, dated. "Meatless and Delicious. Contains Vegetable Protein."

2153. Calkins, Fern; Register, U.D.; Sonnenberg, Lydia. 1980. It's your world vegetarian cookbook. Enlarged, 2nd ed. Washington, DC: Review and Herald Publishing Association. 304 p. Illust. Index. 24 cm. Sponsored by Dept. of Nutrition, School of Health, Loma Linda University, and Southern California Conference of Seventh Day Adventists.
• ***Summary:*** It's Your World" is a television series hosted by Art Linkletter and sponsored by the Seventh-day Adventist Church in Glendale, California. The original edition was published in 1973. Contains a number of quotations on diet and health by Ellen G. White.

Soy-related recipes include: Catalina cutlets (with cooked soybeans, p. 13). Florentine fritters (with soybeans,

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p. 18). Frontier fritters (with soybeans, p. 21). Saucy soy sizzlers (with soybeans, p. 23). Hawaiian chestnut balls (with tofu, p. 24). Tofuburgers (p. 24). Tasty tofu timbales (p. 25). Millet gourmet casserole (with soybeans, p. 34). Tender soya broccoli (with FriChik and Soyannaise, p. 40). Savory baked beans (p. 45). Baked soybeans Americana (p. 48). Beans 'n' apples (p. 50). Soybeans Hawaiian (p. 54). Mandarin garden soys (using Loma Linda Green Soybeans, p. 60). Celebrated red rice (with adzuki beans, p. 63). Oriental tofu (p. 69). Stir-fry vegetables with tofu. Luncheon tofu (p. 70). Tofu dippers (p. 71). Pepper-olive tofu (p. 78). Emperor's feast (with tofu, p. 78). Tofu "steak" (p. 79). Tofu scramble (p. 88). Quick 'n' easy tofu (p. 89). Crispy tofu sticks (p. 89). "Cheesy" spread (with tofu, p. 96). Soybean soup a la Creole (p. 106). Tokyo special (with tofu, p. 111). Tofu salad (p. 130). Tofu stuffing (p. 132). Garlic-dill dressing (with tofu, p. 145). Tofu sour crème topping (p. 151). Garden vegetable dip, or Confetti dip (with tofu, p. 152). Whole-wheat bread (with tofu, p. 174). Wabash fried mush (with soy beans and soy flour, p. 182). Tofu "jerky" (p. 200). Roasted soy smacks (dry-roasted, seasoned soynuts, p. 201).

Pages 42-43 contain a cooking guide for dry beans, peas, and lentils. Adzuki (or Chinese red) beans are included. Concerning soybeans: "It is better to soak soybeans longer than other beans–2 or 3 hours or overnight. Soaked beans in small quantities may be frozen in containers as a convenience. Thaw before cooking or drop frozen into boiling water. 2/3 teaspoon of salt is enough for each cup of dry soybeans, or use 1 tablespoon chicken-like seasoning and ¼ to ½ teaspoon salt. When pressure cooking 1 cup soybeans, use 2 cups water; 1 teaspoon of oil may be added to keep from foaming; at the end of cooking time cool immediately under cold running water. Soybeans have a more nutty flavor and are more tender when they are served immediately after cooking."

Many recipes also called for commercial branded soy-based products made mostly by Loma Linda Foods or Worthington Foods. Pages 273-75 give a list of "Vegetable Protein Alternates (Analogs)." Those made by Loma Linda Foods or Worthington Foods are so marked. Details on tofu are given on pages 24, 69, 79, 275, and 298. Address: 1. B.A.; 2. PhD, RD, Chairman, Dep. of Nutrition; 3. M.A., R.D., Assoc. Prof., Dep. of Nutrition. All: School of Health, Loma Linda Univ., Loma Linda, California.

2154. Food Protein Council. ed. 1980. Government seminar. May 21, 1980: Abstracts and remarks. Washington, DC. 43 p. 28 cm. [65 ref]
• ***Summary:*** Contents: Introductory remarks, by B. Marlo Dirks (Procter & Gamble Co.). Rationale of soy products, by Russell Cooper (Ralston Purina Co.). Technical and nutritional aspects of soy protein, by Endre Sipos (Central Soya Co.). Current regulatory issues involving vegetable protein products, by Eugene I. Lambert (Covington and Burling, FPC Counsel). Educational effort by FPC, by Helen Horton (Miles Laboratories, Inc.). Food Protein Council member firms: ADM, Cargill, Central Soya, Dawson Food Ingredients, General Foods Corp., General Mills, Inc., Grain Processing Corp., Honeymead Products, Kraft, Inc., Miles Laboratories, Inc., Nabisco, Inc., Procter & Gamble Co., Ralston Purina Co., A.E. Staley Mfg. Co. Address: 1800 M St., Northwest, Washington, DC 20036.

2155. Kellogg, John Harvey. 1980. The natural diet of man. Imlaystown, New Jersey: Edenite Society. 132 p. Illust. Index. 28 cm. [50+* ref]
• ***Summary:*** A reprint of the original 1923 edition published in Battle Creek, Michigan, by the Battle Creek Modern Medicine Publishing Co. The author lived 1852-1943. Pages 128-32 are advertisements. Address: Battle Creek, Michigan.

2156. Pennington, Jean A.T.; Church, Helen Nichols. eds. 1980. Bowes and Church's food values of portions commonly used. 13th ed. Philadelphia, Pennsylvania: J.B. Lippincott Co. xvii + 186 p. Index. 28 cm. 1st ed. was 1937. 2nd ed. was 1939. 10th ed. was 1966. [62 ref]
• ***Summary:*** The index contains entries for: Beans (but no soy). Cheese and cheese food (but alternatives). Cheez-its, Chili–vegetarian. Float, Dairy Queen. Flour. French fried potatoes (Arthur Treachers, Burger Chef, Burger King, Dairy Queen, Long John Silver's, McDonald's, Wendys). Ice cream bars. Infant formulas (Isomil–Ross Labs, L-Soyalac–Loma Linda, Neomullsoy–Syntex, Nursoy, ProSobee–Mead Johnson, Soyalac–Loma Linda). Irishmoss [Irish moss]. Milk (goat, human, Indian buffalo, reindeer, sheep, soybean, whole). Miso. Natto. Oils. Soyamaise dressing (p. 122). Soyamel. Soybeans, fermented. Soybean curd. Soybean flour. Soybean milk. Soybean nuts. Soybean oil. Soybean protein. Soysauce. Teriyaki sauce. Tigers Milk Bar. Tofu. Tom Collins. Veg Skalops. Veja-Links. Vegeburger. Vegetarian products made mostly by Worthington Foods and Loma Linda (p. 22-23): Beef style roll, Chicken style, Chic-Ketts, Chili, Corned beef style, Croquettes, Dinner cuts, Fry Sticks, Gran Burger, Meatloaf mix, Nuteena, Prosage, Proteena, Rediburger, Smoked beef style, Stakelets, Stripples, Tasteecuts, Turkey Style–Smoked, Vega-links, Vegeburger, Veg Skallops, Vegetarian Burger, Vitaburger, Wham. Yogurt.

Aluminum is not among the lists of trace minerals in foods in the back. The book *does* list the following as trace minerals: chromium, cobalt, fluoride, iodine, molybdenum, nickel, selenium, and tin. Address: 1. Formerly Instructor of Nutrition, City College of San Francisco, San Francisco, California [Now with U.S. Food and Drug Administration, Washington, DC]. Phone: 202-245-1064.

2157. Phillips, R.L.; Kuzma, J.W.; Lotz, T.M. 1980. Cancer mortality among comparable members versus nonmembers

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of the Seventh-day Adventist church. In: J. Cairns, J.L. Lyon, and M. Skolnick, eds. 1980. Cancer Incidence in Defined Populations. Banbury Report 4. New York: Cold Spring Harbor Laboratory. xi + 458 p. See p. 93-108. *

2158. Tsuchiya, Kanji. 1980. Tônyû: Yomigaetta dentô shokuhin [Soymilk: Traditional food that's make a comeback]. Tokyo: Shokuhin Kenkyusha. 176 p. 2nd edition published in Dec. 1982. Illust. 17 cm. [Jap]
• ***Summary:*** This is the best book seen on soymilk in Japanese. For contents and details, see the enlarged 2nd edition (Dec. 1982). A portrait photo on the rear cover shows the author, Kanji Tsuchiya, and gives a brief biography.
Address: Technical consultant, Okazaki Marusan, Japan.

2159. Worthington Foods, Inc. Div. of Miles Laboratories, Inc. 1980. Facts & recipes. Worthington Soyamel (Leaflet). Worthington, Ohio. 4 panels each side. Each panel: 22 x 9 cm.
• ***Summary:*** One panel is facts about Soyamel (powdered soymilk) and 5½ panels are recipes.
"Family-pleasing Soyamel is available in
"Regular (12 oz., 4 lb. and 20 lb),
"Fortified (12 oz., 4 lb. and 20 lb),
"Instant (10 oz., 3½ lb. and 18 lb), and
"Instant Malt (3½ lb. and 18 lb) at many fine stores."
Address: Worthington, Ohio.

2160. Pural. 1980? Spécialités Pural [Pural specialties]. France: 14 p. Undated. 21 cm. [Fre]
• ***Summary:*** See next page. This Seventh-day Adventist company sells the following soy-related products: Sojlactis (soymilk). Sojanelles (meatless soya quenelles or dumplings). Granotose and Frika-Vita. Grano-san (a paté that includes soy flour). Sandwich-san (with soy flour). New products: Sojanelles épicées, Pasta-Chuta (with soy proteins). Sojafleish (soymeat based on TVP).

2161. **Product Name:** Veja-Bits.
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1980?
New Product–Documentation: Shurtleff & Aoyagi. 1983. History of Worthington Foods. p. 11.

2162. **Product Name:** Super-Links (Regular, or with Artificial Frankfurter Flavor).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1980?
Wt/Vol., Packaging, Price: 19 oz can. Retails for $2.70 (7/90, California).
New Product–Documentation: Shurtleff & Aoyagi. 1983. History of Worthington Foods. p. 11.

2163. Boles, Frank. 1981. Re: First summary of archival research on Dr. John Harvey Kellogg, with many photocopies of documents. Letter to William Shurtleff at Soyfoods Center, Jan. 21. 3 p. Typed, with signature on letterhead.
Address: Bentley Historical Library, The Univ. of Michigan, 1150 Beal Avenue, Ann Arbor, MI 48109.

2164. **Product Name:** Granose Soya Milk (Plain, or with Carob).
Manufacturer's Name: Granose Foods Ltd. (Marketer). Made in Belgium by Alpro.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1981 January.
Wt/Vol., Packaging, Price: 500 ml Tetra Brik Aseptic carton.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Soyfoods Center Computerized Mailing List. 1983. July 20. STS. 1985. Containers for Soymilk. Shows color photo of 500 ml Tetra Brik carton. Orange and green on white. "100% Vegetable. Rich in protein. High in polyunsaturates." Use by 7/84.
Form filled out by Alpro. 1990. May 30. Alpro began making this product (2 flavors) in Jan. 1981 in 500 ml cartons. Granose stopped buying it from Alpro in Dec. 1984; DE-VAU-GE became the new source.
Note: This is the earliest product seen in Britain that uses "Soya Milk" as the product name.

2165. Worthington Foods, Inc. A Division of Miles Laboratories, Inc. 1981. Dealer wholesale price list–order blank. Worthington, Ohio 43085. 1 p. Feb. 1.
• ***Summary:*** The following products are listed: Dry Foods: Soyamel (fortified or regular). Granburger. Kaffree tea bags (regular, mint, or spicy orange).
Canned foods: Vegetarian burger. Chili. Choplets. Vegetarian cutlets. Numete. Protose. Saucettes. Vegetable Skallops. Soyameat (sliced beef, sliced chicken, diced chicken, Frichik, prime stakes), Prime stakes. Worthington "209." Veg. steaks. Veja-Links. Super Links. Non-meat balls. Sandwich spread.
Frozen foods: Beef, roll. Corned beef (sliced or roll). Smk. [Smoked] Beef (sliced or roll). Beef pie. Tuno pie. Chicken (sliced, diced, or roll). Chik Stik. Chicken pie. Chic-Ketts. Wham (sliced or roll). Veja Links. Prosage (patties, links, or regular). Bolono (regular or roll). Meatless salami (regular or roll). Smk. [Smoked] turkey (sliced or roll). Veg. egg rolls. Veelets parmesano. Stakes au sauce. Vegetarian

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SPÉCIALITÉS PURAL

Fiches techniques :

1. Sojlactis
2. Sojanelles
3. Granotose et Frika Vita
4. Grano-San
5. Sandwich-San
6. Tranches lacto-végétales
7. Spéciale levure Pural
8. Purées d'oléagineux
9. Algodentyl
10. Brosse à dents
11. Produits nouveaux
    - Sojanelles épicées
    - Sandwich-olives
    - Sandwich-céréales
    - Sandwich-champignons
    - Pasta-Chuta
    - Sojafleisch
    - Koletts

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lasagna. Pizza Italiana. Dinner roast. Fillets. Stakelets. Fripats. Tuno. Address: Worthington, Ohio. Phone: 614-885-9511.

2166. Webber, Harry. 1981. Perry Webber, Madison College, and Madison Foods (Interview). Conducted by William Shurtleff of Soyfoods Center, Feb. 8. 2 p. transcript.
• ***Summary:*** Harry Webber, the son of Perry A. Webber, attended Madison College from 1930 to 1935, then 1939-1943. He left in 1943 to go to medical school. Harry remembers the foods served at Madison. Vigorost was a gluten meat invented by Perry. There was also Nutmete or Notmete, and several others. They were served to students and widely retailed at health food stores. Ed Bisalski, the sales manager, traveled around the USA selling these foods.

Perry Webber first went to Madison in about 1931. He earned his doctoral degree at Michigan State, graduating in about 1930-31, then went to Madison. Years before that he had been a missionary in Japan.

Harry went to Japan with his father, Perry, for 3 years. Harry's mother has written a biography of Perry; he will send Soyfoods Center a copy. Emmanuel Missionary College asked that she write the book. His interest was in food chemistry. He was head of the chemistry department at Madison. In the early 1930s he got interested in soy.

P.A. Webber and his family went to Japan from 1935 to 1939, then came back to the USA just before World War II, and went to Madison College–where Perry did lots of work with soyfoods.

Perry Webber was good friends with Dr. Harry Miller and he got interested in soymilk through Dr. Miller, probably first in Japan. He visited with Dr. Miller in Japan and saw his program, but Perry was interested in soymilk before 1935. His brother was in Tokyo at the Adventist hospital.

Sam Yoshiwara knew Perry Webber well and was one of his students in Japan. Perry sponsored him to come to the USA. Sam worked in the food factory at Madison College.

There is a small book about Sutherland and Madison by a man who taught Spanish at Madison. Address: M.D., 913 Meadowwood Dr., Modesto, California 95355. Phone: 209-521-1410 OF. 209-529-4291 HM.

2167. Howse, Eric. 1981. Seventh-day Adventist work with soyfoods worldwide (Interview). Conducted by William Shurtleff of Soyfoods Center, Feb. 12. 2 p. transcript.
• ***Summary:*** Howes was the International Director at the General Conference in Washington, DC, until he retired. Soyfoods are a rapidly growing component of Adventist food work worldwide. Discusses: Sanitarium Health Food Co. in Australia, DE-VAU-GE in West Germany, Granose Foods in England. A major new component is low-cost extruders making TVP. Address: 6471 Penn National Drive, Fayetteville, Pennsylvania 17222. Phone: 717-352-7239.

2168. Goodbrad, John. 1981. History of various small Adventist food companies (Interview). Conducted by William Shurtleff of Soyfoods Center, Feb. 15. 1 p. transcript.
• ***Summary:*** Discusses: Butler Foods and Vesper Sias, Sunnyvale Academy (Missouri), Lange Foods, Cedar Lake, New England Sanitarium, Boulder Sanitarium (Colorado), Jethro Kloss, Mrs. Fuller of Collegedale, Tennessee. Address: Owner, Sovex Natural Foods, Box 310, Collegedale, Tennessee 37315. Phone: 615-396-3145 (or 2111).

2169. Innocent, Ken. 1981. History of Millstone Foods (Interview). Conducted by William Shurtleff of Soyfoods Center, Feb. 16. 1 p. transcript.
Address: Box 323, Penryn, California 95663. Phone: 916-663-3302.

2170. Sias, Vep C. 1981. History of Cedar Lake Foods and other Adventist food companies (Interview). Conducted by William Shurtleff of Soyfoods Center, Feb. 18. 2 p. transcript.
Address: 740 N.E. 42nd Terrace, Ocala, Florida 32671. Phone: 904-236-3766.

2171. Fischer, R.W. 1981. Re: History of soyfoods manuscript. Harry W. Miller, Jr. Letter to William Shurtleff at Soyfoods Center, Feb. 19. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "Thanks for your good letter of February 7...

"I would be glad to read the manuscript on soyfoods history. Am glad you are undertaking this very worthwhile effort. You might also want to get the benefit of the truly vast knowledge in this are of Harry W. Miller, Jr. He worked closely with his father on soy foods for nearly 50 years. His address is:

"Harry W. Miller, Jr., 431 Citadel Street, Gahanna, Ohio 53020.

"I, too. hope I can attend the Soyfoods Conference in Colorado." Address: President, Soypro of Iowa Inc., 314 Main St., Cedar Falls, Iowa 50613. Phone: 319/266-0678.

2172. Yoshimura, Sam. 1981. Re: Chronology of work at Madison Foods and reminiscences. Letter to William Shurtleff at Soyfoods Center, Feb. 20. 2 p. Typed, with signature.
• ***Summary:*** 1937-1943. Sam attended Madison College and received a B.S. degree in nutrition in 1941. "At that time extensive study on soy beans and human nutrition was conducted at the college under the direction of Francis Dittes, (Ph.D. in nutrition) Phillip Chen, (Ph.D. in chemistry) and Perry Webber (Ph.D. in nutrition). Madison Foods (owned by the college) was manufacturing various canned and dried vegetable protein products including Kre-O-Soy

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(soy milk) and Cheze-O-Soy (seasoned tofu) and marketed them nationally. I received valuable experience working in the food plant.

1943-1946. Sam went to Emmanuel Missionary College located in Berrien Springs, Michigan (now renamed Andrews University), and received a B.S. degree in agriculture in 1945.

1945-1956. Sam returned to Japan and re-established San-iku Foods (owned by the Japan Missionary College). The college was closed during World War II. The company made canned and baked products based on wheat and soy proteins and marketed them extensively, including at Mitsukoshi, Seibu and other department stores. A series of pilot scale tests of soy milk production was conducted under the direction of Dr. Harry Miller. However, they did not start commercial production due to the somewhat weak public response to the product.

1956-1963. He worked for Madison Foods in Tennessee, where he was responsible for managing the production, research, and development program. Various canned vegetable protein products were produced. Madison Burger based on wheat and soy protein and improved Cheze-O-Soy were well accepted by the market. At the beginning of 1962, production of Infa Soy using Dr. Harry Miller's formula, was started under the direction of his son, Willis Miller; J.B. Craw was general manager at that time.

1963-1964. Sam left Madison Foods and went to work for Madison Hospital (owned by the organization). He was assigned to develop economical vegetable protein products suitable for hospitals, schools and other institutions. A series of frozen products including the so-called "Sam's Chicken," made with wheat protein [gluten] and tofu, were formulated. The product was well accepted by institutions as it had a torn chicken-like texture. "It was a least expensive product. I understand a dish prepared with Sam's Chicken (supplied by Southern Missionary College) received recognition at the International Restaurant Show in Chicago several years ago.

1965 to present. He joined Worthington Foods after Worthington acquired Madison Foods. Worthington sent him to Africa Basic Foods Inc. in Uganda, East Africa, to assist development of soy protein products. During his 6-month stay the company produced soy milk, tofu, CSM (combination of corn, soy and powdered skim milk) and other high protein products for hospitals and the school lunch program. It was a missionary project for the company to take part in solving kwashiorkor problems. It was an unforgettable and rewarding experience for Sam. He is a staff member of the R&D department, especially assigned to develop new products. He is also a professional member of the Institute of Food Technologists.

For information regarding Krem-O-Soy and other products from the early days of Madison Foods, contact Dr. Register (Chairman, Dep. of Nutrition, Loma Linda Univ.) or Dr. Shirou Kunihara at the same university. They were students at Madison College and did R&D work for the food plant. The son of Dr. Philip Chen (deceased) is at the Weimar Institute, Box A, Weimar, California 95736. Address: 8200 Colonial Meadows, Westerville, Ohio 43081. Phone: 614-882-0625.

2173. John, Harrison W. 1981. Adventist food industries: Recent developments. *Spectrum: Journal of the Association of Adventist Forums* 11(3):28-36. Feb.
• ***Summary:*** One of the most informative articles ever written about Seventh-day Adventist food companies worldwide. "Ever since Ellen G. White's health reform message of 1863, Seventh-day Adventists have had a 'theology' of nutrition." In 1979 food sales for Adventist manufacturing and marketing companies totaled $188 million, up 95% over 1974 sales of $96 million, and up 3.68 times over 1970 sales of $51 million. The most successful company is Sanitarium Health Food Company in Australia. Sales for the 5-year period 1975-75 totaled $400 million. Their most popular product is read-to-eat "Weet Bix," a breakfast cereal that outsells Kellogg's Corn Flakes.

In Europe: Earned income figures for 1978 were impressive. DE-VAU-GE's income was $12.2 million (second only to Sanitarium Health Foods in Australia). Nutana's was $7.6 million ($10 million in 1979), and Granose's was $1.8 million. Nutana showed an impressive tenfold sales increase from 1973 to 1979.

Profit figures, however, were not impressive. In 1978 Granose lost about $295,000 and Nutana $5,903. DE-VAU-GE's profits were unknown. Granose had been a consistent money looser; between 1975 and 1978 it lost an average of $101,000 a year and its net worth decreased from $331,902 in 1975 to $113,515 in 1978. Thus in October 1979 Sanitarium Health Foods of Australia was asked to take over the management of ailing Granose. Loma Linda Foods in the USA has also had problems. Though 1978 sales were $11.7 million, they lost $390,000. In April 1980 management and control of LLF was transferred to Sanitarium of Australia. In about 1978 Granix in Argentina and Superbom in Brazil entered the vegetable protein market with TVP and are currently producing 700 tons/year. In 1976 a "World Foods Service Expansion Program" was started to finance expansion of food production into countries having serious nutritional problems. Low-cost extrusion cookers making TVP were a key part of this program. Address: Rockville, Maryland.

2174. Leviton, Richard. 1981. Making soymilk in America. *Soyfoods* 1(4):16-24. Winter.
• ***Summary:*** A review of soymilks available nationwide and a detailed analysis of Numu, New England Soy Dairy's problematic soymilk and the reasons for its failure in September 1980, at a cost of $40,000. Also discusses: Vitasoy (imported to California). President Soybean Drink

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(imported to California). Soy Fresh (made by Quong Hop in California since 1972). Soy Moo (made by Health Valley in California). Fresh Soybean Juice (made by Wy Ky of Los Angeles). Soymilk (made by Mighty Soy). Soybean Beverage (made by Hoven Foods, Seattle). Soy Juice (made by Redwood Valley Soyfoods Unlimited [Richard Rose]). Plain Soymilk (made by Island Spring, Vashon, Washington). Nutrisoya (made by Victor Food Products, Toronto, Canada). Soy-Ya! (made by Joy of Soy, Minneapolis, Minnesota). Soy Milk (made by White Wave of Boulder, Colorado). Soyalac and Soyagen (made by Loma Linda of Mt. Vernon, Ohio). In 1978 Nasoya introduced Vidasoy–prematurely; it was a disaster. A photo shows Stephen Yu holding a bottle of Victor Foods' Nutrisoya. Address: Colrain, Massachusetts.

2175. **Product Name:** [PHAG Soya Drink].
Foreign Name: PHAG Soja-Drink.
Manufacturer's Name: PHAG Sàrl (Produits Hygièniques Alimentaires Gland) (Marketer-Distributor). Made in Belgium by Alpro.
Manufacturer's Address: La Ligniere, CH-1196 Gland, Switzerland. Phone: 022/64 11 18.
Date of Introduction: 1981 February.
Wt/Vol., Packaging, Price: 0.5 liter Tetra Brik Aseptic carton.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: This company was founded in 1895. Leviton. 1983. Report on soyfoods research and speaking trip to Europe with American Soybean Assoc., Oct. 8–Nov. 15. p. 17. Product seen at Reformhaeuser in Switzerland. Retailed for F1.65/500 ml.

Letter from Remy Mayer of PHAG. 1990. Oct. 2. This product was introduced in Feb. 1981. His company distributed the product, which was made by a manufacturer in Belgium [probably Alpro]. "PHAG is written officially in capital letters. It is an abbreviation of 'Produits Hygièniques Alimentaires Gland.'" On the company's letterhead, the logo is an illustration of the profile of a squirrel. Below the logo is written: "Force de la nature–Kraft der Natur" ("The Power of Nature"). After the company's name is written "Alimentation naturele–Neuzeitliche Nahrungsmittel" ("Natural foods–Modern foods"). New labels were created in 1985 after DE-VAU-GE began soymilk production.

Labels sent by Mayer. 1991. Jan. 24. 500 ml and 1 liter Tetra Brik Aseptic cartons. Red and green on white.

2176. Shurtleff, William. 1981. Dr. Harry Miller: Taking soymilk around the world. *Soyfoods* 1(4):28-36. Winter.
• ***Summary:*** Contents: Introduction. Growing up (1879-1902): Birth, early contact with Dr. J.H. Kellogg, marriage. Early years in China (1903-1911). Washington, DC (1912-1925). Pioneering soymilk in China (1925-1939): Research, development of plant, destruction of plant 13 Aug. 1937, U.S. patent, No. 2,078,962 for soymilk process and equipment, work before return to U.S. Introducing soyfoods to America (1939-1949): In Mt. Vernon, new products, work with AMA, American Soybean Assoc. speaker and lifetime member 1958, contact with K.S. Lo and Vitasoy. Research and work around the world (1949-1977): Quick visit to Shanghai, death of second wife, sale of International Nutrition Foundation, Taiwan work, Indonesian plant, Trinidad, Libya, Japan, old age and relationship with William Shurtleff, the "Great Man." Contains 5 photos, and a sidebar titled "Early History of Soymilk."

Among the many people who pioneered in bringing soyfoods to America and to the West, two men of great vision, dedication, and perseverance deserve special mention: Dr. Harry W. Miller and William J. Morse. Dr. Miller, the well-known 'China Doctor'(after his biography by that title), was a world-famous missionary doctor and surgeon, and founder of more than 15 Seventh-day Adventist hospitals around the world. He was one of those unique individuals who was both a dreamer and a doer, and who inspired almost everyone who knew him.

"Like W.J. Morse, he considered it his personal 'responsibility to awaken the West to the wonders of the soybean and to promote its use as food. (But where Morse was interested in soybean agronomy, livestock feeding, and food, Miller was interested only in food uses.) Dr. Miller can also be considered the founder of the modern soymilk renaissance in Asia. The development and popularization of soyfoods, and especially soymilk, was his lifelong hobby and despite his other numerous and demanding careers, he never lacked the time, over a span of almost 75 years, to continue his ongoing research and work in this new field that he loved so well.

"Growing Up (1879-1902): The first of five children of Amanda Ehlers and John Oliver Miller, Harry was born in a log cabin on a farm in the small town of Ludlow Falls, Ohio (just north of Dayton) on 2 July 1879. His father was a school teacher. He later wrote that he delighted in working on the family farm but found it 'disgusting' to have to kill and eat the animals he had raised. When he was 12, Harry's parents became Seventh-day Adventists. Two years later, after much study, at the annual camp meeting, he and a friend decided to be baptized and become Adventist church members.

"At age 15 Harry entered secondary school at the Adventist-run Mt. Vernon Academy in Mt. Vernon, Ohio. He loved the strict, puritan atmosphere, the vegetarian diet, and the teachings of the church. In 1898, at age 19, he enrolled in medical school at the newly opened, Adventist-run American Medical Missionary College in Battle Creek, Michigan, which was associated with Dr. John Harvey Kellogg's Battle Creek Sanitarium (founded in 1866), the largest and most progressive medical institution of its kind in America at that time, and the birthplace of modern dietetics. Opposing the popular cures of the day (drugs, bleeding,

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etc.), the sanitarium recommended diet (especially a simple grain-based vegetarian diet), exercise, hydrotherapy and good mental health as the foundations of healthful living and natural healing. These teachings had a lifelong effect on Miller.

"Working to pay his own tuition, room, and board, Miller led guided tours through the sanitarium and food factory, which forced him to learn more about the various foods (America's first meat analogs and breakfast cereals) and how they were made. Miller was deeply influenced by the personality and teachings of Dr. J.H. Kellogg, who personally taught a number of the classes Miller attended, treated him like a son, and helped put him through college. One of America's great pioneers of both nutrition and of soyfoods, Kellogg stressed to the small class the importance of preventive medicine, nutrition, and diet. He strongly opposed the use of alcohol, tobacco, caffeine, and narcotics. Miller later noted that almost all the students in the small class lived past the age of 90; Kellogg lived to age 91, Miller to 97½ and one classmate to 101.

"Miller graduated in 1902 and was married to a classmate-doctor, Maude Thompson, the same year. During an internship autopsy, Dr. Miller cut his finger badly and suddenly contracted systemic blastomycosis, an infection considered at the time to be fatal. With deep faith he prayed to God, promising that if he were to be healed, he would go anywhere in the Lord's service. To the astonishment of his doctors, Miller was miraculously healed. This greatly deepened his faith. Shortly thereafter a call came from the Adventist church for a missionary doctor in China. Miller accepted the challenge. For the rest of his life he prayed for his patients before all operations (minor or major), and, according to others, apparently his great faith was rewarded by their recovery.

"Early Years in China (1903-1911): In October 1903, Dr. Miller and Maude, together with another physician couple, sailed for China, stopping briefly in Japan. In Kobe, at the home of fellow Adventists, Myrtle Lockwood first introduced Miller to soyfoods serving an entree called Tofu Loaf, with which Miller was particularly impressed. In China the couple went deep into the interior, near the center of Honan Province, where they found great poverty and malnutrition. They both learned Chinese, dressed like the local people, and even adopted the hair style of a long queue and shaved pate. They also ate Chinese foods, and soon Miller was visiting local tofu shops, learning about and sampling tofu, yuba, curds, soymilk, and the like. He found that tofu was much more widely consumed than soymilk, although the latter was quite widely used as a spicy hot breakfast soup and a warm, sweetened beverage. Dr. Miller later said (1961) that many Chinese and other East Asians told him that they did not drink much soymilk since they believed it caused them intestinal disturbances, which tofu did not. Perhaps this was why soymilk was not generally fed to infants-and children.

"In 1905, Dr. Miller's beloved wife died suddenly of an unknown disease. He was 26. 0ut of his deep sadness grew an even deeper commitment to help the impoverished and suffering millions of China. After a brief return to America two years later, where he married Marie Iverson, Miller returned to Shanghai. Two daughters were born in 1908 and 1910. Then Dr. Miller contracted a severe unknown disease and was forced to return to America in 1911.

"Washington, D.C. (1912-1925): Miller eventually managed to heal himself of what he later learned was a vitamin deficiency illness called sprue. During recovery he taught the Bible at Mt. Vernon Academy, his former alma mater and in 1912 his first son. Harry Willis, Jr., was born. Soon he was called to the position of medical superintendent and surgeon of the Adventist-run Washington Sanitarium and Hospital, which he developed into a Mecca for congressional leaders of the day. He became consulting physician to three U.S. presidents. In Washington he pioneered new techniques of thyroid goiter surgery, which lowered fatalities from 50 percent to about one percent. He eventually performed over 6,000 goiter surgeries around the world. In Washington he also met Dr. W.J. Morse and Dr. J.A. LeClerc, both soy pioneers from the USDA. He later wrote that these men filled him with 'inspiration, enthusiasm, and information,' and both later made frequent visits to Miller's soymilk plant in Ohio. In 1915 a fourth child, Clarence, was born.

"Prior to 1917 the Sanitarium had used a lot of dairy products on its vegetarian menus, but in that year, with World War I under way, all milk supplies from the local dairy were requisitioned by the Walter Reed Military Hospital. The sanitarium bought its own herd, but the problems that Miller found with contamination, animal disease (tuberculosis), and the like, convinced him of the need to develop a good alternative to dairy milk. In the small food plant connected with the hospital, where several soyfoods were already being produced for use in the lacto-vegetarian diet, Miller began a few basic soymilk experiments in 1925." Continued. Address: Lafayette, California.

2177. Shurtleff, William. 1981. Soymilk at Loma Linda. *Soyfoods* 1(4):24-26. Winter.

• ***Summary:*** This is a detailed, step by step description of how soymilk is made by Loma Linda Foods at their plant in Mt. Vernon, Ohio, based on the author's visit to that plant. Loma Linda sells nine types of soymilk under two brand names: Soyalac is specially formulated for infants and Soyagen is for adults. Soyalac constitutes 75-80% of the companies total sales. i-Soyalac is an infant soymilk made from soy protein isolates; like regular Soyalac it is sold canned in 3 forms: concentrated, ready-to-feed, and powdered. Regular Soyalac outsells the isolate-based product by 2 to 1. "Of all the Loma Linda soymilks, their best seller is Soyalac concentrate, followed by their i-Soyalac

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concentrate, their ready-to-feed Soyalac, and then their powdered Soyalac. Their main competitor is Worthington's Soyamel, which is sold powdered in Pure Pak cartons at health food stores.

"Of the 70-75% of all babies in the U.S. that are raised on a formula rather than breastfed, 25% of these are fed a soy-based formula and 75% a dairy-based formula. Loma Linda presently has about 7% of the soy-based infant formula market. The largest shares of that market are held by Ross Labs' Isomel (approximately 50%), and Mead Johnson's Prosobee (40%). Wyeth Labs in Pennsylvania also has a 3% share... Of the adult soymilk market, Loma Linda's Soyagen (made with whole soyabeans) has about 60% and Worthington's Soyamel (made with soy protein isolates) has about 40%."

One interesting observation is that babies raised on a soy-based infant formula generally have a strong dislike for the flavor of cow's milk. Some 7% of U.S. babies are allergic to cow's milk and a small percentage are allergic to the lactose in mother's milk. Address: Soyfoods Center, Lafayette, California.

2178. Shurtleff, William. 1981. Dr. Harry Miller: Taking soymilk around the world (Continued–Document part II). *Soyfoods* 1(4):28-36. Winter.

• ***Summary:*** Continued. "Pioneering Soymilk in China (1925-1939): In 1925 Miller accepted the church's invitation to return to Shanghai to develop a network of Adventist health care facilities, the first of which was the Shanghai Sanitarium and Hospital, which opened January 1, 1928, with Dr. Miller as medical director. Deeply touched by the high infant mortality rate caused by malnutrition, Dr. Miller began again in 1926 to turn his attention to soymilk, working on it steadily in his spare time at a small food plant located behind the hospital building. A growing number of orphaned infants began to appear at the hospital. Their only hope of finding food was to find a wet nurse or to be fed cow's milk, which was very expensive in China and which not all infants tolerated well.

"Dr. Miller was determined to develop a soymilk that had good flavor and digestibility, could be formulated to nutritional equivalency to mother's milk, was low in cost, and had a good storage life. Preparing his soymilk at the small soy plant in the typical Chinese way, with cold extraction of the soymilk from the okara, followed by cooking, he began to study ways to remove the beany flavor and make the soymilk more digestible.

"On his medical travels in other parts of China, and in Korea and Japan, he visited tofu shops and studied their methods. He believed that the beany flavor resulted from natural oils in the soybean; perhaps if the soymilk were spray dried and then reformulated with fresh soy oil, the flavor would improve.

"In the early 1930s, returning to America on furlough, he purchased the necessary equipment for a small soy dairy and had it shipped to China; a motorized stone mill, an American extractor, and a small homogenizer. Soon he was making improved formulated soymilk for the babies, patients, and staff at the Shanghai Sanitarium. The Chinese, too, liked the flavor. Some friends cajoled that it was 'undignified for a talented surgeon to be always playing around with beans.' Miller was undaunted, yet the beany flavor persisted.

"One day, in the mid 1930s, the breakthrough came as he was standing in the kitchen of the compound working with slurry from a tofu maker. He later wrote: 'I heard a divine voice behind me that said "why don't you cook it longer with live steam?" No one had ever thought of that before. Soon the staff and patients noticed the improved flavor and digestibility, and he added some soy oil or peanut oil during homogenization to make it even better. With new enthusiasm he began more baby feeding experiments. Soymilk was added to what was called the sanitarium's 'Universal Diet,' which also included whole wheat bread and half polished rice, plus other soyfoods. During a trip to the Philippines at this time he learned from refiners of coconut oil that steam distillation and flash pasteurization improved flavor of foods containing fats by driving off volatile oils and gases.

"So promising was the new product that Miller began to move forward on three fronts: controlled feeding studies on infants, establishment of a commercial soy, dairy, and application for a U.S. patent. In 1932 Dr. Miller had established the Vetose Nutritional Laboratory for furtherance of his research. For two years (1936-37) he fed formulated soymilk to several hundred small children at the Shanghai Clinic, running control tests with fresh cow's milk and various types of American and European prepared baby foods. The study turned out well and the results were published in the April 1936 issue of the prestigious *Chinese Medical Journal*, an English-language publication read widely in the U.S. and China. Here it was officially noted that babies could be nourished from birth fully as well with soymilk as with animal milks. This led to increased interest in the product. Dr. Miller later wrote: 'I regarded that work as of far greater importance than the building up of the sanitarium because it had to do with the preservation of thousands of lives that otherwise would be lost if they did not have a proper substitute for mother's breast milk, since cow' milk is beyond the economic level of the Chinese people and almost all Oriental races.' In later years follow-up infant feeding studies were done by other researchers using Dr. Miller's soymilk at the Indigent Hospital in the Philippines, at Tokyo University, and at Ohio State University at the Children's Hospital in Columbus, Ohio.

"In January 1936 Dr. Miller and his oldest son, Willis (who did much of the plant design and equipment construction and was the production manager), opened a full-scale soy dairy, the first of its kind in the world, on Pingliang

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Road in Shanghai, not far from the Shanghai clinic. The milk was cooked with live steam in open-top kettles. Soon a fresh liquid beverage, called Vetose Soya Milk, was available in natural, chocolate, and acidophilus flavors, in half-pint and quart bottles. The tangy acidophilus, cultured, bottled (but not sterilized) and delivered chilled was a real favorite. Ice cream was sold to institutions and meat analogs were under development. Production skyrocketed, doubling each month. Eventually the entire city of Shanghai had a soymilk route with thousands of families receiving door to door deliveries (by three-wheel pedicycles with carts behind them) of 3,000 quarts and 4,000 half-pints a day. The commercial product sold for less than dairy milks and cost less than one-fourth as much to produce. The soymilk proved so successful that it was soon included in rations for the Chinese army. A system for making dehydrated soymilk was also set up using a locally made Grey Jensen spray dryer; the government planned to use the dehydrated soymilk in rations that were lighter in weight and could be stored longer.

"But the Japanese were now invading China and on August 13, 1937, just eight months after the plant opened, it was totally destroyed by Japanese crossfire and bombs. (At the same time another soy dairy was being run by Julean Arnold of California and Nellie Lee, a Chinese, both of the China Nutritional Aid Council, in Dr. Fu's Children's Hospital in Shanghai. They provided their soymilk to 25,000 to 37,000 refugee children a day and distributed millions of biscuits containing 40 percent okara from their soy dairy.) The Japanese occupied Shanghai in November, 1937, and soon thereafter the Shanghai Sanitarium was closed, to become a refugee center. The political situation forced Miller to leave Shanghai.

On May 4, 1937, while his Shanghai soy dairy was still in full swing, Dr. Miller was awarded U.S. Patent No. 2,078,962. He introduced methods for eliminating beany flavor, and for the use of a centrifuge, and an homogenizer. In the patent he referred to his product as 'vegetable milk;' however subsequent pressure from the powerful dairy industry and the USDA convinced him to Latinize the name to Soya-Lac. This term was first used in late 1939 for Miller's first American soymilk; the spelling had been changed to the present one-word Soyalac by September 1941.

"Miller's patented process was as follows: Soak 1 part by weight of soybeans in 8 parts of water at 60 to 75ºF for 6 to 10 hours. Grind well in a burr mill, adding a little water while grinding, to produce a mixture of 20 gallons water and 25 pounds ground beans. Extract the soymilk through a fine cloth in a centrifuge at 2,500 RPM in either of two ways: (1) before heating; or (2) after bringing to a boil, stirring constantly, in a caldron and simmering briefly. Now to the simmering soymilk add 7 pounds each grain sugar (dextrose, maltose) and oil plus 3 ounces salt. Return to the boil and simmer, stirring constantly, for 30 to 60 minutes, or until the flavor changes from 'beany' to 'nutty.' Homogenize in a colloid mill or homogenizer to give a milk containing 3.5 to 4 percent protein and 5 percent fat. Cool, bottle, and refrigerate, or dehydrate.

"From late 1937, Dr. Miller was in Hankow-Wuhan establishing the Wuhan Sanitarium Hospital, where he also had a small soy dairy. Eventually over 15,000 Chinese refugees, escaping the Japanese troops in the north, filled the hospital compound. Finally in January 1939, as the war got too hot, Dr. Miller left China and returned to America in April of that year." Continued. Address: Lafayette, California.

2179. Shurtleff, William. 1981. Dr. Harry Miller: Taking soymilk around the world (Continued–Document part III). *Soyfoods* 1(4):28-36. Winter.

• ***Summary:*** Continued. "Introducing Soyfoods to America: Undaunted, Dr. Miller returned to the U.S., convinced that soymilk was destined for worldwide acceptance. He decided to settle in Mt. Vernon, Ohio, where he had formerly gone to school and later taught. Dr. Miller's oldest son, Willis, had returned from Shanghai after the plant there had been destroyed and in 1938 started his own business, Miller's Soy Foods, in Utica, New York. Later that year it moved to Washington, DC, and was successfully marketing canned soymilk, okara spreads, and gluten cutlets.

"When Dr. Miller returned to the U.S. he suggested that he and his son go into business together; Willis liked the idea. Working with his son, Dr. Miller set up a company called the International Nutrition Foundation and then began searching for a suitable site in Mt. Vernon for their new soy dairy. Soon they found a 140-acre farm, containing a number of fine springs, located several miles outside of town–and for the remarkably low price of $7,000. Dr. Miller borrowed money from his brother Clarence to purchase this farm, then moved into the one large house on the property. Willis moved his soyfoods equipment from Washington, DC, into a garage near the house and got the plant running while the new buildings were being built. In April 1939 Clarence, Dr. Miller's second son, left his job in Washington, DC, and went to Mt. Vernon to help with the work; he later became accountant and treasurer of the soy business. To help raise money for the soymilk operation, Dr. Miller set up a private part time medical practice, with an office in one wing of the local hospital. Although he had very little money, Dr. Miller made plans for a 60- by 130-foot building, which he planned to enlarge later by adding a second story. A local high school had been recently torn down and he obtained all the bricks for free if he would haul them away. So each evening after his medical work was done, Dr. Miller and his sons trucked the bricks over to their land, cleaned them, and built the new soy dairy building. The surgeon's skilled hands were not too delicate for the rough work. The original building still stands strong; today it houses the office, lab, and pilot plant where

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Loma Linda still makes Soyalac.

"The new plant was completed in the fall of 1939 and the first products, canned Soya Lac (made in a pressure cooker and fortified with vitamins and minerals) and Soy-A-Malt were available late that year; powdered Soya Lac was first produced in 1940. But contrary to Miller's expectations, the American public was simply not ready for soymilk; acceptance was painfully slow. He decided that, in order to survive, he would have to develop new products, try to get his soymilk approved by the American Medical Association, and, in the meantime, sell his soymilk and related soyfoods to ready markets in East Asia.

"With his typical boundless energy, Dr. Miller, now 61 years old, started by setting up a plant near the soy dairy to can fresh green soybeans of the tasty, large-seeded or vegetable variety, which were grown on the farm. Partially because of the mushrooming growth of interest in soyfoods during World War II (due to the rationing and high prices of meat, milk, eggs, and cheese), these found a ready market and became his most profitable product, with 40,000 cases a year being sold at supermarkets and health food stores around the Midwest by 1943. The company's best selling product (which was not as profitable due to the high production costs) was Miller's Cutlets, a canned gluten entree. He began to develop other meat analogs similar to those developed initially by Dr. J.H. Kellogg at Battle Creek. He now perfected his acidophilus soymilk but sold it only to the local Mt. Vernon hospital since he did not want to kill the culture by sterilization required for long distance distribution. (In 1934, Kellogg had patented a similar acidophilus soymilk.) He made tofu from his basic soymilk and did extensive experiments, working with Ohio State University, in making a fermented tofu cheese; tofu was pressed as hard as possible, inoculated with Cheddar microorganisms, then allowed to ripen. The product was fairly good but often excess moisture in the tofu led to the growth of unfriendly bacteria. Next came a soymilk ice cream. Dr. Miller put all of his medical income into the soyfoods business and by 1940 the company was producing an exciting line of vegetarian soyfoods and meat substitutes, sold nationwide, mostly at health food stores. A pamphlet of that year lists the following, all sold under the brand name 'Miller's': Soya Lac, a liquid soymilk in natural and chocolate flavors sold in 13 ounce and 30 ounce cans. Soy-A-Malt, spray dried soymilk in natural and chocolate flavors in one-pound cans. Soya Sauce, produced in South China. Soya Curd, made by coagulating Soya Lac with lactic acid to make curds, then blending this with tomato puree, pimento, and soy sauce. Soya Loaf, made from a seasoned mixture of okara (soy pulp and gluten). Soya Spread, for sandwiches, also made from okara and sold in 16-ounce jars. Whole Soya Bean Flour, a naturally alkaline full-fat soy flour. Green Soya Beans, canned, vegetable type. Giant Soya Beans, cooked and canned mature vegetable-type soybeans, and Soya Beans with Tomato Sauce, edible soybeans canned with tomato puree and malt.

"Products added years later included Vegetable Chili Con Carne and Vegetable Chop Suey, both sold in 16-ounce jars with wheat gluten used in place of meat. In 1942 Kellogg's Battle Creek Food Company had a similar line of soyfoods: Soy Protose (a meat analog), Soy Gluten Wafers, canned Green Soybeans, Soy Flour, Soykee (soy coffee), and Soy Acidophilus. A few years later Dr. Miller developed Vege-Links, the world's first meatless wiener, made of seasoned okara and wheat gluten packed in a sausage casing, and Vege-Chee, a cheese analog made of curdled soymilk."

Note: This is the earliest English-language document seen (Oct. 2013) that uses the term "cheese analog" to refer to a Western-style soy cheese.

"During the years that he was developing new products, Dr. Miller made countless trips to the American Medical Association trying to convince them that the research he had done in China proved that his Soyalac was an acceptable substitute for dairy milk in feeding both infants and adults. But the AMA, apparently strongly influenced by the dairy industry, refused to grant any recognition to the product. Finally, after one fruitless trip, a member of the board took Dr. Miller aside and explained frankly that he would never get endorsement for his product unless he started to market his product specifically for that 7 percent of U.S. infants who are allergic to cow's milk, and avoided unfriendly comparisons with cow's milk. Dr. Miller was not too pleased, since he had hoped that soymilk would gradually replace cow's milk in the American diet. He felt that soymilk made much more efficient use of the world's land to feed people, and that it was a lower cost, more healthful product of comparable nutritional value. Yet he reluctantly accepted the AMA's advice and within a few months had their approval. Soyalac began to be prescribed by physicians for allergic infants and soon started to sell quite well." Continued. Address: Lafayette, California.

2180. Shurtleff, William. 1981. Dr. Harry Miller: Taking soymilk around the world (Continued–Document part IV). *Soyfoods* 1(4):28-36. Winter.

• ***Summary:*** Continued. "From 1939 to 1941 most of Miller's powdered soymilk and some of his other soyfoods were sold in the Philippines and China. However World War II cut off his business, so he began to promote his soymilk more vigorously in the U.S. not only as an allergy-free infant formula that would not clog the nipple, but as a healthful beverage that alkalized the bloodstream and was good for diabetics, postoperative patients, ulcer and colitis patients, and those with atherosclerosis.

"Before World War II started, Dr. Miller had set up a branch of his International Nutrition Laboratory and a Soymilk plant in the Philippines at 41 Nagtahan in Manila. It was run by Paul Sycip (pronounced SIS-up), a private

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Chinese Christian (but not Adventist) businessman, who had come briefly to Mt. Vernon to learn Miller's process, and buy equipment. Miller was in the Philippines helping to set up the plant when the Japanese attacked. During the war the Japanese stole all of the soymilk equipment but did not harm the building. In 1948 Mr. Sinclair Pinnick, a foreman at the Mt. Vernon plant since 1944, went to the Philippines, took new equipment, and got the plant reestablished. It produced regular soymilk, the first ever in the Philippines.

"The expanding success of Soyalac encouraged the growth of competing products but Dr. Miller didn't mind. A true evangelist, he was happy to see the message finally reaching the people.

"To fully appreciate Dr. Miller's great energy and diverse talents, we should note that during the early 1940's, as he developed, produced, and marketed his line of innovative new soyfoods, he also maintained an active medical practice, partially because the other two doctors at the hospital where he worked were called for military duty, and partially to support his work. Prior to World War II he would fly to the Philippines about once a year, do 12 to 15 thyroid surgeries a day for two to three weeks, give half of his income to the hospital there, then return to America with the balance. In 1942 he and his brother bought the local hospital in Mt. Vernon where he worked; his son Clarence came in to manage, renovate, and expand it. Miller was the only surgeon in Knox County (population 35,000).

"At his Mt. Vernon soy dairy, Miller was always the first one to start the day's work. One day, while experimenting with a new formula, he cut off end of his finger in a food grinder. He calmly picked up the severed part, walked into his office, and sewed it back on.

"During the years he spent introducing soyfoods to America, Dr. Miller was one of the most active supporters of the American Soybean Association, a regular speaker at conventions and contributor of articles to the Soybean Digest. His first speech was "The Role of the Soybean in Human Nutrition" (1940) and his first article "Soybeans and the Orient" (1943), was followed by "Feeding the World with Soya" (1946), "Survey of Soy Foods in East Asia" (1948), and others. Then in September 1958 he was made an honorary member of the Association and awarded a gold medal.

"By the late 1930s the seeds that Dr. Miller had planted in East Asia began to sprout. It is interesting to note that most of the remarkable expansion of interest in and production of soymilk that has taken place throughout Asia during the last half of the twentieth century can trace its origins directly back to the work of Dr. Miller.

"While Dr. Miller was in Shanghai, an Adventist named Howard Hoover had come and learned the soymilk process, then started his own soy dairy and health food plant in a mission school in Canton in about 1938. This was the first offshoot.

"In 1940 Mr. K.S. Lo of Hong Kong asked Hoover if he would help him set up a plant. Hoover got approval from Miller, then went to Hong Kong and designed Lo's first plant. [Note: K.S. Lo recalls the origin of has company quite differently; we accept his version of the story]. By 1940 Lo's Hong Kong Milk Factory was making homogenized soymilk and selling it in natural and chocolate flavors, like dairy milk, in standard half-pint bottles sealed with a paper cap and hood. The soymilk was sweeter and a little thinner than Miller's and had more of the natural (so-called beany) flavor, which the Chinese prefer. By 1942, when the Pacific War broke out, Lo's company had gone broke. But in 1945, after the war, the company reopened as the Hong Kong Soya Bean Products Co., Ltd, and reintroduced their product, now called Vitasoy, not as a milk substitute, but as the world's first soymilk soft drink. By 1974 Vitasoy passed Coca Cola to become Hong Kong's best selling soft drink, with sales of 150 million bottles a year. In the meantime many other large soymilk plants had started up in Singapore, Malaysia, and Thailand.

"In 1948 the Chinese Quartermaster Department, with the help of Dr. Miller's son, Willis, set up the largest soymilk plant in the world in Shanghai, using a process patterned after that used in Ohio, to make spray-dried soymilk. Costing over $1,000,000, it had a capacity of 5 tons of dry soymilk every 12 hours. The dried soymilk would be mixed with puffed rice, pressed into wafers, and packed into cans, then opened in the field and soaked with hot water for rations. The plant was completed and ready for operation (Dr. Miller was at the dedication ceremony) just prior to the Communist takeover of Shanghai in 1949.

"Research and Work Around The World (1949-1977): In 1949, at age 70, Dr. Miller accepted the invitation of the Adventist church to take over the direction of the Shanghai Sanitarium and reestablish a soy dairy there. China was in the throes of revolutionary war and Shanghai was still held by the Nationalist forces. A daring pilot dropped Miller at the besieged Shanghai airport, hardly pausing to stop. But Shanghai fell to the Communists in May 1949; Miller was soon evacuated, and returned to America.

"In 1950 Dr. Miller's second wife died. Shortly thereafter he decided to sell his Mt. Vernon business. There was the increasing pressure of running a food plant and although sales were good ($1.25 million gross in 1950) profits were only $120,000 due to high taxes. He wanted to devote more of his time to research and medicine. Although offered a large sum of money by a private company outside the Adventist denomination, he decided to divide the company into two parts, the meat analogs and the soymilk plus related products, and sell these to Adventist-run firms. In June 1950 he sold the meat-analog part of his business (gluten meats, nut loaves, frankfurters, etc.) to Worthington Foods in Worthington, Ohio, a private company owned by Adventist laymen that had been making meat analogs

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since 1939. They bought the patents, recipes and formulas, equipment, technology, and good will that went with Miller's meat analog business. Most of these analogs contained no soy. Worthington kept the brand name "Miller's" for several years thereafter as they sold Miller's Cutlets, Miller's Burger, Miller's Stew, Vege-Links, and the like. Willis Miller worked with Worthington for some time after the sale.

"In early 1951, Dr. Miller sold the rest of his business at a very low price (book value) to Loma Linda Foods of Riverside, California. This sale included the Mt. Vernon land, buildings, equipment, technology, and recipes and formulas for soymilk, canned fresh green soybeans, Vege-Cheese (a canned tofu cottage cheese) and related products. All these products continued to be produced in Ohio. Loma Linda Foods, an integral part of the Seventh-day Adventist Church, was founded in 1906 and had run a plant in Riverside making meat analogs, soymilk, and other foods since 1936. Dr. Miller had always believed that the process for making soymilk was not something that he had originated; the key to it had been a gift to him from a higher power. Thus, he felt it was simply not his to sell. So he gave the process to the Adventist church but sold the rest of the business to Loma Linda Foods (they operate the Mt. Vernon plant to this day), and loaned them the money to buy it. They paid him in installments and he returned half of the money to them for them to set up laboratories and a pilot plant in their headquarters at 11503 Pierce Boulevard in Riverside (the town was then called Arlington). Here he established the International Nutrition Research Foundation, which he further endowed heavily with his own funds; 95 percent of its future research was on soyfoods. He bought a home nearby. For the three years following his wife's death he worked intensively on soyfoods research. In 1951 Loma Linda first introduced Soyagen, a lightly fortified soymilk for adults to match their Soyalac for babies. Miller did extensive work on further eliminating the beany flavor from soymilk using a vacuum pan and flash pasteurization. By 1958 his labs had developed new and improved soymilks, soy cream, improved acidophilus soymilk and ice cream, cottage cheese, a soy-cream cheese spread, cholesterol-free cheese, and a non-dairy margarine." Continued. Address: Lafayette, California.

2181. Shurtleff, William. 1981. Dr. Harry Miller: Taking soymilk around the world (Continued–Document part V). *Soyfoods* 1(4):28-36. Winter.

• ***Summary:*** Continued. "In 1953, at the age of 74, he married for a third time (his wife was about 35) and shortly thereafter was asked to establish an Adventist Sanitarium in Taipei, Taiwan. With it, of course, he started a soy dairy at a school, which supplied the school, the Sanitarium, and the surrounding community with soymilk daily. In 1956, when it came time for Miller to leave Taiwan, Generalissimo Chiang Kai-shek personally gave him China's highest award, the Blue Star of China, in appreciation for his tireless service to the people of China in saving the lives of thousands of infants with the use of soymilk and in establishing some twelve sanitarium-hospital clinics. At the time, the Generalissimo, who had been a former patient of Dr. Miller's, recalled how he had become so fond of the sanitarium's soymilk that he had once sent his private plane over 1,000 miles to Shanghai to replenish his supply.

"In 1954 the World Health Organization became interested in Miller's work with soymilk. His oldest son, H.W. (Bill) Miller supervised the construction of a joint FAO / UNICEF soymilk plant in Yogyakarta, Java, Indonesia, which opened in 1957 and produced about two tons a day of a spray-dried soymilk called Saridele.

"After filling in for other surgeons in Trinidad and Libya from 1956 to 1957, Miller went to Japan in 1957 to spend seven months as medical director and surgeon at the Tokyo Sanitarium-Hospital. He was now 79. Despite his busy medical routine, he found time to set up a small soymilk pilot plant in the hospital kitchen where they made soymilk, soy whipping cream, soy ice cream, and soy spread, which were served to the staff and patients. In cooperation with the Japanese Ministry of Health, he then developed the concept of helping existing small tofu producers to set up a soymilk operation right in their shops by adding on a boiler, pressure cooker, homogenizer, cooler, and bottler. The equipment could be installed for less than $2,000 and would enable each plant to produce 150 pounds of tofu and 200 gallons of soymilk a day using three trained workers. Miller personally helped at least one small rural tofu shop set up such a system; their soymilk was sold fresh and hot or cold and bottled for half the price of fresh dairy milk.

"Starting in about 1955 Dr. Miller began to recommend that the Adventist-run Japan Saniku School serve soymilk instead of cow's milk to the students; however the staff hesitated because of questions about its nutritional value and flavor. In 1957 two Japanese Adventists, Mr. Hidekazu Watanabe and Mr. Hanzo Ueda (who ran a tofu shop at the time) started making Japan's first soymilk on a small scale in Hachioji, Tokyo, bottling it in 180-ml bottles, and selling it locally. Mr. Watanabe later described the great value to them of Dr. Miller's ongoing technical, nutritional, and spiritual guidance.

"After some time, directors of the Saniku School visited the small soymilk plant, liked the soymilk flavor, and understood its nutritional value. In 1959 they bought similar equipment, set up a small plant in the school, and started to produce soymilk, which was bottled in 180-ml bottles and served to the students at every meal. In 1969 the Saniku School set up an independent food production company called College Health Foods (which later became today's Saniku Foods) and through it, with the help of Loma Linda Foods in America, began to produce Soyalac soymilk infant formula. That same year, the Luppy Soymilk Company

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started and went on to produce Japan's first widely popular commercial soymilk.

"By 1980 Japan's largest soymilk producers were Kibun Foods (33,000 pacs a day), Saniku Foods (23,000 pacs a day), Okazaki Marusan (23,000 pacs a day), and Mitsubishi Kasei (18,000 pacs a day), A typical pac is 200 ml (6.8 fluid ounces).

"Prior to 1960, a small soymilk plant similar to those established by Miller in Japan, was set up at the Adventist-run Mountain View College in Central Mindanao, Philippines. The college farm raised edible soybeans and the 700 students were served fresh soymilk each morning for breakfast and fresh tofu for lunch.

"In 1960 Dr. Miller again accepted the invitation of the Adventist church to start a new hospital, this time in Hong Kong. As always, it was accompanied by a little soymilk plant. By 1960 soy dairies had also been established in Hong Kong at the South China Union College and at an Adventist-run college in Bandung, Indonesia.

"Dr. Miller spent most of his time from 1960 to 1973 in East Asia. He practiced surgery until the age of 93. In 1961 his biography *China Doctor* by Raymond S. Moore was published by Harper & Bros. In 1963 Dorothea Van Gundy Jones in *The Soybean Cookbook* wrote: 'Certainly Dr. Miller has done more than any other person to introduce soybeans and soybean products, especially the milk, to the population of this country.'

"In 1973 Dr. Miller formally retired from medical practice and returned to California, where he spent the last few years of his life doing the work he loved so much: soyfoods research. He lived about one mile from Loma Linda Foods in Riverside, and he walked to work each morning. He continued his experiments with tofu and soymilk, making improved acidophilus soymilk, tofu-based cheese, and cheese spreads. He made a good tofu-based Cheddar cheese but could not make it melt. His later years were not as productive as they might have been since, in old age, he had lost most of his sense of smell; when he would ask others how new products tasted, they would often tend to flatter him instead of giving an honest and objective response. Yet this work was still of real potential value.

"In 1972 the Southern Asia Division of the Adventist church asked Mr. Pinnick of Mt. Vernon to go to India to set up a soymilk plant at their Spicer Memorial College in Poona. In March 1973 Dr. Miller flew over from Hong Kong to help the operation get started. Pinnick writes: 'He would work all day with us at the plant (at age 94) then spend nearly-every evening speaking to some group on healthful living. There seemed to be no limit to his endurance.'

"Starting in 1975, while in Japan, I exchanged numerous letters with Dr. Miller. He typed each letter himself and was always full of questions about new developments in tofu and soymilk production in Japan. In 1976 he sponsored and hosted a program about tofu and soymilk that my wife and I did for several hundred members of the faculty and community of Loma Linda University, La Sierra campus. During the day of our visit he took us through his pilot plant and described his latest experiments making tofu-based fermented cheese spreads. He seemed extremely alert and well informed.

"Dr. Miller died on New Year's Day, 1977, at the age of 97, just as he was getting ready to go to his beloved church.

"Harry Miller was a shining example of what the Chinese call 'The Great Man.' He dedicated his life to the welfare of all beings, human and nonhuman. He chose a life of voluntary simplicity, finding his real joy in giving. Close associates estimate that, in professional fees alone, he turned over some $2.5 million to the hospitals, church, and nutritional work with which he was connected. Spiritual values were at the center of his life. Though world famous, he was the most humble of men; though very busy, he had time for each person who needed him. His vision was fifty years ahead of his time. He left an indelible impression on the world. Would that he could he here with us now to see the blossoming of his work in America and around the globe.

"The author wishes to give special thanks to Dr. Miller's two sons, Willis and Clarence, and to Glen Blix, plant manager at the Loma Linda Mt. Vernon plant, for extensive information provided in interviews and letters. For a bibliography of Dr. Miller's publications, send a SASE to *Soyfoods* magazine." Address: Lafayette, California.

2182. Shurtleff, William. 1981. Early history of soymilk. *Soyfoods* 1(4):31. Winter.

• ***Summary:*** Note: This was published as a sidebar to the article "Dr. Harry Miller: Taking soymilk around the world."

"It is important to understand Dr. Miller's soymilk research, writing, and product development in their proper historical perspective.

"Soymilk is thought to have been developed in China by Liu An, King of Huai-nan in about 164 B.C. In most parts of China, soymilk has long been used as a spicy hot breakfast soup (*sien tou-chiang*) or as a warm, sweetened beverage (*t'ien tou-chiang*). Yet it had not traditionally been used as a substitute for mothers milk or cow's milk in infant feeding. and its nutritive value for infant feeding was virtually unknown. By 1923, as described with photographs by Piper and Morse in their classic, *The Soybean*, a soymilk factory in Changsha, China (p. 231) was selling soymilk in bottles, each sealed with paper, and carried in baskets suspended from shoulder poles. This was 13 years before Dr. Miller's soy dairy opened in Shanghai.

"The first known mention of soymilk in a Western publication was in 1895 by H.C. Prinsen Geerligs, a Dutch scientist who lived and traveled in Southeast Asia, and wrote an article entitled *'Einige Chinese Voedingsmiddelen Mit Soyabonen Bereid'* [Some Chinese Foods Made with Soybeans]. The first English-language article on

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soymilk, entitled 'Soybeans and Soybean Products,' was published by H. Trimble in 1896 in the *American Journal of Pharmacology.* In 1906 Katayama in Tokyo wrote 'Condensed Vegetable Milk,' and in 1907 J. Rurah published the first article on infant formulas entitled 'The Soybean in infant Feeding' in *Archives of Pediatrics,* followed in 1910 by 'The Soybean as an Article of Diet for infants.' Some 30 journal articles had been published by 1928 and at least 66 by 1936. In 1926 Dr. Ernest Tso of the Peking Union Medical College published his first of many studies in English on feeding infants water-extracted soymilk. Entitled 'Soybean Milk–Infant Feeding,' it appeared in the *American Journal of Physiology.* He published five more similar studies prior to 1931.

"The first patent for soymilk was issued to Li Yu Ying in Britain in 1910. A German patent was issued to Goessel in 1911. The first U.S. patents were issued to Goessel (1913), Li Yu Ying (1913) and Monahan and Pope (1915); the latter was the first issued to American citizens. By the time Dr. Miller started his soymilk research in 1925, some 30 patents had been granted; there were 66 patents by the time Dr. Miller received his in 1936.

"Soymilk was being produced in the West as early as 1911, when a Chinese plant near Paris was reported to produce soymilk, fermented soymilk, tofu, soy sauce, soy flour, soy bread, soy preserves, etc. (Beltzer 1911). Allergy to cow's milk and lactose intolerance stimulated the development of the first soy-based infant formulas in the U.S. Most of these were made from soy flour and contained the fiber in the soymilk. In 1929 Mead Johnson Co. produced the first soy-based infant formula in America. Called Sobee, it was made from a mixture of full-fat soy and barley flours homogenized with olive oil, had a dark tan color and beany flavor, and contained many complex carbohydrates that led to intestinal gas (flatus) and poor-smelling stools, but in 1929 it was a godsend to infants allergic to cow's milk (Sarett 1976). Also in 1929 Dr. Ernest Tso in Peking published a nutritional study of Sobee, entitled 'A Vegetable Milk Substitute in North China,' in the *American Journal of Physiology.* (At this time Dr. Miller knew both Dr. Tso and Sobee well). The second commercial soymilk in America was developed by Dr. Julius F. Muller. In 1934, while director of allergy research for the Borden Company, he developed a soymilk product for his own child, who was highly allergic to dairy milk. in 1936-37 this liquid milk, made from homogenized soy flour, was introduced by Borden as Mull-Soy. In 1934 Dr. J.H. Kellogg received the first U.S. patent on a method for making acidophilus soymilk; Miller had produced a similar product in China in 1936.

"By 1935 Henry Ford was running a soymilk pilot plant near his main automobile factory in Michigan. By 1936 Loma Linda Foods was making soymilk in southern California. By 1938 Dr. Miller's son, Willis, was making canned soymilk in New York and Washington, DC, and in early 1939 Jethro Kloss had written *Back to Eden* containing many creative soymilk recipes and he may have been producing soymilk at his health food factory near Nashville, Tennessee... all this prior to Dr. Miller's introduction of Soyalac to America in the fall of 1939.

"Although it is clear that Dr. Miller was not the first to do research on soymilk, receive a patent, or produce a commercial product, he still deserves great credit for almost single-handedly popularizing the use of soymilk on a large scale around the world, especially for feeding infants suffering from allergies or malnutrition, for starting the first large scale commercial soy dairy in East Asia and assisting in the foundation of many subsequent ones, and for producing the first major commercial fiber-free soymilk in America, a product that was generally considered to be better tasting and less prone to clog nipples than the various flour-based products, although at least one set of tests showed it to have a significantly lower protein quality as measured by PER (Gyorgy 1962).

"Although Dr. Miller originally intended soymilk for general consumption, it has come to be most widely used in America for feeding babies. Today, the U.S. infant formula market is comprised of 75 percent dairy milk based products and 25 percent soymilk; Soyalac has only five to six percent of the latter market (all competing products are made from soy protein isolates). A full 75 to 80 percent of all Loma Linda's soymilk goes to feed babies." Address: P.O. Box 234, Lafayette, California.

2183. Stepanske, Kenneth. 1981. Madison Foods, Worthington Foods, and Loma Linda Foods (Two interviews). Conducted by William Shurtleff of Soyfoods Center, Feb. 12 and Feb. 15. 4 p. transcript.
• ***Summary:*** Kenneth started work at Madison in 1964, when the college lost its accreditation. He had been working at Worthington before that. Discussion of how Sam's Chicken was made, using tofu.

2184. MacIvor, Charles R. 1981. Re: Dr. John Harvey Kellogg's work with meatlike products and soyfoods. Letters to William Shurtleff at Soyfoods Center, March 4 and April 28. 3 p. and 1 p. Typed, with signature.
• ***Summary:*** Protose was the first meat analog made by Dr. Kellogg, introduced in 1896. Nuttolene was next. It was named Nuttose later to rhyme with Protose. Battle Creek Steaks and Battle Creek Skallops followed later, sometime before 15 Oct. 1944, as they were listed in the 1944 dealer retail price list. None of these products contained any soya. Peanut butter was first made by Dr. Kellogg in 1892. "I never heard that it was patented."

In 1960 when Battle Creek Food Co. was purchased by Worthington Foods, Protose was a mixture of wheat gluten and peanut meal. Vegetable Steaks and Vegetable Burger were made of pure gluten with certain seasonings.

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Mr. MacIvor worked in the sales division of Battle Creek Food Co. from 1929 to 1939. He was writing a book on Dr. Kellogg but it will probably never be published because it is too big and he can't condense it.

Update: Talk with Lenna M. MacIvor. 1995. Oct. 20. Charles MacIvor, her husband, died of a massive stroke about 10 years ago, on about 28 Dec. 1985. He was age 85 at the time. He was very clear of mind until days before his death. His book on Dr. Kellogg, which he titled "The Lord's Physician," was never published. She and her daughter each have a copy of the manuscript, which is about 700 pages long, and contained extensive original information. She will try to send a photocopy of the pages concerning the development and manufacture of Protose. She now lives at P.O. Box 32, Route 11, Hendersonville, North Carolina 28792-8233. Address: Route 8, Box 164, Hendersonville, North Carolina 28739. Phone: 704-684-8329.

2185. Miller, Harry Willis, Jr. ("Willis"). 1981. Work with soymilk in the United States and China (Interview). Conducted by William Shurtleff of Soyfoods Center, March 8. 2 p. transcript.
• ***Summary:*** Discusses his work with soymilk around the world. Address: 450 Neeleys Bend Rd., Madison, Tennessee 37115. Phone: 615-868-2483.

2186. Crites, Eva, 1981. Dorothea Van Gundy Jones (Interview). *SoyaScan Notes*. March 13.
• ***Summary:*** Eva will send Dorothea's address, to whom she is sending payments.

The best person to ask about Dorothea is Ella Mae Stoneburner.

Dorothea collaborated with Mildred Lager on a book about arthritis; this hurt her professionally.

Dorothea got interested in soy because of her father. She was an authority on soy; she went al over the world. She worked closely with Dr. Harry Miller at the International Nutrition Foundation. "Dr. Miller would bring around samples of products he was developing and we'd all taste them. Everybody loved him. Dorothea asked him questions.

Dorothea was very sold on soy. She refused to use any milk or eggs in anything. Soy is sufficient–she felt. This led to a little friction. Although this was not a popular position, she was not too pushy about it. Hers was a 'total vegetarian diet'" [vegan]. "She felt the soybean was a gift from God for vegetarians. Eva thinks we need caution for infants, young children, pregnant and lactating mothers

Dorothea, who died in 1979, was very generous, outgoing, kind, always interested in everything, a very vital, alive person. She had a dynamic personality and was a dynamic speaker. She spoke at both Adventist and non-Adventist conferences. She carried her audience on subjects most people would flop on. To be as much of a leader as she was and to accomplish as much as she did, she was a little on the aggressive side–but never obnoxious. Yet nobody stood in her way.

Ela Mae and Dorothy traveled in Africa, teaching cooking schools and how to teach cooking schools.

"Dorothea's big handicap: she graduated from a 3-year dietetic course from Loma Linda University, so she didn't even have a BA degree; she was not even a university graduate, in the professional sense. She was too busy to go back and get a degree. She came in contact with a lot of food faddists." Address: 907 Walnut, Redlands, California 92373.

2187. Lo, K.S. 1981. Re: Early history of Hong Kong Soya Bean Products Co., Ltd., makers of Vitasoy. Letter to William Shurtleff at Soyfoods Center, March 19. 3 p. Typed, with signature on letterhead.
• ***Summary:*** William Shurtleff sent K.S. Lo a copy of an article he [Shurtleff] had written about Dr. Harry Miller, and asked for Mr. Lo's comments. "Strangely enough, it was Julian [sic, Julean] Arnold and not Dr. [Harry] Miller who first launched me onto the road of making soya bean milk. I happened to be in Shanghai in the Winter of 1936, and, while there, I attended a talk given by Julian Arnold on the subject: 'Soya Bean, the Cow of China'. I soon left Shanghai to return to Hong Kong, but, Arnold's message kept ringing in my head. Not long after, Japan invaded China and the first wave of refugees started to arrive in Hong Kong in 1938 [sic, 1939]. As I recall, a refugee camp was set up in Argyle Street on Kowloon side to receive them. Most of these refugees were either sick or suffering from malnutrition and required urgent medical care. Some of them were suffering from beri-beri. A small group of volunteers including myself used to visit the camp to find out what could be done for them. And when I saw so many were unable to walk because of beri-beri, the story of the wonder bean, as related to Arnold, came to my mind. I, therefore, suggested to our group to buy some soya bean, a stone-mill and a cooking pan and sent them to the camp. We enlisted a group of people from the camp to prepare soya bean milk in the crudest form and gave one bowl to each person every morning. The results were quite startling, as many of them showed significant improvement in their health after the first month. This little experiment gave me the full confidence in the nutritional value of soya bean milk and I decided to make it available to the masses of people in Hong Kong who could not afford to buy cows' milk.

"It is far from my intention to try to belittle Dr. Miller's contribution in the development of soya bean food, but, I think it is fair to say each of us develop our own products and marketed them independently. He concentrated more in promoting it among medical profession, hospitals and churches; whereas I took it to the street level and catered to the mass market in competition with the soft drinks. As the result, the sales of my Company are far greater than any governmental or private institution could have hope to reach.

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Last year alone, my Company sold over 8 million cases of soya bean milk in Hong Kong, and, since 1979, we had been exporting our products, packed in tetrabrik, to all parts of the world. There can be no question that our commercial success in Hong Kong has inspired many other companies throughout Asia and other parts of the world to follow suit.

"I thank you once again for sending me your article and I hope that my comments will help to put the record straight."

"P.S. After 45 years when it first started in a refugee camp, Vitasoy is still serving the refugees of another era. To-day, they are distributed daily to all the Vietnamese Refugees Camps in Hongkong to bring better nutrition to the Vietnamese children. I am also send you a copy of the 40th Anniversary Brochure of my Company." Address: Chairman, Hong Kong Soya Bean Products Co., Ltd., 41 Heung Yip Rd. Aberdeen, Hong Kong. Phone: 5-528211.

2188. Yoshimura, Sam. 1981. Re: Reminiscences of work at Madison Foods. Letter to William Shurtleff at Soyfoods Center, March 19–in reply to inquiry. 3 p. Handwritten.
• ***Summary:*** Sam attended Madison College from 1937-1943, then worked for Madison Foods 1956-63. As far as he knows, no graduate of Madison College owns or presently operates a viable soy food plant.

Mr. H.J. Miller was supervisor for canned and cereal sections of the Madison plant when Sam was there. He was not related to Dr. Harry W. Miller.

Okara was used in the Madison Zoyburger exclusively. The product consisted of wheat gluten, okara, tomato paste and seasonings. It was a canned, meat loaf type of product.

Compro was a canned product made of wheat gluten, soy cheese [tofu] and seasonings. It was first distributed commercially in 1957.

Sam's Chicken was modified and called Chickettes. The product contained wheat gluten, soy protein, and seasonings. Address: 8200 Colonial Meadows, Westerville, Ohio 43081. Phone: 614-882-0625.

2189. Chen, Philip S., Jr. 1981. Re: The life and work of his father, Philip S. Chen. Letter to William Shurtleff at Soyfoods Center, March 20. 2 p. Handwritten–in reply to letter of March 10.
• ***Summary:*** "1. Dr. Philip Stanley Chen was born on Aug. 17, 1903 near Shanghai, China. He died July 29, 1978 in Camarillo, California.

"2. Dr. Philip Chen received his early education in Seventh-day Adventist mission schools in China. He came to the United States in 1925, attending college at Emmanuel Missionary College (now Andrews University) in Berrien Springs, Michigan where he majored in chemistry. From 1929 to 1933 he attended graduate school at Michigan State College (now Michigan State University) and received the Ph.D. degree in organic chemistry from that institution.

"His first teaching and research position was at Madison College near Nashville, Tennessee. It was there that he first began his extensive studies on the beneficial nutritive value of soybeans.

"3. Dr. Chen's first book about soybeans was entitled: *Soybeans for Health, Longevity, and Economy.* It was published in 1956 by The Chemical Elements, Publishers, South Lancaster, Massachusetts. It went through several printings, copyright 1956, 1962, 1968, 1973.

"4. The above hardcover book was republished as a paperback book entitled: *Soybeans for Health and a Longer Life* by Pivot Books, Keats Publishing Inc., New Canaan, Connecticut, in 1973." Address: 10093 Dudley Drive, Ijamsville, Maryland 21754. Phone: 301-831-6471.

2190. Stoneburner, Ella Mae. 1981. Recollections of Dorothea Van Gundy Jones (Interview). *SoyaScan Notes.* March 24.
• ***Summary:*** After doing some real detective work, Ella Mae has been able to find some relatives of Dorothea. Her younger sister is Charlotte Holmes, who took a medical course at Loma Linda University, but lost her license. Charlotte's daughter is Sue Nicholas Muff, 1044 Rolling Ridge Estates, Sedro Wolley, Washington 98284. Phone: 206-856-2250. Charlotte is not an Adventist. She has some radical, far-fetched ideas. She was a friend of Mildred Lager, who was all crippled up with arthritis. Dorothea talked about Mildred a lot in a friendly way. It was agreed that Dorothea would take over their soybean book after Mildred was gone. She lectures and sells stainless steel ware.

Dorothea talked a lot about her father, Theodore. She first got her interest in soy through her father, who thought that soy was the answer to many, many problems. Her interest in soy deepened after she met Mildred Lager. As Ellla Mae recalls, he lived by San Jose / Gilroy and raised soybeans as a farmer. He lived in San Francisco for a while. Best to get these details from Charlotte Holmes.

Character sketch: "Dorothea was the most cheerful person I ever met. She saw the bright side of everything. She lived what she believed, but she was never an extremist. She was very humorous, naturally funny. She loved to travel and be with people from other cultures. She was a joy to be with. She died of cancer."

Dorothea was a nutritionist for Loma Linda Foods, a dietitian from Loma Linda University, and food service director at Pacific Union College (Angwin, California).

Ella Mae was health educator at the General Conference, including nutrition.

2191. Boles, Frank. 1981. Re: Second summary of archival research on Dr. John Harvey Kellogg, with many photocopies of documents. Letter to William Shurtleff at Soyfoods Center, March 28. 2 p. Typed, with signature on letterhead.

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Address: Bentley Historical Library, The Univ. of Michigan, 1150 Beal Avenue, Ann Arbor, MI 48109.

2192. Lo, K.S. 1981. Re: Two letters of appreciation for Vitasoy soya bean milk. Letter to William Shurtleff at Soyfoods Center, March 31. 3 p. Typed, with signature on letterhead.
• ***Summary:*** Mr. Lo encloses letters from H.D. Dale, M.D., Medical Director, Sham Shui Po Transit Centre, Kowloon, and Walter Schmidt, Coordinator of Refugee Activities, Hong Kong Christian Service, Migration Services Dept. The Vitasoy was given to refugees from Vietnam in late 1979–children under age 5 and old people over age 65, and to all pregnant women. "There was a marked improvement in the general health of all those receiving this added supplement." Address: Chairman, Hong Kong Soya Bean Products Co., Ltd., 41 Heung Yip Rd. Aberdeen, Hong Kong. Phone: 5-528211.

2193. Twomley, Dale. 1981. James L. Hagle: An uncommon businessman. *Andrews University Record.* March 31. p. 27-31.
• ***Summary:*** This excellent biography of Hagle and history of Worthington Foods begins with a quote from Hagle: "'You can get away with all kinds of sharp little practices in business. You have the opportunity every day to do things they won't put you in jail for. But if in the back of your mind it's not whether the IRS or some other company is watching, or whether God knows, then you don't take advantage of people. You don't do dishonest things.'" Address: PhD, Dean, School of Business, Andrews Univ., Berrien Springs, Michigan.

2194. **Product Name:** Soyamel (Plain Soymilk with Vitamins).
Manufacturer's Name: Alpro.
Manufacturer's Address: Zuidkaai 33, B-8700 Izegem, Belgium.
Date of Introduction: 1981 March.
New Product–Documentation: N.V. Vandemoortele Protein Division (manufacturer's brochure). 1979. "Soyamel: A New Source of Proteins. 9 p. Gives details about Soyamel soymilk, including the nutritional composition and technology used to manufacture it, but does not say that the product is being made commercially.

Soyfoods Center Computerized Mailing List. 1982. Feb. 22. The company is listed as N.V. Vandemoortele. The first listing for Alpro appears on 20 June 1983. Chr. Daems is Marketing Manager. Phone: 51 30 96 01.

Form filled out by Alpro. 1990. May 30. Alpro began making this product (plain with vitamins) in March 1981 in 500 ml cartons. This was the first of Alpro's own soymilk brands, sold only in drug stores and pharmacies.

Note 1. The product was announced about 2 years before it was available.

Note 2. The term Soyamel, a registered trademark of Worthington Foods Inc., was first used in about 1954 to refer to a powdered soymilk made by Worthington.

2195. Holmes, Charlotte Van Gundy. 1981. The life of T.A. Van Gundy (Three interviews). Conducted by William Shurtleff of Soyfoods Center, March-May 1981. 6 p. transcript. Also 3 letters from Charlottte in March, April, and May 1981.
• ***Summary:*** Birth and early life: Theodore Ananias Van Gundy (his friends called him "Van") was born on 8 July 1874 in the tiny rural community of Osoflaco, near Arroyo Grande, on the California Coast midway between San Francisco and Los Angeles. In 1886, at age 12, he became a Seventh-day Adventist, and began to show his mechanical talent by building an engine powered by steam from his mother's stove. He went to college in Healdsburg, California.

Early work with peanut butter: In 1897, at about age 23, he began his first commercial food production, making peanut butter (which, at the time, was a new food) with Dr. Hare in Fresno, California. In February 1898 he married Lulu Pond and moved to San Jose. It is not known what became of his peanut butter business.

Founding La Sierra Industries in 1928: In the fall of 1928 (probably not in 1927 as reported by Dorothea Van Gundy Jones in 1963), T.A. Van Gundy moved to La Sierra, California (now a suburb of Riverside) and started La Sierra Industries, the business that would make him famous as a soyfoods pioneer. The plant was on a lot behind his brother-in-law's home. By continuous experimentation and using equipment he designed and built himself, he soon developed a line of eleven soyfood products, plus canned garbanzos (chick peas), brown rice, and whole wheat. The first eight La Sierra-brand soyfood products were probably on the market by late 1929. They included Smoein (bacon-flavored smoked soy powder), Soy Beans (canned, unseasoned green-seeded type or with tomato sauce; his next products developed after Smoein), Soy Milk (canned, with the beany flavor removed by processing with live steam), Soy Cheese (canned tofu, with pimiento added to prevent graying after canning), Soy Flour, Soy Mamenoka (roasted soy flour; a Chinese name), Soy-Co (soy coffee substitute with an excellent coffeelike flavor; coarse grind or fine), B-Nuts or Beanuts (oil-roasted soynuts), B-Nut Butter (soynut butter made from B-Nuts), Soy Spread (canned okara or soy pulp, salt, mace, and other seasonings; it had a soft consistency and was said to taste and smell like "potted chicken"), Soy Gluten (a meat analog made of soy spread mixed with ground wheat gluten, resembling Dr. John Harvey Kellogg's Protose, but with soy), and Soy Cereal. In 1929 or 1930 he designed and built the mill that produced this Soy Cereal, a ready-to-eat, toasted and shredded, all-soy product.

"When we started work at La Sierra Industries each

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morning, soy milk was the first thing made, then cheese [tofu], And the residue [okara] had to be worked up and canned–gluten made–when soy protose was made. When we made spread it was an easier day. This work went far into the night and my brother Ted (Theodore Romayne) was the last one on the job–working into the wee morning hours, watching the retorts and bringing the cans out for labeling. We (five) all worked hard. We were all vegetarians and (as I said) for these two years we used no cow's milk or eggs. Yet we were all strong as oxen. Dad age 62, Mother 64, Ted 35, Dot [Dorothea] 32, and Charlotte (me) 30. I was taking medical courses and worked as much as I could.

"My folks were having a hard time after loss of the business. After 1 year of internship, I landed back in Los Angeles with 50 cents in my pocket–to start a practice in Beverly Hills [home of many movie stars, surrounded by the city of Los Angeles]–where I remained for 8 years. I went there because I wanted to use nutrition and diet for my patients, and this place was wide open for new ideas. It is so satisfactory to see severe cases getting well from good nutrition. I wanted to be another pioneer like Dad." Address: Star Route 2, Bosse Rd., Jackson, California 95642.

2196. *Madison Survey & Alumni News* (*Madison, Tennessee*). 1981. We moved to Heritage House on Jan. 29, 1981. 63(1):1. Jan.
• ***Summary:*** See next page. "On January 29, 1981, the move from Parkview Building at the hospital was completed." "Dorothy Mathews deserves the lion's share of the credit for her unflagging interest in heading up the project..." "We hope you can come and see Heritage House and its collection of Madison mementos."

2197. McDonnell, Kathleen. 1981. From fodder to fast food: Soybeans crop up more than ever on farms and in stores. *Maclean's* (*Canada*). March.
• ***Summary:*** Recently soybean breeders have created early-maturing varieties which are enabling soybeans to spread northward "beyond their traditional growing area in extreme southern Ontario, which now produces more than 90 per cent of Canada's total harvest." This year substantial acreage will be seeded in Alberta, Manitoba, P.U.I. [Prince Edward Island], Quebec and eastern Ontario.

"With last year's harvest of 26.2 million bushels worth more than $200 million, Canada has now moved into fifth place among world soybean producers–after the U.S., Brazil, China, and Argentina.

Human consumption of soybeans is definitely catching on in Canada. At one health food store in Vancouver, BC, the most popular item is tofu, or soybean curd, which is now "being touted as the 'yogurt of the '80s.' Packaged tofu is now being sold in major supermarket chains across the country..."

The largest consumers of soy products by far are vegetarians. Elsie Sokol, chief dietitian at Toronto's Branson Hospital (run by Seventh-Day Adventists) "receives 'thousands' of requests from across the country for information about soybeans and gives lectures on their nutritional value and preparation." She believes the day will come when people in general will praise soybean growers. Mary Anderson, who shares her enthusiasm, is one of three partners who run a soy-food restaurant named Soja in Kensington Market. A photo shows Mary, with a tray of soy cheesecake and burgers, in front of her restaurant's sign.

2198. Moretti, R.H. 1981. Soy milk developments in Latin America. *J. of the American Oil Chemists' Society* 58(3):521-22. March.
• ***Summary:*** Dr. Harry Miller introduced soy milk into Latin America. From his writings, a Brazilian, Dr. Barretto of Laticinios Mococa, developed Solein, a mixture of 30% soya milk and 70% cow's milk; it was introduced in 1967. Still sold, it is powdered and canned. Almost simultaneously Dr. Suberbie in Mexico developed Sustilac, introduced in 1968, and made from sprouted soybeans. The pregermination reduces the amount of oligosaccharides. His company, Compañia Industrial de Alimentos, still produces soya milk, with all products being in powdered form. They also developed Isolac (20.3% protein) and Soyamalt (24.4% protein). Soyamalt is sold in strawberry, vanilla, and nut flavors. In 1968 the Coca Cola Co. introduced into Brazil the soya milk Saci in 200 ml bottles.

During the 1970s powdered Provesol was developed in IIT, Colombia, by Dr. Diaz Delgado. The process was later sold to a Brazilian company, Olvebra, which started production in 1975 with the Coca-Cola pilot plant. The canned powdered product is sold as Novo Milk (sweetened, with orange, chocolate, banana, and strawberry flavors), and as Novo Vida, which has the same composition as Provesol (50% protein, 25% fat, 19% carbohydrates, and 19% fiber). Novo Vida is widely used in the school lunch program in Brazil, and well accepted.

In 1975-76 ITAL, the Inst. of Food Technology in Brazil, developed a soya milk brand named Vital. It was packaged in Tetra Pak cartons. Several flavors were developed and tested by school children and industrial workers. It was well accepted but limited by the high cost. In 1977 it was packed in polyethylene bags with a 2-3 day shelf life.

"In 1976 a new concept of soya milk processing was developed in Brazil. This technique consists of producing on a small scale, the soya milk at the market spot. The project was called 'mechanical cow' and produces 200 liters/hour of sterilized soya milk with 3.0% protein, 1.9% fat, 1.2% carbohydrates, 0.5% ash, 8.0% added sugar and at pH 7.0.

"This project was introduced in 1977 and, presently, there are 80-90 'mechanical cows' in Brazil." The is idea already being exported to Paraguay, the Seychelles Islands,

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The Madison Survey
and ALUMNI NEWS

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Madisonites, Come Home

Homecoming Slated for June 19-21

The Madison College Homecoming is scheduled for June 19-21, 1981. We hope you are planning to come.

Graduates, former students and staff, friends of Madison College, Academy, and Hospital are cordially invited to the meetings.

HONOR CLASSES this year are 1931 (50 years ago); 1941 (40 years ago); 1956 (25 years ago); and 1971 paramedical classes of ten years ago. Each year we spend a lot of time and effort in compiling names and addreses of honor classes. We plan to send out letters and a list to the members whose address is known.

You don't have to be a member of an honor class of course, to be welcome at Homecoming. Madisonites, come one, come all!

All Homecoming meetings will be held in the Madison Campus Church across from the hospital. On Sabbath a potluck dinner and a supper will be served. The hospital does not serve breakfast, but will be open to visitors on Friday and all day Sunday.

Please do notify us if you plan to come, even if you plan to stay with relatives or friends, as it will help in preparing for the two potluck meals on Sabbath.

It is suggested that those coming in from a distance try to bring some food items, or better yet, donate some money for these two Sabbath meals. Breakfast is not served at the hospital on Sabbath morning, but the cafeteria will be open for all three meals on Friday and Sunday.

There are two motels in Madison--the Madison Motel at 625 Gallatin Road, Tel. 615-865-2323; and the Madison Square Motel across from Madison Shopping Center at 118 Emmitt Ave., Tel. 615-865-4203. (Please make your own reservations but do let us know if you plan to come.)

There are two KOA's near Madison--one on Elize Miller Rd. (Near Opryland) Tel. 889-0282, and one at 708 Dickerson Rd. (Goodlettsville) Tel. 859-0075.

(For the telephones and address of the alumni office and secretary, see back page. Other numbers: Dorothy Mathews, 615-865-5350; Edith Johnson, 865-6076; Velma Jeffus, 865-8786.) Katherine Marshall (868-2133).

The first meeting starts Friday evening June 19, at 7:45. Try to arrive Friday afternoon in time to register at the alumni office and Heritage House--the small rock house across from Madison Hospital. You will enjoy looking around at the many interesting items on display.

We Moved to Heritage House on Jan. 29, 1981

On January 29, 1981, the move from Parkview Building at the hospital was completed. Painting, alterations, repairs, carpentry, carpeting, curtain and picture hanging had been going on for a couple months. Then began the arduous task of moving furniture, equipment, files, supplies and historical materials. Trucks were loaded and taken over by Bill Campbell and sons, George Schwarz, and Bruce Collins, assisted by George Brashears and Maurice Patton.

As reported in the December *SURVEY*, Dorothy Mathews deserves the lion's share of credit for her unflagging interest in heading up the project, assisted by Vel Jeffus, Gary Schueler and others. Many have sent money, We had planned to list the donors, but haven't found time or space yet.

COMING EVENTS

Madison College Homecoming
June 19-21, 1981

ASI Convention, Sept. 23-26
Four Seasons Motor Inn
Colorado Springs, Colo.

Laymen's Extension League
P. F. A., Chunky, Miss. Oct. 15-17

We hope you can come and see Heritage House and its collection of Madison mementos. Among the things to see and savor are the large portraits of the three founders--Sutherland, DeGraw, and Druillard; bound volumes of *MADISON SURVEY*, from the beginning in 1919; Cumberland Echoes from the beginning in 1948; the picture tree, containing most of the class pictures; the sun dial; plaque saved from the Science Building fire on a cold November night in 1967; pictures and books and scrapbooks; a world map depicting where Madison Missionaries served; and many more.

One item of unusual interest is a "geode" from the old san parlor fireplace, saved by E. E. Schlenker. (A beautiful stone, having a cavity lined with crystals.)

• Have you contributed to the Heritage House?" It is not too late. Make sure too, that your dues or *SURVEY* subscription is paid up.

Spiritual Emphasis Week at Madison Hospital

"Health, Heart, and Healing Hands That Care" was the theme of "Spiritual Emphasis Week" at Madison Hospital on February 16-20. Four daily programs were held in Gant Hall so that each shift could attend. According to Judy Silva, director of Nursing Service, and program coordinator, the purpose of the week was not only to acquaint employees with Madison Hospital's philosophy and history of health care, but to give them a chance to interact on the subject of "Healing Relationships."

Among the speakers was hospital chaplain, Dr. Robert Hirst, who covered the Adventist philosphy on diet, healthful living, and health education.

Jan Rushing, regional vice-president for Adventist Health System, brought a bit of history concerning the early days of Madison Rural Sanitarium (as it was called at first). A few years after the school, Nashville Agriculture Normal Institute, was established

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and Ecuador. A detailed description of the process and its main advantages are given. Being very inexpensive, "the equipment can be bought by very small entrepreneurs, or by the government to implement school lunch programs or health programs. The equipment uses only water and electricity and does not need a steam generator.

"Presently, the Brazilian federal government gives tax exemptions for this equipment when it is bought in a full package: Mechanical Cow, polyethylene bag filler, and residue [okara] dryer, which shows Brazil's interest in the project and also the success of the product all over the country.

One kg of soybeans can produce 8 liters of 3% soya protein milk, which has the antitrypsin factor correctly inactivated. Packed soya milk can stand for 2 days at room temperature and 10 days refrigerated at 5ºC. The cost to make 1 liter of this formulated soya milk is US $1.10. Address: Dep. Food Technology, FEA/UNICAMP, Sao Paulo, Brazil.

2199. McCalla, M. Beth. 1981. Re: Dorothea Van Gundy Jones and Loma Linda Foods. Letter to Dr. Charlotte Holmes, Star Route #2, Bosse Road, Jackson, California 95642, April 1–in reply to inquiry. 1 p. Typed, with signature on letterhead.
• ***Summary:*** Mrs. Dorothea Van Gundy "Jones worked for Loma Linda Foods from November 1, 1952 to December 31, 1972. She went to Japan in 1964 representing the U.S. Government at the Soy Bean Seminar and Food Fair."

"I am enclosing a copy of *Today's Food* [a periodical published by Loma Linda Foods] which tells of Dorothea's trip to Japan.

Note: Charlotte Holmes forwarded this letter to Soyfoods Center with this note handwritten at the bottom: "Sister [Dorothea] put in her resignation, but new labeling of products & writing a cook [book] prevented her retirement at this time. She worked [for Loma Linda Foods] for 23 years I know." Address: R.D., Loma Linda Foods, Marketing Dep., 11503 Pierce St., Riverside, California 92515. Phone: (714) 687-7800.

2200. Webber, Alfred B. 1981. Perry Webber, Madison College, and Madison Foods (Interview). Conducted by William Shurtleff of Soyfoods Center, April 3. 2 p. transcript.
• ***Summary:*** Alfred is a son of Perry Webber. Perry's first interest in soyfoods started in Japan, during his first stay there in 1912. He loved Japanese food, and he ate lots of it, but he especially liked Inari-zushi, which contained aburage [deep-fried tofu pouches]. He used to go to the Shinoda sushi-ya, a sushi shop in Kanda (now Awajicho)–stopping in on his way to language school. At one time they named a type of sushi type after him, calling it the "Webber Sushi. He was used in some of their promotional material. Perry was also very fond of tofu and of miso soup, but he got interested in soyfoods via aburage. The thought is was a delicious form of protein, not known or used in U.S.

2. Perry met Dr. Harry Miller in about 1936 when Miller was a missionary in China; a number of meetings were held in Shanghai. Alfred was attending the SDA Far Eastern Academy in Shanghai, when his dad came from Japan to China. The main reason for Perry's trip was for him to set up a research lab for analyzing soymilk products in Dr. Miller's soymilk plant in Shanghai. Perry was biochemist and had graduated with a PhD.

Not much soy used in the early days of Saniku Foods. In 1935 Saniku started using soy, he thinks. But mostly they used puffed rice and wheat, and nutmeat.

Madison Foods had difficulty processing soy flour to make into milk, before it was made into tofu. They ordered a mill from Japan for this and began grinding whole soaked soybeans to make tofu. Perry liked plain tofu and wanted to sell it like this in the U.S., but at Madison they wanted to season it to make "Soy Cheese" [seasoned tofu]. Perry helped to develop Vigorost (which Alfred loved) and Yum.

Alfred thinks production of soymilk at Madison was started in 1935-37, when Perry had returned to Japan. During those years it really became a commercial product. When Perry returned to Madison in 1939-40, Madison was already well into production. So Alfred does not know to what extent Perry helped to develop it.

Another person who knows details is Sam Yoshimura, a student of Perry's in Japan. He is the best man to talk to about production of soyfoods in the U.S. He was a great friend of Perry's, and he developed new food products.

Perry was treasurer of the American Soybean Association (ASA) in about 1933 or 34. He may have been

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secretary too. Alfred went with Perry to the ASA convention at Baton Rouge, Louisiana, where Perry gave a slide show and lecture on soybeans and soyfoods in the Orient. Alfred also went with Perry to the research labs at Ford Motor Co. and talked with Edsel Ruddiman; they did not meet Henry Ford, however Perry gave a talk to leading Ford research scientists.

Perry was a great friend of Dr. John Harvey Kellogg. He did research work for the Kellogg Food Co. He visited Dr. Kellogg and talked about soyfoods. He also developed preservatives for crackers for the Sanitarium Food Co.

Alfred suggests I talk with Ed Bisalski, who is now in Arkansas. Address: M.D., 24424 Univ. Ave., No. 122, Loma Linda, California 92354.

2201. Kempadoo, Peter. 1981. Re: My work with soyfoods in Guyana. Letter to William Shurtleff at Soyfoods Center, April 12. 2 p. Typed, with signature on letterhead.
• ***Summary:*** Peter started making tofu in 1972, when he learned the process from an elderly Chinese gentleman in Guyana. Since then he has made tofu for his family and for the local Seventh-day Adventist Hospital. Two years ago he started a vegetarian society. They enjoy Soyburgers (made from whole soybeans), tokara (tofu with the okara fiber), soynut butter (75% peanuts, 25% soybeans), soy bread (10% okara in whole wheat bread). Address: The Sarvodaya Development Education Organisation Ltd., 423 Golden Grove, E.C.D., Guyana.

2202. Holmes, Charlotte Van Gundy. 1981. Re: Loma Linda Foods and T.A. Van Gundy's La Sierra Industries. Letter to William Shurtleff at Soyfoods Center, April 27–in reply to questions. 3 p. Handwritten answers between the typewritten questions from Shurtleff.
• ***Summary:*** Q1. You said the lights in your home were turned off for three months. Did you turn them off or did the electrical company because of unpaid bills? Ans: "Yes [the electrical company turned off the lights], we were too involved with the soy company. All our money went into it. Our necessities were limited to our needs."

Q2. You said you canned green soybeans. Were these the fresh immature green soybeans or mature dry soybeans with green seedcoats? Ans: "Green dried beans. Green after drying. We use Mammoth Yellow soybeans for milk [soymilk]."

Q3. In your letter you used various terms for the Protose-like product. You said "Soy Gluten, Soy & Gluten Protose, and Soy Protose." Which of the three actually appeared on the label of the product? Ans: "Soy Gluten–I believe–it was. Similar to Protose but that was Loma Linda's name & we could not use it.

Q4. Could you make an estimate of the company's annual sales in the best year? What year was that? Did the company ever make a profit? Ans: "Yes, but it had to be plowed right back in because of constantly increasing demand. La Sierra was in the embryo state but was successful."

Q5. In approximately what year did Mr. Kingman start making dairy acidophilus milk? Ans: "Don't know." In what year did he start making soy acidophilus milk? This is important since Dr. Kellogg started in 1933 to make Soy Acidophilus milk. Ans: Mr. Kingman asked Dad to help him make soymilk for his soy acidophilus milk in La Sierra. It must have been 1929 or 1930, but it was before we went to Ontario, I'm sure. Mr. Kingman coming to Dad made a profound impression on us. To my knowledge, Mr. Kingman never used dairy milk after finding soy milk. I have used this product and I know the source–even before I became a doctor.

Q6. You said your mother was blind. Since what year? What caused the blindness? Was she totally blind? Ans: "She was blind since 1929. The doctor's diet caused it–malnutrition. She was considered totally blind." On Sunday we washed and ironed all day and got ready for the next 5 days run.

In the 1st of school, about Sept. 1929, Mother's eyes (the whites) became fiery red. It was diagnosed as 'iritis.' Just the August before we had heard of iritis for the 1st time. Mother was also in her menopause, which no doubt added stress to her already overloaded school work and home duties. Don't forget we all worked and carried our own share, yet Mom and Dad had the brunt of it. We went to doctor after doctor. One doctor would send us to another. From White Memorial we were sent to specialists. One Loma Linda graduate doctor put her in bed for 6 weeks on 'white crackers' (which we hadn't used for years) and water–or thin oatmeal gruel & nothing else. Why? God only knows. This developed ulcers (corneal) on booth eyes, Then the treatment for this was to burn corneas at 135º with a platinum instrument until a thick scar was formed. This was done so mother's body had to absorb pus from carbuncles (another name for ulcer in another location) so that the bursting or opening of the ulcer would not let the fluid out of her eye. The redness still continued. God was very merciful. This did not pain mother very much. Only God's mercy, nothing else, because she did not take pain medication. After this we moved to La Sierra and Dad made soy milk. Mother begged for carrot juice and soy milk. So we put her to bed (for fear she'd fall to pieces–I guess on such a limited diet). She had these two every hour for 10-12 hours daily. This cleared mother's eyes of inflammation, but the damage was done. She was blind from the scar black white over pupils.

Q7. Are you aware of any exchange of information between Madison College and Van Gundy? Ans: "No." (Incidentally note that I put in the information about when Madison started making soymilk and tofu). Ans: "I wouldn't be surprised if they got Dad's info for their cannery–but I have no proof. They always said they were first; I always

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doubted it.

Q8. Do you have any idea when Mildred Lager's book on soybeans eventually became Dorothea's book? What prompted Mildred to write her first book about 1943? Since when had Mildred and Dorothy been friends? Ans: "No. Competitors for the same man. Ha! They were never friends."

Q10. Not important. Q11. Can you tell me where the family was living throughout the period from 1915 to 1920? Was part of this time spent in San Jose? Ans: "On Ranch in San Jose, 10 miles out, 1920. Mom taught in San Jose; Dad was foreman of a ranch–1920-1921. Tired of [?] & indoors. Sonoma 1913-1916, Vallejo 1919 school year only. Dad at Mare Island. Napa 1916-19. Back to Napa 1919-1920. Then to San Jose. Loma Linda 1921. We were not fickle or unstable people, but moving seemed to be in our blood or in Mother's. Dad worked at night on Mare Island, and would come home to find a note that we had moved and the new address. Even if we lived in some town we'd move every year. We had a family joke if we got past Oct. of the year we would not move.

In 1915 Dad had a hernia operation at the St. Helena Sanitarium so he couldn't work on Mare Island. That was his only defect. He as rarely ever sick. He worked always 16-18 hours per day. When we was a mechanic in Sonoma for a few months he often worked day & night or into the wee hours of morning in order to get a salesman's car back on the road. You really have gotten more than you asked for. I hope you can read it & it is more accurately told. You are doing a fine job.

While Dad taught in the College of Medical Evangelists as a technician, mother taught in the academy located there on Anderson & Colton Ave. in Loma Linda. Because they were husband and wife, mother's and dad's wages & did not give them their full worth that any other one person received. It was due to this that Dad went to Los Angeles and started teaching so he could get enough money to pursue his lifelong dream of manufacturing [food] products.

"Again I say his first products in 1929 were soy beans, wheat, garbanzos & brown rice–4 products. That year he added soy milk and soy cheese–cereal coffee–soy spread and soy gluten as he could make his own equipment and machinery. The last 3 products were sold only on order and soon soy prod back them off the market or little used.

Now about mother's blindness. We lived 3 blocks south of Valley and one block west of San Gabriel Blvd.–South of the city of San Gabriel. This was 9 miles form Dad's school in L.A and 9 miles from Mother's school in Pasadena–an SDA church school. Dot and I went with mother to Pasadena Junior College. I was taking 1st year pre-med & Dot was getting a B.S. degree & finishing college. Dot took part-time work at Pasadena Jr. College, then went on to UCLA for other classes, going to both schools at once. We left at 7:30 to 8 a.m. except Saturdays and Sundays. Got home at 5:30 to 6:00. We also had two boys, ages 11 and 13, friends whose father had died and needed a home. 7 lunches we packed five days a week.

Mother's retinal optic nerves were OK but scars formed a blank curtain over each pupil. Once in a while she could see around at once side if she could tip her head just right and if the light was She could see our faces or color of flowers or bright colors of sunset a rare treat. Mother accepted her cross in Christlike style & gave an inspiration to many of her young visitors. Now if corneal implants had been older and mother younger I would have it done–but not advisable. I had to stay out of school for 3 years on [behalf of] Mother's health and I was glad to do it–while Dot finished college at P.U.C. in 1928. I finished 1929 & was out a year on daddy's death. So I was nine years getting my 5 years of medicine. I would do it over.

Now about Dot. As soon as Dot graduated from La Sierra Academy (1924) she went right to Loma Linda into dietetics. 1924 Fall Mother wanted Dot to be a teacher & did not want Dot to be a dietitian. But she went anyway, not stubborn but steadfast, as soon as she graduated 1927. She became Matron of La Sierra Academy. Good experience for later life. For about 3 months (summer to Sept. of 1927) she was dietitian for White Memorial. I worked any or all shifts setting trays at the White. 1927 Sept. we both went to Pacific Union College (PUC). Dot got B.S. in May of 1928–She carried a heavy course–last 6 weeks school took her out of lab work and she taught the girls in Home Economics classes. The teacher got sick and unless Dot did the teaching the girls would lose the year. At PUC Dot took sewing. She was a past master–could make hats, coats, gloves–anything she wanted. I was slowing. I came in second. Dot took speech classes and was always out in front. I was never jealous, but glad to be less brilliant!–or in her shadow. She was a marvelous sister & we never quarreled. Now about Dot's flare [love]. Dot 1st met Ed in the course of work she did. Now Mildred Lager lectured and knew Ed. Ed loaned her money ($10,000 I think). After Hulda's death, Dot started going with Ed. But Mildred said or made her boasts she would marry Ed–& if not make him lose the loan–so he married Mildred. Mildred died from cortisone drug taken for arthritis that she had. Mildred was sick most of the years she was married to Ed. After Dot & Ed married. Dot said 'Now Ed, you really have married a well wife' & in 10 days she broke out from head to foot with chicken pox. That was her only sickness though. Address: Jackson, California.

2203. Kjeldal, Inge (Mrs.). 1981. Re: Nutana and the soya products it now makes. Letter to William Shurtleff at Soyfoods Center, April 27–in reply to letter of Feb. 15. 1 p. Typed, with signature on letterhead. [Dan]

• ***Summary:*** See next two pages. This letter is accompanied by a portfolio of the following documents: (1) A list of Nutana products (3 p., in English); the 21 products

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marked with a handwritten "S" contain soya. (2) "Nutana: Producer and wholesaler of health food. Export and import. Established 1898. Member of World Foods Service" (17 p., 30 cm, with some large color photos). Address: Nutana Helsekost, Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.. Phone: (03) *67 00 19.

2204. Bower, Lois. 1981. Mildred Lager: Recollections of her life and work (Interview). Conducted by William Shurtleff of Soyfoods Center, April 28. 2 p. typed transcript. [1 ref]

• ***Summary:*** Lois is Mildred Lager's stepdaughter, the daughter of Ed Jones' former wife before he married Mildred. Lois' mother died in about 1943-44, about 2 years before Ed remarried to Mildred. Mildred and Ed were married in 1946; Lois was about age 30 at the time. Mildred died in 1960; they were married for 14 years. She died of osteoporosis caused by cortisone or a cortisone derivative. She had been on steroid hormones because of her arthritis. She apparently used too much cortisone, and suffered from spinal collapse.

The House of Better Living was a health food store in Los Angels that published its own newsletter and catalogs, which were sent to a mailing list. Mildred also gave nutrition classes there. Lois has a guestbook from The House of Better Living, and she has newspaper articles about Mildred in Los Angeles plus several of Mildred's books, which she will send to Soyfoods Center.

Mildred's interest in nutrition started when she got rheumatoid arthritis. Her interest in soy developed after that. Mildred probably learned a lot about soy from Ed Jones, who was a health food jobber. He called on Mildred, and sold her various products, including soy products. Ed Jones also worked for T.A. Van Gundy. Ed could have known Mildred for as much as 10 years before their marriage.

Dorothea was Lois' 2nd stepmother. Mildred and Dorothea did NOT co-author the book. After Mildred died, Dorothea rewrote the book. After Lois' mother died, both Mildred and Dorothea were going out with Ed Jones; that was how they met. There was not a close relationship between Dorothea and Mildred; as competitors for the same man, they were cordial but not friendly. Ed chose to marry Mildred.

By 1946, when she married Ed, Mildred was no longer involved with her health food store or her radio program. She has a regular news column in the Los Angeles Times; she was very well known in her field.

Mildred was in a wheelchair when she was young. Lois does not know how long she had been in a wheelchair. Mildred's engagement to a young man was broken because of her illness. She had very painful, difficult years, but she had a tremendous spirit. "She was a tiny little thing, very slight, just skin and bones, but with a twinkle in her eyes. Always a laugh. A very pretty woman. She just forged ahead, with a brisk walk and a little swing of one leg–but no one would call it a limp. She was no longer crippled in her later years, so she conquered her disease. All the time she operated The House of Better Living she was on her feet. She was eager to help others."

How did others see her? "She was extremely likeable and friendly, but very thrifty, almost stingy. Her parents were immigrants from Sweden. She was rather sharp; nobody would take advantage of Mildred.

Mildred wrote *The Useful Soybean.* When Ed married Dorothea he probably said, "You know about soy too. Why don't you rework it and we'll re-issue it and keep it alive as a source of family income." Ed was at work selling those books long after Mildred died. Address: 825 Redbud Drive, Redding, California 96001.

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2205. Holmes, Charlotte Van Gundy. 1981. Re: Chronology of T.A. Van Gundy and La Sierra Industries. Letter to William Shurtleff at Soyfoods Center, April 28. 2 p. Handwritten.

• ***Summary:*** 1874 July 8–Theodore A. Van Gundy born. His parents and their family (in which he was a child) moved to Morgan Hill, California, where his elder sister died; she was age 16–4 years older than he.

1898 Feb. 16–T.A. Van Gundy married. He left Dr. Hare that spring, because he had been with Dr. Hare for 4 years. During this time he was indoors most of the time. He felt a change to the outdoors would be invigorating. So he and his wife, Lulu, moved into Yosemite Valley. They were taken in by stage coach drawn by horses–eight horses, if I remember; that seems like a lot of horses. Dad was mechanic and maintenance man for the old hotel.

They remained all summer, living in a tent–gathered mushrooms. Dad made running water come to the tent by placing a pipe upstream for gravity flow to the tent. At the end of summer, they moved to San Jose, California, where dad drove one of the 2 autos in San Jose 1898 to 1906.

1906–They moved to St. Helena Sanitarium [California, where many Seventh-day Adventists also lived].

1906-1912–Worked in food factory [in St. Helena]. I can remember, I was 7 (1912) before Dad left St. Helena, He, Mother and I visited on a Friday 12 canneries in S.F. At Heinz 57 Varieties, I got a pickle pin. Campbell Soup–I can still see those soup pots boiling & many others.

1912-1915–Ran a cannery for Mr. Ritz–canned st beans [stringed beans?], pears, peaches, tomatoes, quince jelly. In 1915 Mr. Ritz closed the cannery. Turned Dad & family out without the wages he owned to my Father. Dad was an honest & too trusting genius & always was left on little, and it seemed because no papers were signed.

1915 Oct.–Dad made Smoein out of fava beans. Mother that spring demonstrated this Smoein in a Household show at Lake Merritt in Oakland. The biggest of its kind then.

1915 Oct.–We moved to Napa. Dad started working at Mare Island as a fine precision mechanic. He did fine lathe work–could make anything from metal asked for.

1919 Sept.–Moved back to San Jose. Dad was foreman of a 200 acre ranch.

1921–Moved to Imperial Valley, California. Dad taught school at New River, a SDA [Seventh-day Adventist] church school.

1921/22–Moved to Loma Linda, California. Father was head of Psychology Lab.

1922-23–La Sierra, near Riverside. Dad made Smoein here out of soy beans.

1923-25. Pomona–Dad taught L.A, [Los Angeles] schools. 1925-29–San Gabriel. Here dad made a feed mixer for a chicken ranch to mix soy beans for feed.

1929-32–La Sierra–Made soy products.

1931-35. Ontario [California]. California St. Died June 1st 1935. (Note–Not June 3) at the White Memorial Hospital after a 10 day bout with life and death coronary occlusion; the last 4 days he was unconscious. I stayed by his side day and night for fear I would miss his last words, if any. As a result, I missed all of my final exams. (And, in passing, had to stay out of my class & audit that year over). Politics I think–but I was the gainer. I was Dad's birthday present [Charlotte was born on her father's birthday]. We had a father-daughter relationship few have ever had the privilege of having. I cherish the memories. Address: Jackson, California.

2206. Buller, Allan. 1981. Re: History of Worthington Foods and its work with soyfoods. Letter to William Shurtleff at Soyfoods Center, April 29. 2 p. Typed, with signature on letterhead.

• ***Summary:*** "Dear Bill: In response to your letter and telephone call, I'll try to provide you with some information that will be useful to you as you prepare material for your book on soy foods. I'll begin by trying to answer some of the questions you raised in your letter.

"One of the first products which Worthington Foods made containing soy was our Soyloin Steaks product introduced in 1949. That was the same year we also began the manufacture of Meatless Wieners which we later identified as Veja-Links. The change in name was made in 1955. Meatless Wieners, as we began making them in 1949, also contained soy.

"We acquired the rights to manufacture and market products developed by Dr. Harry Miller, who founded and operated International Nutrition Laboratories, at Mount Vernon, Ohio. We made this acquisition in 1950. Among the products involved were Miller's Cutlets, Miller's Cutletburger, and Meatless Vegetarian Stew.

"We began marketing our Soyamel soy milk in the year 1954. By 1956 we had discovered a way to instantize the product so we sold both a non-instantized and an instantized Soyamel for a number of years. We used a spray-dried material in making our Soyamel. The protein we used was Gunthers.

"I might mention that at the time we acquired the rights to manufacture and market vegetable protein foods developed by Dr. Harry Miller, the Loma Linda Food Company acquired rights to manufacture and market the soy milk that Dr. Miller had developed. The Loma Linda Food Company also purchased Dr. Miller's plant at Mount Vernon. Because we had the equipment necessary to produce textured vegetable protein foods, we were not interested in Dr. Miller's factory or equipment.

"In 1960 Worthington Foods acquired the rights to manufacture and market the Battle Creek Food Company products. Because Worthington Foods did not need the plant facilities including equipment, only the rights to the trademarks and recipes were purchased.

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"In 1962 Worthington Foods began the production and marketing of frozen foods utilizing spun protein fibers which We produced under license received from Robert Boyer, the inventor and holder of the patent. The first frozen foods we produced were chicken analogs. We had a frozen sliced chicken that resembled white meat of chicken pressed into chubs. We also had a chicken-like analog that was deep-fat fried and sold in a form that resembled fried chicken. The fried chicken-like product was sold in both frozen and canned form. It was at this time that we began use of the Word Soyameat to describe our canned meat analogs made from spun protein.

"In 1964 Worthington Foods acquired the rights to manufacture and market Madison Foods. Again the acquisition included trademarks and recipes. We operated the Madison Food plant for a couple of years but this proved to be unprofitable; therefore, all manufacturing operations were moved to Worthington.

"Going back in history a bit, I might point out that Worthington Foods was founded in 1939 under the name Special Foods. We were incorporated in December of 1945 under the name Worthington Foods, Inc. In 1970 Worthington Foods merged with Miles Laboratories.

"In response to your request, I am sending you photocopies of price lists dating back to the early beginnings of our company. I have included price lists printed at various intervals to give you some idea of the growth of the product line.

"While this information does not make a history, it may be helpful to you in putting together some information about our company. Certainly it's better to work from the basis of a few facts than from hearsay. Very truly yours,..."

Allan sends price lists / order forms dated October 1, 1941. Feb. 15, 1945. Aug, 1, 1946. July 31, 1950. Dec. 10, 1950. Nov. 15, 1954. April 1, 1959. May 1, 1961. Dec. 15, 1969. Oct. 1, 1962. July 1, 1964. Address: Executive Vice President, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085.

2207. Towery, Mable. 1981. Re: Basic information on people involved with soy at Madison College. Questions answered on Soyfoods Center letterhead (dated 25 April 1981) and returned to SC on 2 May 1981. 1 p. Handwritten.
• ***Summary:*** Basic information about Miss Frances Dittes and Ed Bisalski. Francis was born in 1891. She first came to Madison in Oct. 1910 as a student. Then she attended Peabody College, where she earned MA (1929) and a PhD (1935) degrees. In 1935 Madison started offering a major in nutrition. Frances is no longer living.

Ed Bisalski is still living, at 3123 East Miller Road, Bancroft, Michigan 48414. Phone: 517-634-5203. He first came to Madison in Sept. 1933 as a student. He started working for Madison Foods in about 1940.

Not all of Madison's students were Seventh-day Adventists (SDAs). About 26% were SDAs after the article about Madison College was published in *Reader's Digest* in 1938, but only 10% or less during the 1950s. Willis Miller, the son of Dr. Harry Miller, guesses that Dr. Miller first visited Madison College in 1924 or 1925.

Note: Dorothy Mathews dug out extensive information about soybeans and soyfoods from early, unindexed issues of the *Madison Survey* and sent it to Shurtleff at Soyfoods Center. Address: Editor, Madison Survey, Box 1303, M.C. Station, Madison, Tennessee 37115. Phone: 615-865-1615.

2208. Holmes, Charlotte Van Gundy. 1981. Re: Mildred Lager, Ed Jones, and Dorothea Van Gundy. Letter to William Shurtleff at Soyfoods Center, May 9. 2 p. Handwritten, with signature.
• ***Summary:*** Mildred Lager "was certainly a go-getter. And she got Ed [Jones] the same way." "I will say Ed was good to his wives–tho' the first two were very sick." "Mildred was a Unitarian, yet Ed took her to the White Memorial Church on Sabbath, but she never accepted the [Seventh-day Adventist] faith. I believe she was quite crippled before she died & suffered greatly... Ed was 13 years older than Dot [Dorothea Van Gundy] when they married, so Mildred died at age 51 (?) and Ed was 19 years older than Mildred. Ed was 77 when he died in 1968–March. He was a twin."

Note: Mildred Lager died on 25 Jan. 1960 for various factors, but mainly from the increasingly large doses of steroid hormones, cortisone derivatives, she was taking to treat her severe arthritis. She also had severe osteoporosis at the time of her death. Address: California.

2209. Sias, Vep C. 1981. Re: Brief history of Cedar Lake Foods. Letter to William Shurtleff at Soyfoods Center, May 19. Following interview of Feb. 18. 1 p. Typed, with signature.
• ***Summary:*** "Cedar Lake Foods started in 1949 by Vesper Sias, former employee of Butler Food Products and Cedar Lake Academy. This company began in rooms in the back of the Sias home on a kitchen scale making a similar line of foods as Butler Food Products. The line started with vegetarian chops, vegeburger, soynut cheese, soynut loaf and meatlike. In 1968, Cedar Lake bought the production of Sunnydale Foods of Centralia, Missouri. At the same time, Lang Foods canning division was also purchased and the products called Turketts, Hostess Cuts, Vegebits, Lentil Roast and Breakfast Links were added to the Cedar Lake Line. In 1975, after several months of illness Sias sold Cedar Lake Foods to a corporation of five stockholders who operated business under the name Cedar Lake Foods Inc. of Tennessee. In the spring of 1981 the business was sold to Country Life Natural Foods, a non-profit corporation. At this time, Cedar Lake Foods are produced as a department of Country Life Foods."

Note: Country Life is a self-supporting Adventist group

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with other health food items such as juices and nut butters. In 1975 Cedar Lake employed 26 people and had sales of $500,000. Address: 740 N.E. 42nd Terrace, Ocala, Florida 32671. Phone: 904-236-3766.

2210. Miller, Roger W. 1981. Vegetarianism: A healthy diet is quite possible. *Chicago Tribune.* May 21. p. W_A30D.
• ***Summary:*** A long article in praise of vegetarianism, and explaining the many benefits of a vegetarian diet. Philosophers ask: What right do humans have to kill and eat other creatures. Nutritionists admit that a balanced vegetarian diet is healthier and leads to less obesity than the standard American diet. Cattle have to eat 16 pounds of grain to produce 1 pound of meat, so ecologists applaud vegetarians.

In 1974 the Food and Nutrition Board of the National Academy of Sciences put an end to the myth that humans need to eat meat in order to be healthy. Their statement on vegetarian diets concluded: "A vegetarian can be well nourished *if* he eats a variety of plant foods and gives attention to the critical nutrients (needed by all people)." The writer summarizes the Board's recommendations for vegetarians, focusing on legumes, grains, nuts and other seeds, dark green leafy vegetables, and meat alternatives.

Defines vegans, lacto vegetarians, and lacto-ovo vegetarians.

Trappist monks shun meat because they consider it a luxury, and this in conflict with their quest for the simple life. Seventh-Day Adventists, who are vegetarians, generally have fewer death due to heart disease, but this may be due to the fact that many of them do not smoke or drink, and they consume lower levels of fats and cholesterol.

Meat contains no dietary fiber; this it contributes to the U.S. laxative habit that costs several hundred million dollars a year.

Legumes (such as soybeans, lentils, peanuts, or chickpeas), nuts, and "meat substitutes made from plant protein (usually with a soybean base) are also protein sources for a vegetarian diet. In addition to providing protein, these meat alternatives supply varying amounts of other essential nutrients."

2211. Bisalski, Ed. 1981. Madison Foods (Interview). Conducted by William Shurtleff of Soyfoods Center, May 30. 2 p. transcript.
• ***Summary:*** Edwin M. Bisalski, along with Perry A. Webber and Frances L. Dittes, was one of Madison's soyfoods pioneers. Ed was born in 1903 in Pennsylvania. He arrived at Madison in 1931 as a college student, then in Sept. 1933 he went to work with Madison Foods, eventually being made General Manager and Chairman of the Board, a post he held until March 1945. During this time he did an outstanding job building up the small food company, introducing soyfoods to America and to other Adventist Groups, getting endowments, enlarging the plant, and directing soyfoods research and development efforts. In 1935, Bisalski spoke about soyfoods and Madison at the American Soybean Association's annual convention / meeting at Evansville, Indiana. In 1939 U.D. Register and Shiro Kunihara joined Madison Foods' R&D staff and made key contributions at this critical stage.

In 1941, under his direction, a major expansion of Madison Foods took place. A practically new plant, with one section five stories high, was constructed. The work was completed in Oct. 1942 at a cost of $35,000. By late 1942 Madison was distributing its foods to the 48 states and to some countries overseas. In 1945 Bisalski left the food company to finish his education. Shortly thereafter, also because of the end of World War II, sales began to fall, so it was never necessary to use the new plant to capacity. During the 1950s sales continued to drop sharply; during that decade, Madison foods just managed to break even.

In 1946 Ed received his BS degree in nutrition from Madison then did graduate study in nutrition and education at Peabody College and Michigan State University. In 1948 he returned to Madison Foods this time as sales manager, a position he held until leaving in 1951 to continue private work in the area of healthful foods. He later became a science teacher, retired in 1971, and in 1981 (at age 78) was writing a book on nutrition. Address: 3123 E. Miller Rd., Bancroft, Michigan 48414. Phone: 517-634-5203.

2212. Schwarz, Richard W. 1981. Re: John Harvey Kellogg's development of peanut butter. Letter to William Shurtleff at Soyfoods Center, June 9. 1 p. [2 ref]
• ***Summary:*** "I am not certain I should have ever given an exact date for the first peanut butter. My impression is that it was 'shortly after 1890' or 'early in the 1890's.' My dissertation references on this are to a *Good Health* article, April 1920, p. 190, and in Dr. Kellogg's testimony in his major lawsuit against his brother's company. If you have access to a *good* law library you might check the case of John Harvey Kellogg, the Kellogg Food Company, and the Sanitarium Equipment Company vs. Kellogg Toasted Corn Flake Company, et al. My citation is to the Michigan State Supreme Court *Record* of this case (1920), the second volume of this case transcript, p. 369.

"You may find it helpful in the future to check the documentation in my Ph.D. dissertation, which is available in the Loma Linda University Library system." Address: Vice President, Andrews Univ., Berrien Springs, Michigan 49104. Phone: 616-471-7771.

2213. Shurtleff, William; Aoyagi, Akiko. 1981. History of fermented soymilk and its products. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 19 p. June 28. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject. Contents: Introduction: Relatively recent, advantages of fermentation. History of acidophilus soymilk from Li Yu-

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ying and Beltzer (1910-1912). History of investigations on the growth of lactic acid bacteria in soymilk from Gehrke and Weiser (1947). History of soymilk yogurt. History of fermented soymilk cheeses. History of soymilk piima and viili. History of soymilk kefir, kumiss, and buttermilk. Address: Lafayette, California. Phone: 415-283-2991.

2214. *Toronto Star* (*Ontario, Canada*). 1981. Meals are meatless for many families (Advertorial). June 30. p. B13. Advertising supplement.
• ***Summary:*** "There's a quiet revolution shaping up on your dinner table.

"Many families are eating meat analogue (meat substitute to you and me). Long acclaimed by many vegetarians and members of the Seventh-Day Adventist church, the meat analogue looks and tastes about as much like meat as margarine resembles butter, and that's close enough for many.

"Some are frozen and ready to serve, some come in sealed tins and complete a recipe, others in packages, dehydrated so that you can slip them into your knapsack when you aren't making stews and casseroles at home. Names like Vegetarian Burger, Sizzleburgers, Prosage Links and Big Franks abound, not to mention Vegetarian Stakelets, Stripples (like bacon). You name your favorite meat, fowl, or fish and manufacturers such as Loma Linda Foods or Worthington Foods will probably be able to offer a reasonable facsimile.

"The soybean has been a staple of the oriental diet for hundreds, if not thousands of years. It is a complete protein, and enthusiasts are quick to note the absence of cholesterol and animal fat content. Add wheat gluten to capture the 'mouth feel' of flesh food, peanuts for the taste and fibrous texture, a bit of seasoning here and there, extrude the whole, cook to taste, and voila, the meat analogue!

"Soybean drink [soymilk] is another entrant in the huge North American beverage sweepstakes. With its white colour and nut-like flavour, it offers an alternative to milk for drinking and cooking."

2215. Anderson, Bonnie M.; Gibson, R.S.; Sabry, J.H. 1981. The iron and zinc status of long-term vegetarian women. *American J. of Clinical Nutrition* 34(6):1042-48. June. [55* ref]
• ***Summary:*** The iron and zinc status of 56 Seventh-day Adventist Canadian women (mean age 52.9 years) following vegetarian diets for an average of 19 years were investigated. Plant products provided 92% and 77% of their total dietary iron and zinc intakes, respectively. "The iron and zinc status of these long-term Seventh-day Adventist vegetarian women appeared adequate despite their low intake of readily absorbed iron and zinc from flesh foods and their high intake of total dietary fiber and phytate." Address: Applied Human Nutrition, Dep. of Family Studies, Univ. of Guelph, Guelph, ONT, Canada N1G 2W1.

2216. **Product Name:** [Soyalac Healthy Child {Soymilk}].
Foreign Name: Soiyarakku Genki na Ko.
Manufacturer's Name: San-iku Foods.
Manufacturer's Address: 1-1 Nagaurataku, Sodegaura-machi, Kimizu-gun, Chiba-ken 299-02, Japan.
Date of Introduction: 1981 June.
Wt/Vol., Packaging, Price: 425 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: K. Tsuchiya. 1982. Dec. *Tonyu* [*Soymilk.* 2nd ed.]. p. 74. States that Soiyarakku Genki no Ko was introduced in June 1981 in a 425 gm can and distributed nationwide.

2217. Smith, Paul. 1981. Re: Pioneering work with debittered full fat soy flour and with soybeans in Australia. Soybean production in Australia. Letter to William Shurtleff at Soyfoods Center, undated. 2 p. Handwritten. Plus comments on draft of History chapter.
• ***Summary:*** Comments on "History of Soya in Australia" manuscript: Vincent R. Smith was a soyfoods pioneer in Australia. In 1951-52 he began to manufacture Australia's first whole (full-fat) heat-treated (debittered) soy flour. From 1953-54 to 1974-75 V.R. Smith also canned soybeans in tomato sauce or puree. In 1956 he founded Soy Products of Australia Pty. Ltd. Between 1965 and 1974-75 Mr. Smith developed and manufactured two soyabean meat substitutes–Soya Bean Luncheon Loaf, and Savoury Roast–for Bellevue Health Supplies, as part of his product range within F.G. Roberts' Health Foods Proprietary Ltd. This latter company has since been absorbed within Soy Products of Australia Pty. Ltd. Technically and nutritionally these products were excellent, but they were discontinued due to rising labour costs, the small Australian market, and competition from larger, more highly automated companies like Sanitarium and Heinz. At the time, possibly due to the very cheap cost of meat in Australia, there was very little market interest in soyabeans either as a food, meat substitute, and/or extender.

By 1981 Soya Products of Australia Pty. Ltd. was making debittered full-fat soy flour and grits, Soy Crunch (a breakfast cereal containing soy grits), Soy Compound (containing dry soymilk, whole soy flour, malt, and lactose), and several types of Muesli containing soy grits. The company's main role is in supplying high grade, human consumption quality raw (enzyme active) and debittered (heat-treated) soy grits and soy flour to industry [food processors] for a wide variety of uses: cakes, biscuits, bread, bread premixes, pizzas, breakfast cereals and mueslis, hamburgers, smallgoods, baby foods, soy milk, soy ice cream, tofu, and calf- and piglet rations.

Interest in soyfoods is growing in Australia, and will continue to grow fostered by increasing health consciousness and the rising prices of meats of all kinds. After the end

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of the Vietnam war in 1975, there was a big influx of Vietnamese into Australia, swelling the number to 50,000, of which 30,000 are ethnic Chinese. There are also some 10,000 Indonesians currently residing in Sydney alone.

Letter: "Thank you for your hospitality during my visit to the USA... We are now more than fully occupied running, maintaining, and expanding our soy flour mill and our health food business. In the last two years we have made substantial improvements in our quality control, throughput, and heat-treatment process. We have also been working on improving our bulk unloading and grain cleaning system, and plans for extending and further automating our plant are well in hand... We are actively participating in research and development work on soy flour and its end uses: particularly in the areas of liquid and powdered soymilks and soy ice cream.

"We were amongst the first people in Australia to use soya beans to make products for human consumption, in particular heat-treated or debittered full fat soy flour. We were actively involved with the first commercial crops of soybeans grown in Australia in the early 1950s at Kingaroy; we even had a plot of several varieties of soyabeans growing in our own backyard for several years from about 1953-55. Though the bushes grow, the soybeans never mature properly. We also did some interesting work in canning beans in tomato sauce or purée and in manufacturing soy meat substitutes. In addition to our conventional bakery and small goods outlets, our own specialty products and breakfast cereals, we are now supplying several small manufacturers of tofu, soymilk with soybeans, soy flour (raw), and soy grits (raw) and have recently become involved in tempeh manufacture. The trend here in Australia is definitely following that in the USA and interest seems to have grown dramatically in the last year or so. Soyfoods seem to have taken off... Unless you can afford shiploads, freight to Australia is a killer, so we do our best to avoid importing soybeans.

"I am enclosing a recent newspaper article about a tofu producer. We supply him with soy flour for making his tofu and soymilk."

Concerning soyabean production in Australia: "Soyabeans are widely grown in Australia from just north of Shepparton in Victoria (120 miles north of Melbourne), through the Riverina district of southern New South Wales (NSW), through central, north, and northeastern NSW; the Darling Downs area (around Toowoomba) and Kingaroy districts of Queensland. More recently soyabeans have been grown in Western Australia, near Perth.

"A great deal of work has gone into developing suitable varieties of soyabeans for Australian conditions; much of this has been built on American research and experience. U.S., Chinese and Australian beans, while generally similar, are very different to handle and process, in our experience.

"Initially, soyabeans were grown under natural rainfall but this is now rare as bean size tends to be small and yield poor. Soyabeans are definitely not suited to dryland farming techniques. Nearly all soya beans now grown in Australia are grown under irrigation."

Update (March 1995): Paul Smith joined this family-run company in April 1980. In 1981 he was just starting to learn about its history. By 1986 he had done extensive research and writing (which see) on the company history, which showed that it had much earlier and very interesting origins. Address: Soy Products of Australia Pty. Ltd., 69 Power Road, Bayswater, VIC 3153, Australia. Phone: (03) 729-1738 or 729-3611.

2218. *South African Medical Journal.* 1981. News and comment: Health and longevity among Seventh-Day Adventists. 59(26):925. June.
• ***Summary:*** This editorial notes: "Studies in English-speaking countries have established that those who belong to the Seventh-Day Adventist Church tend to be more healthy and to live longer than the average population." A recent study from Norway by Waaler and Hjort (*T. norske Laegeforen.*, 1981, 101:623) shows that the 5,000 Adventists there live longer than anyone else. The men live 4 years longer and the women live 2 years longer than anyone other Norwegians.

The likeliest explanation for this difference is that Adventists do not use tobacco, alcohol, coffee, tea or any addicting drugs, and that they use fruit and vegetables freely–in fact 50% are entirely vegetarian. They also encourage exercise, good working habits, and regular sleep.

2219. Watanabe, Hidekazu. 1981. Re: Early work by San-iku Foods in Japan with tofu and soymilk. Letter to William Shurtleff at Soyfoods Center, July 19. 2 p. Handwritten. [Jap]
• ***Summary:*** Discusses the early history of this product. "The Ueda Tofu Shop in Hachioji helped with the development of our first soymilk in 1957; I was there at the time. In those days our name was *San-iku Gakuin Shokuhin-bu,* not San-iku Foods. The purpose was to provide a place of labor for the students and opportunities to learn food processing. It was not a business. Dr. Perry Webber was the principal of our school at the time. I think that our company did not make commercial soymilk before 1957. The food company is said to have been founded in 1928 in connection with the school, but legally it did not become an independent company until December 1970."

Note: In 1969 the food company, named College Health Foods (later renamed San-iku Foods), introduced Soyalac soymilk. Address: San-iku Foods, Sodegaura-machi, Chiba-ken 299-02, Japan.

2220. *Toyo Shinpo* (*Soyfoods News*). 1981. [Japanese soymilk companies and their products]. July 21. p. 25. [Jap]
• ***Summary:*** A large and very interesting table shows that 14 companies are now selling soymilk in Japan, and

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7 companies are making it. For each company is given: Soymilk product name in Japanese [and English]. Volume (all are 200 ml). Retail price in yen: Either 70 or 80 yen. Package type (all are Tetra Brik Aseptic; each has a straw attached to the back). Shelf life: All are 60 days.

The manufacturers are: (1) Kibun Foods: Plain Soymilk (Tonyu Sutoreeto [Straight]). Vegetable Soymilk (Tonyu Yasai). Fruit Soymilk (Tonyu Kaju). Barley Malt Soymilk (Tonyu Bakuga).

(2) Okazaki Marusan: Marusan Soymilk (Marusan Tonyu). Marusan Orange (Marusan Orenji). Marusan Barley Malt (Marusan Bakuga).

(3) Mitsubishi Kasei: Maburon. Maburon Orange (Maburon Orenji). Maburon Coffee (Maburon Koohii). Maburon Honey (Maburon Hachimitsu).

(4) Meiji Nyugyo: Sunglow Soymilk (Sanguroo Tonyu).

(5) Midori Shokuhin. Midori Soymilk Plain (Midori Tonyu Sutoreeto). Midori Soymilk Soft (Midori Tonyu Sofuto).

(6) Asahi Shokuhin: Soymilk (Soimiruku). Soymilk Orange (Soimiruku Orenji). Soymilk Coffee (Soimiruku Koohii).

(7) Saniku Foods: Soya Neo Cocoa (Soia Neo Kokoa).

Note: A large black-and-white photo in this issue or a nearby issue this year shows 25 different soymilk packages, including 3 Soyalac cans.

2221. Schwarz, Richard W. 1981. Re: Small Seventh-day Adventist food companies in the USA. Letter to William Shurtleff at Soyfoods Center, July 22. 1 p. Typed, with signature on letterhead.

• ***Summary:*** "I suspect that the production of all of these small companies (and there were many more than you list in your chapter) was very limited and was largely with wheat gluten products. Their heyday was 1895-1915.

"Part of the reason each little sanitarium developed its own local products was due to distribution problems; part because these were seen as a potential financial support to the evangelistic-humanitarian goals of the sanitariums. Also, Ellen White feared monopolies as concentrating too much power in one person's hands–she favored free enterprise in the production of the various Battle Creek type "health foods." The problem was that the market was not great enough to allow most of these small operations to survive."

Address: Vice President, Andrews Univ., Berrien Springs, Michigan 49104. Phone: 616-471-7771.

2222. Fraser, Gary E.; Jacobs, D.R., Jr.; Anderson, J.T.; Foster, N.; Palta, M.; Blackburn, H. 1981. The effect of various vegetable supplements on serum cholesterol. *American J. of Clinical Nutrition* 34(7):1272-77. July. [31 ref]

Address: Lab. of Physiological Hygiene, School of Public Health, Univ. of Minnesota, Minneapolis, MN–Dep. of Biostatistics and Epidemiology, School of Health, Loma Linda Univ., Loma Linda, California 92350.

2223. Shurtleff, William. 1981. William Morse: The father of soybeans in America (Continued–Part III). *Soyfoods* No. 5. p. 56-60. Summer.

• ***Summary:*** Continued: "Later years in America (1931-1959): Morse returned to America in March 1931 with great enthusiasm and interest in transmitting to America all that he had learned in East Asia. He was now a principal agronomist at the USDA Bureau of Plant Industry. With the stage set for the fruition of years of work and research that would transform the place of the soybean in the Western world, let us pause for a minute to ask, 'What kind of a man was Bill Morse?'

"In appearance, he was tall and lean, with a kind face and soft features. Farmers all over America, with whom he had met and talked in their fields, might remember his baggy suspendered pants, loose tie, and slouched hat, his great interest in their problems and successes.

"George Strayer, editor for 27 years of the American Soybean Association's *Soybean Digest*, who had known Morse since 1927, said of him: 'He was a quiet, unassuming, yet brilliant fellow, not particularly dynamic as a speechmaker, but intensely interested in seeing soybeans progress. He would sit up half the night talking with people about soybeans and soyfoods.'

"An article by Mary Burr Pieters in the September 1944 *Soybean Digest* described Morse as 'modest and retiring but sure and right as rain... He studied, he traveled, he toiled, he experimented–he exhorted–and the result of all of this singleness of purpose and devotion surely borders on fantastic.'

"Edward J. Dies, his close colleague, described him in Gold from the Soil as 'heedless of material gain or personal honor, shy, modest, agreeable, and easy going, but with the repressed intensity of a crusader.' Martin G. Weiss, who worked under Morse for many years and succeeded him when Morse retired, said of him: 'He was a kindly man, always willing to encourage and give moral support to his subordinates. He was loved by all, and his employees worked hard–they never wished to disappoint him.' His daughter Margaret described him in 1980 by saying: 'He was a gentle, soft-spoken person, who liked others and they liked him. He liked to tease, and the secretaries at his office all loved it. He was a very easy person to get along with; he was slow to anger and never cursed. He wasn't aggressive; where some might push, he would give in. He was intelligent. His work came first. He was not financially ambitious.'

"After returning from East Asia, Morse was more interested than ever in soyfoods, and much of the subsequent increasing interest in America derives from his efforts. He expanded his work with the USDA Office of Home Economics in Washington, D.C. and interested researchers

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in the Department of Home Economics at the University of Illinois to get involved with research on soyfoods, especially on use of the large-seeded, vegetable-type soybeans he had brought back from East Asia. He encouraged development of soyfoods recipes suited to American tastes and talked a lot about soyfoods at American Soybean Association meetings and many other gatherings. Working with others, he was largely responsible for the development of soy flour and grits. One entire wall of Morse's Washington office was covered with floor-to-ceiling shelves, filled with soyfood samples from Asia.

Except for Dr. Harry Miller, Morse was probably the first soy researcher in America to make soyfoods a regular part of his diet. While in East Asia, he and his family had become very fond of Oriental cooking, and especially of soyfoods, and they enjoyed them often after returning to America. Of the many recipes they brought back from the Orient, Morse's favorite was sukiyaki. He built a low sukiyaki table with a hot plate on top and cushions around it on the floor in his home and at every opportunity would invite over guests to serve them his specialty which of course featured tofu and sprouts. He also liked to take family and friends out to a good Chinese or Japanese restaurant. The family enjoyed using soy flour when making breads, muffins, or waffles. Morse's mother [Edna] liked to cook him fresh green soybeans and his wife regularly fixed him her favorite Boston Baked Soybeans. Morse loved soymilk ice cream; one magazine ran a full-page photo of him happily eating it. He also regularly enjoyed tofu, soymilk (plain and acidophilus), and soymilk yogurt, and these foods became increasingly important in his largely meatless diet after he found he had an ulcer. In fact he once told George Strayer that, with his ulcer, he felt these soyfoods had greatly extended his life and good health.

"Morse also actively continued his soybean selection and propagation work at the Arlington Farm. He realized more than ever that if the soybean was to become a national crop that hundreds of different varieties, adaptable to different latitudes, soils, and climates, would have to be found and developed by breeding. He was especially interested in working with farmers and the USDA to stimulate research and development on the vegetable-type soybeans, which had been little more than a curiosity prior to his trip to East Asia. While Morse was the first to popularize the vegetable-type soybeans, he was not the first to introduce them. The variety Easycook (which took less than half as long as most field-type soybeans to become tender after boiling) was introduced to the U.S. in 1894 and the Hahto was introduced in 1915. Morse mentioned both of these in *The Soybean* in 1923 but did not mention the term 'vegetable-type soybeans,' and was apparently unaware of their significance. Many of the vegetable-type soybeans that Morse brought back from East Asia were grown out and starting in 1934, distributed to various state agricultural experiment stations for trial.

"Up until 1928, Morse, in charge of soybean research, had been the only USDA employee working full time in this field. In 1928 the USDA hired a second full-time soybean researcher, Jackson L. Cartter, who had just graduated with a master's degree from Iowa State College. From 1928 to 1933 Cartter did soybean research on a farm in Holgate, Ohio that was managed by the Ohio Experiment Station. From 1933 to 1936 Cartter worked directly under Morse at the USDA Experiment Station, Arlington Farm, Virginia; he tested, grew out, and classified many of the soybeans from Morse's trip to East Asia. In 1936 Cartter helped to organize the U.S. Regional Soybean Laboratory at the University of Illinois. He became the first director of its agronomic division and was placed in charge of the soybean breeding program for the 12 Midwestern states; he studied the soybean's oil and protein composition, and served as director of the laboratory until his retirement in 1965.

"Unfortunately the long-term results of Morse's collection efforts in East Asia are not what they might have been. It was estimated in 1980 that only 25,000 acres of the 70.1-million-acre U.S. soybean crop were planted in vegetable-type soybeans, a mere 0.04 percent of the total. They have never become popular here for various reasons; they give 20 to 30 percent lower per-acre yields than field-type soybeans, tend to shatter easily at maturity and are thus hard to harvest, and consequently sell for 12 to 18 percent more than other soybeans. If they were less expensive, large amounts would probably be used in East Asia to make tofu, soymilk, tempeh, and miso by producers who already buy their beans from America." Continued. Address: Soyfoods Center, P.O. Box 234, Lafayette, California.

2224. Shurtleff, William. 1981. Soynut butter–Economical soy spread. *Soyfoods* No. 5. p. 22-23. Summer.
• ***Summary:*** "The heat waves and drought of the summer of 1980 devastated peanut crops across America and especially in the Deep South where most of the crop is grown–the leading states being Georgia, Alabama, and Texas in that order.

"The American peanut harvest was down almost 50 percent (from 2.0 to 1.1 million tons), the price of unprocessed peanuts leaped from $455 to $1510 a ton (up 332 percent) and the price of peanut butter roughly doubled. A creamy sunflower spread, selling for 49 cents a jar less than peanut butter, was quickly put on the shelves at Star Markets, a New England grocery store chain, and was reported to be selling 'very well.' Yet as of April 1981 not a single soyfoods processor had grasped this golden opportunity to put a tasty, low-priced soynut butter on the market; and to once again demonstrate the soybean's amazing versatility.'

"The peanut, as everyone knows, is not a nut; like the soybean it is a legume and an oilseed. The soybean, like

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the peanut, when roasted, makes a delectable soynut butter. The tastiest product is made by oil-roasting the soybeans. But a good product can also be made from dry-roasted soy flour (called kinako in Japanese). The addition of peanut oil to soynut butter or dry roasted soy flour gives a flavor very close to that of peanut butter. Or soynut butter can be mixed with peanut butter as a lower-cost extender.

"While peanut butter is a surprisingly new food, soynut butter is surprisingly old. Both products were first developed in America. Peanut butter was first produced about 1890 by the remarkable Seventh-day Adventist health reformer Dr. John Harvey Kellogg of Battle Creek, Michigan. He chose not to patent the product, believing it was a product that 'the world ought to have; let everybody that wants it have it, and make the best use of it.' As mentioned above, the first soynut butter was patented by another Kellogg (no relation) John L. Kellogg, in 1915. Piper and Morse in their classic *The Soybean* (1923) described the production of soynut butter (including the suggested addition of peanut oil) and commented that it had 'much the same appearance as peanut butter and a very agreeable flavor.' In 1927 Mr. T.A. Van Gundy, a Seventh-day Adventist and father of Dorothea Van Gundy Jones (author of *The Soybean Cookbook*) made America' first commercial soynut butter at his La Sierra Industries in La Sierra, near Riverside, California. He sold the product through health food stores. In 1967 Pichel and Weiss took out America's second patent for soynut butter; and in 1971 Badenhop and Hackler suggested grinding soynuts with oil to make a peanut butter analog. In 1972 Herbert Horn, a student in the Department of Food Science at the University of Illinois, wrote an excellent master' thesis entitled *Quality of Soybean Butter as Determined by Processing Variables.* The key step in his process was inactivation of the beany flavor in soybeans by a bicarbonate blanch, which also removed flatulence-causing oligosaccharides. He ground his oil roasted soynuts with 8% oil, plus salt and dextrose.

"Horn mentioned that there was a commercial soynut butter on the market in 1972 but he did not mention the name of the manufacturer. Subama Food Company in Iowa started to make soynut butter commercially in 1973; unsalted and made from oil roasted soynuts, it was sold only in bulk (30-pound pails), mostly to local food co-ops. As of 1981 the world's best selling soynut butter was probably produced by Itona Products Ltd. in Wigan, England. Called *Beanoot Butter* and sold as a dry mix in a plastic bag, this product consists of roasted soy flour, malt extract (a natural sweetener), vegetable oil, and salt. To serve, mix with a small amount of water and use like peanut butter.

"To make soynut butter on a commercial scale according to the method developed by Horn, a company would need a blancher (steam-jacketed kettle), an oil roaster (deep-frying unit), and a colloidal mill (which both grinds the soynuts and homogenizes them with the added oil to prevent oil separation). The oil-roasting process is much faster than a dry roast: three minutes at 190ºC versus 35 minutes at 400ºC. If it is desirable to simulate the consistency of peanut butter, soynut butter should contain about 50 percent oil. Horn found that oil-roasting dehulled soybeans increased the oil content from 20 to 42 percent; thus 9 percent of the oil was added afterwards. Grade A peanut butter contains 1.0 to 1.8 percent added salt and not more than 55 percent total oil. Peanuts typically contain 46 percent protein as compared with 20 percent oil and 38 percent protein for soybeans.

"Horn's process, slightly modified by Dr. L.S. Wei, is as follows: clean, dry and dehull five pounds of (Corsoy) soybeans. Drop the dry dehulled cotyledons into boiling solution of water and 0.25 percent by weight of sodium bicarbonate (baking soda). Return to the boil and blanch (simmer) for 30 minutes. Drain well. Oil-roast (deep-fry) at l90ºC (375ºF) for three minutes. Combine the oil-roasted soynuts (1610 gm.) in a large container with the following ingredients and mix thoroughly: 274 gm. each liquid vegetable oil and hydrogenated vegetable oil, 110 gm. dextrose (a sweetener), 26 gm. salt, and 15 gm, monodiglyceride [hydrogenated oils]. Using a stone-type colloid mill with a No. 120 corundum stone, grind one or more times until the desired consistency is attained; first grind at 0.8 mm. setting, second at 0.4 mm., third at 0.2 mm., etc. For a very smooth texture; run through a minisonic homogenizer. Run into jars at approximately 55ºC (130ºF), cure for 24 hours at 1ºC (34ºF) to allow for setting, then store at 21ºC (70ºF). Some producers interested in natural foods will want to reduce or eliminate the dextrose and the monodiglyceride emulsifier. As little a as 1 percent hydrogenated oil is sufficient to prevent oil separation.

"To make soynut butter from dry-roasted soy flour, mix with each cup of the dry-roasted soy flour: 5 tablespoons oil, 1/3 teaspoon salt or 2 teaspoons miso (red, barley, or Hatcho), 2 tablespoons honey or other sweetener of equivalent sweetness, and 3 to 4 tablespoons water. For best flavor, heat while mixing."

Note: This is the earliest English-language document seen (Dec. 2012) with the term "soynut butter" in the title. Address: Soyfoods Center, Lafayette, California.

2225. Spencer, Colin. 1981. Food: Bean feast. *Guardian* (*Manchester*). Aug. 14. p. 7.

• ***Summary:*** A recent cartoon in the *New Yorker* showed a wife serving a suckling pig, as her husband sourly remarked, "Not tofu disguised again." "Tofu is a soybean curd" that has been made in China more 2,000 years. In the 6th century, Buddhist monks made elaborate imitations of fish and poultry out of tofu. "In the United States, thanks to the moral health movement, tofu has become an 'in' food."

Although Americans constitute only 6% of the world's population, they consume 30% of its meat and dairy products. "The vegetarian minority–estimated at 10 million–

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are blazingly articulate in their diatribes against this injustice.

"William Shurtleff and Akiko Aoyagi have again written the definitive work, *The Book of Tofu* [Autumn Press] £4.50, available at Cranks and all health stores which stock a wide range of publications."

In England, Granose Foods Ltd. makes soya milk; it is delicious and such a book for vegans and children allergic to dairy milk. A new brand of tofu is now available. Sunwheel Foods, whose products are always impeccable in quality, are selling a tofu made by Morinaga and imported from Japan. It retails for 60 pence for 297 gm. Contains 4 recipes using Morinaga [silken] tofu: Stir-fried tofu. Sesame tofu. Tofu salad dressing. Tofu-stuffed pancakes. Address: [England].

2226. Miller, Dwight L. 1981. A chapter in the history of soy fiber meat analogs. *Northern Regional Research Center: Notes from the Director* No. 1473. p. 3. Aug. 21.
• ***Summary:*** "The concept of spinning soy protein isolates into fibers and then converting them into meat analogs has been around since at least 1954 when Robert A. Boyer first patented the idea. Subsequently, several companies licensed the process, and in the 1960's General Mills introduced a series of meat analogs made by the spinning operation. After opening a plant in 1970, General Mills closed down operations in 1976. The equipment and process were sold to Dawson Mills" and Dawson built a new plant (just east of Dawson, Minnesota) "to produce soy isolates plus meat analogs from spun isolate. Early this week, Daniel E. Hooten (President, Dawson Food Ingredients) was here for an update on our soy protein research and to discuss functional properties of various soy protein fractions with Walter J. Wolf and A.C. Eldridge (OC [Oilseed Crops Lab]). We learned that Dawson's parent company, Land O'Lakes, Inc. has recently sold the soy isolate and protein spinning plant to American [sic, Associated] Milk Products, Inc. [AMPI in Texas], a Houston-based milk cooperative. They apparently plan to use the plant to process milk products. Dawson's withdrawal leaves Miles Laboratories [Worthington Foods] as the only company that currently manufactures meat analogs from spun soy protein fibers." Address: Acting Center Director.

2227. Country Life Natural Foods. 1981. Wholesale price list. April 15. Place orders to: CLNF, P.O. Box 487, Edmore, MI 48829. National Sales Office: P.O. Box 838, Collegedale, TN 37315.
• ***Summary:*** The 1-page green sheet lists the following product lines: Cedar Lake Foods, incl. Chops, Vegeburger, Terkettes, Sloppy Joe, Soynut Loaf, Chili Burger, Chipetts, Tender Tips, Breakfast Links, and Hostess Cuts. Terkettes and Tender Tips (and perhaps some others) contain no soy. Address: Edmore, Michigan; or Collegedale, Tennessee. Phone: 517-427-5143 or 615-396-2192.

2228. Mayell, Mark. 1981. The rise and fall of the Cornflake: How Kellogg's became a household word. *East West Journal.* Aug. p. 46-55.
• ***Summary:*** This history of brothers Dr. John Harvey and Will Keith Kellogg, which contains many photos, was largely borrowed from the book *Cornflake Crusade.* Concerning Granola: Dr. James Caleb Jackson of New York developed Granula, trademarked the name, and formed a company to make the product which he promoted. One of the first of Dr. Kellogg's "new" foods was "suspiciously similar to Jackson's Granula. The doctor mixed wheat, oatmeal, and cornmeal to form a biscuit which was slowly baked and then ground into granular form. When J.H. went so far as to dub his food Granula, the Jackson folks had had enough. They sued and won. Kellogg changed the name to Granola." Also discusses Ellen G. White, Sylvester Graham, Henry Perky, Charles W. Post, and Charles Bolin. Address: Freelance writer based in Washington, DC. On the staff of the Center for Science in the Public Interest.

2229. Shurtleff, William; Aoyagi, Akiko. 1981. History of Butler Food Products (Document part). In: William Shurtleff and A. Aoyagi. 1981. History of Small Seventh-day Adventist Food Companies and Sanitariums. 8 p. See p. 4-6. Unpublished manuscript. Available online at www.soyinfocenter.com. [1 ref]
• ***Summary:*** In operation from 1939 to 1946, this was a private company in Cedar Lake, Michigan. "This creative company was founded in 1939 by Howard O. Butler and run primarily as a family enterprise. Butler got interested in soyfoods from people he knew at Madison Foods in Tennessee. He hired people with prior experience in soyfoods production; Howard Hoover (who made soymilk with Dr. Miller in East Asia) and a Mr. Roose. An initial aim of the business was to offer jobs for Adventist youth to pay their tuition at nearby Cedar Lake Academy, although the business was not formally connected with the Academy. The company's primary product, first produced in 1942, was 'Soya Butter,' actually what we would now call soy margarine; it contained 79% lightly hydrogenated soy oil, soymilk (18% by weight), salt, vitamin A carotene (as a natural coloring), and butter flavor. The melting point was 110ºF (43ºC). Butler advertised the product as being nonfattening.

"He soon ran into problems with the government concerning his soya butter. In August 1944 the *Soybean Digest* reported that 'H.L. Hoover, manager of the firm, claims that he is the victim of conflicting federal and state regulations, and that he cannot comply with one set of regulations without violating others. Hoover points out that while the Food & Drug Administration prohibits his company from labeling the product oleomargarine without the addition of dairy products to it, the Bureau of Internal Revenue classifies it as oleomargarine for taxing purposes.'

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Margarine was then defined as vegetable oils churned with dairy milk; Butler used soymilk in place of dairy milk to give a completely vegetarian product. Furthermore, it was claimed by the Bureau of Dairying in Lansing, Michigan, that the product had been illegally colored in imitation of butter, and in several instances had been sold as butter. In August 1944 cases were pending in circuit and U.S. courts, awaiting trial. In May 1945 a federal judge in Cleveland, Ohio ruled that Butler's Soya Butter was not taxable as margarine and should not be labeled as margarine, but shortly thereafter the Ohio Department of Agriculture, in variance with the federal ruling, classified soya butter as colored margarine, which could not be sold legally in Ohio. In June 1945 the American Soybean Association came out in favor of a congressional bill to define soya butter as being distinct from margarine. Finally in December 1945, at which time the company was manufacturing 100,000 units of soya butter a month, a federal judge in Detroit ruled that the product was oleomargarine as defined by the internal revenue code, and therefore subject to back taxes of 10 cents a pound on every pound made to date. The three-year battle and the ruling assessing an estimated $150,000 in back taxes drove the company out of business in 1946. In about 1950, while typing out an appeal to the government to reconsider his case, Butler suffered a fatal heart attack. Shortly after his death, the margarine law was changed and the tax (on other companies) removed.

"During the early 1940s, Butler Foods was a thriving operation. In early 1942 they were making a nice line of nine soyfoods including ready to eat Soy-Fruit & Nut Cereal (with figs, dates, and bran), ViM-eat Soy-Nut-Loaf, ViM Soy-Nut Cheese, Soy-Kawfee, Entire Soybean Flour (i.e. full-fat), Entire Soybean Wheat Flour Mix (70:30), Soybeans with Tomato Sauce, ViM-ilk (soymilk) and Soy-Nuts. An attractive brochure, which described the company's products and gave recipes, noted that some of the soybeans were 'grown on Butler's own mineralized farm.' In mid-1942 Soya Butter was added to the line. The company also made bulk soymilk for use in its Soya Butter. In September 1943 Butler Foods ran a full-page ad in the *Soybean Digest* headlined 'New Foods from the Wonder Bean' showing pictures of cans of Butler's Soynut Cheese, Vegeburger, Soya Nut-Loaf, Soya Butter, and Vegetarian Chops. The chops, his most popular meat analog, were a blend of wheat gluten and soy flour, sliced, pre-cooked, then canned in a broth made of soy sauce and other savory seasonings. A September 1945 ad showed that Butler's Meatlike had been added to the line.

"After the government tax ruling of 1946, Cedar Lake Academy leased Butler's property and tried to operate the food business for 2 years, but the plant was too big and the company had now lost its vital income from sales of soya butter. The Academy food business ceased operation in 1949. The supervisor at that time, Vesper Sias, who had worked at Butler Foods since 1942, then left and started his own company, Cedar Lake, in November 1949." Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2230. Shurtleff, William; Aoyagi, Akiko. 1981. History of Cedar Lake Foods (Document part). In: William Shurtleff and A. Aoyagi. 1981. History of Small Seventh-day Adventist Food Companies and Sanitariums. 8 p. See p. 6-7. Unpublished manuscript. Available online at www.soyinfocenter.com. [1 ref]

• ***Summary:*** In operation from 1949 to the present, this was a private company in Cedar Lake, Michigan. "In 1949 when the Cedar Lake Academy ceased operating the former Butler Foods, Vesper Sias, a former employee of both companies, purchased the name Cedar Lake Foods and the food manufacturing rights from the Academy. He then started a business in rooms in the back of his home, working on a kitchen scale with his wife, making meatless products similar to those developed by Butler Food Products. The line started with Vegetarian Chops (like a veal cutlet with a savory soy sauce), Vegeburger, Soynut Cheese (whole soaked soybeans and nuts milled together, slurried, then cooked down to form a spreadable or sliceable loaf), Soynut Loaf, and Meatlike. They also made tofu. In 1959 the business expanded into a newly constructed plant, and four workers were kept busy meeting a growing demand and adding new products such as meatless frankfurters. Sias soon opened a storefront in his plant where all of his products were retailed (*Grand Rapids Press* 1962). In 1968 Cedar Lake bought the production of Sunnydale Foods of Centralia, Missouri. At the same time, Sias purchased the canning division of Lange Foods. The product Turkettes, Hostess Cuts, Vegebits, Lentil Roast, and Breakfast Links were added to the Cedar Lake line. In 1975, after several months of illness, Sias sold Cedar Lake Foods (which employed 26 people and had $500,000 yearly sales) to a corporation of five stockholders, who operated the business as Cedar Lake Foods Inc. of Tennessee. In the spring of 1981 the business, after being closed for 6 months, was sold to Country Life Natural Foods, a non-profit corporation and self-supporting Adventist group that made other vegetarian health food items such as nut butters, pastas, and juices, and ran several natural food restaurants. Many of the new company's foods contained soy products. TSF (textured soy flour) and soy sauce were used in the Vegeburger. Defatted soy flour was used in the Soynut Loaf. And soy sauce was the only soyfood used in the Hostess Cuts, Sloppy Joe, Vege-bits, Chops, and Chipettes. Wheat gluten served as the primary ingredient in most of the products. In March 1981 a typical 19-ounce can retailed for $1.75-$1.95. The plant continued to be located in Cedar Lake, Michigan, near the original Cedar Lake Academy, founded in 1898." Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2231. Shurtleff, William; Aoyagi, Akiko. 1981. History of

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Millstone Foods (Document part). In: William Shurtleff and A. Aoyagi. 1981. History of Small Seventh-day Adventist Food Companies and Sanitariums. 8 p. See p. 8. Unpublished manuscript. Available online at www.soyinfocenter.com. [1 ref]

• ***Summary:*** In operation from 1977-1985, this was a private company in Penryn, California (near Sacramento). "Founded in 1977 and run by Ken Innocent, who formerly worked in the personnel department at Worthington Foods. Millstone Foods makes canned products that contain soy, including Burger-Like (an imitation ground beef of textured soy flour {TSF} in a rich broth), Dehydrated Vegetarian Stew with TSF, and Tender Cuts (a gluten patty containing a little soy flour). While the products contain no MSG, some contain HVP (hydrolyzed vegetable protein)."

In 1985 the company was sold to Loma Linda Foods in Riverside, California. Basically the same product line continued to be manufactured, with new green and yellow labels. They were still available in July 1990. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2232. *Adventist Review* (*Hagerstown, Maryland*). 1981. Was Ellen G. White a plagiarist? Sept. 17. 8 p. A reprint under a collective title. [2 ref]

2233. Holmes, Charlotte Van Gundy. 1981. Re: Ransom Brown, Loma Linda Foods and T.A. Van Gundy's La Sierra Industries. Letter to William Shurtleff at Soyfoods Center, Sept. 17. 1 p. Handwritten, with signature.

• ***Summary:*** "Dear Bill and good wife–I have a letter from a friend giving me the address of Dad's cook [Ransom Brown]. He is the one I told you about. Loma Linda Foods offered him better wages and hired him. The next thing we knew, Loma Linda Foods was putting out Dad's [soy] milk, soy cheese [tofu] and spread–about a week later.

"You may write to him & be very frank and tell him I gave you his address & any questions he can answer about Dad or Loma Linda Foods is okayed by us.

"I have never been able to find tempeh. I'd like to try it.

"How's everything and thanks for your hospitality while [we were] there. Cordially, Charlotte and Campbell.

Ransom Brown, Dove Creek, Colorado 81324.

"This should reach him. Small town–if not delivered I'll get the box number." Address: Jackson, California.

2234. Shurtleff, William; Aoyagi, Akiko. 1981. Dr. Harry W. Miller: History of his work with soyfoods. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 21 p. Sept. 29. Unpublished typescript. Available online at www.soyinfocenter.com.

• ***Summary:*** A comprehensive history of the subject. Contents: Introduction. Growing up (1879-1902): Birth, early contact with Dr. J.H. Kellogg, marriage. Early years in China (1903-1911). Washington, DC (1912-1925). Pioneering soymilk in China (1925-1939): Research, development of plant, destruction of plant 13 Aug. 1937, U.S. patent, No. 2,078,962 for soymilk process and equipment, work before return to U.S. Introducing soyfoods to America (1939-1949): In Mt. Vernon, new products, work with AMA, American Soybean Assoc. speaker and lifetime member 1958, Vitasoy. Research and work around the world (1949-1977): Quick visit to Shanghai, death of second wife, sale of International Nutrition Foundation, Taiwan work, Indonesian plant, Trinidad, Libya, Japan, old age and relationship with William Shurtleff, the "Great Man."

See http://www.soyinfocenter.com/HSS/harry_miller.php Address: Lafayette, California. Phone: 415-283-2991.

2235. Shurtleff, William; Aoyagi, Akiko. 1981. Dr. John Harvey Kellogg and Battle Creek Foods: History of work with soyfoods. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 20 p. Sept. 29. Unpublished typescript. Available online at www.soyinfocenter.com.

• ***Summary:*** A comprehensive history of the subject. Contents: Introduction. Early life and teachings: Birth, work with Ellen White, medical school, thesis, in 1876 took charge of institute he renamed Battle Creek Sanitarium (new meaning for this term), its research kitchen developed America's first meat analogs, start of *Good Health*, famous people who came to sanitarium, trip to Europe to deepen medical knowledge, primitive state of medical knowledge, "Biologic Living," dynamic man, living proof of his techniques. Early health food products: Granola, peanut butter (probably America's first), cereals, rift with church, meat substitutes (Nuttose, Protose), Harry Miller. Early writings about soyfoods: *The New Method in Diabetes* (1917), mentions to 1923, mentions in *Good Health* (1921-29), *Good Health* (1930-39), J.H. and W.K. Kellogg's speeches to American Soybean Association (1927 and 1930), Kellogg and Henry Ford, 1933 edition of *The New Method in Diabetes*, 1936 expanding interest, letters to Horvath and Admiral Byrd, 1937 speech to American Public Health Association. Development of early soyfoods: soy meal, early interest in fermented milks, Metchnikoff and Tissier, first soymilk (1930), soy acidophilus and diseases (1933), patent for soy acidophilus milk (SAM, 1934), Dionne quintuplets (1934), SAM from 1936-1950's, heyday of his work with soyfoods (1934-37). Later soyfoods developments: Correspondence with William Morse, products in Morse's office, 1937 Battle Creek Food Co. products, 1940 price list, first commercial soymilk (Soygal, 1942), Kellogg's first meat analog (Soy Protose, 1943), small price list in 1955, sale of company in 1960, Kellogg's death in 1943, his influence on others.

See: http://www.soyinfocenter.com/HSS/john_kellogg_and_battle_creek_foods.php Address: Lafayette, California. Phone: 415-283-2991.

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2236. Shurtleff, William; Aoyagi, Akiko. 1981. Ellen G. White: History of her work with health reform. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 6 p. Sept. 29. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject. Contents: Introduction and description by G.W. James: Prolific writer. Background and early life (1827-1863): Ellen's education and character. Health reform from 1863: Otsego vision of 1863 and basic teachings, second vision (1865), 1866 formation of Western Health Reform Institute (Battle Creek, Michigan), growth of sanitariums, recommended diet (no spices, meat, sugar, alcohol, or tobacco), unaware of soy. Writings on health: Major writings and their present validity, death in 1915 at age 87, influence on Dr. John Harvey Kellogg.

See: http://www.soyinfocenter.com/HSS/ellen_white.php Address: Lafayette, California. Phone: 415-283-2991.

2237. Shurtleff, William; Aoyagi, Akiko. 1981. History of Madison College and Madison Foods. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 21 p. Sept. 30. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject. Contents: Introduction. Founding the school: E.A. Sutherland, his life, moving south, locating the school, Ellen White's love of it. Principles and activities of the school: Dr. David Paulson's original idea, early hard years, type of school, rural units, sanitarium, Sutherland's receipt of M.D. degree, printing business. Madison Foods and early soyfoods: Founding the food factory, growing soybeans (1917-1919), soyfoods in the 1920's, America's first soy-based meat analog, the lacto-ovo vegetarian diet, vegetarian cafeterias (1917). Madison soyfoods pioneers: Webber, Dittes, Bisalski. Soyfoods during the 1930's: The "Golden Age." The 1940's and 1950's: soyfoods, "Fateful Forties," Sutherland's death. From 1960-1972: Shutting down the school (1964), Sam Yoshimura, Infa-Soy, shutting down Madison Foods, conclusion.

See: http://www.soyinfocenter.com/HSS/madison_college_and_foods.php Address: Lafayette, California. Phone: 415-283-2991.

2238. Shurtleff, William; Aoyagi, Akiko. 1981. T.A. Van Gundy and La Sierra Industries: History of work with soyfoods. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 9 p. Sept. 30. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject. Contents: Introduction and summary: Many soyfoods firsts. 1874-1926: Birth, education, birth of children, work at St. Helena Sanitarium Food Co. (1906-1912), first interest in soyfoods from 1915 World's Fair exhibits, Smoein (1915-16), soy Smoein (1918-21), moving and teaching (1920-27). La Sierra Industries: started 1928, names of soyfoods, how the foods were sold, Dorothea Van Gundy, competition (Haines, Loma Linda, Mr. Brown), criticism of work with soy, move to Ontario (California) in 1931, Theradophilus, Morse connection. The man and his legacy: Death in 1935 at age 61 of overwork, business stopped 1936-37, business problems, his major influence on the future.

See: http://www.soyinfocenter.com/HSS/van_gundy_and_la_sierra_industries.php Address: Lafayette, California. Phone: 415-283-2991.

2239. Shurtleff, William; Aoyagi, Akiko. 1981. Jethro Kloss and *Back to Eden:* History of work with soyfoods. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 4 p. Sept. 30. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject. Contents: Early years (1863-1923). Birth and work to late 1800's, Rose Lawn, Wisconsin, sanitarium (early 1900's), takeover of Nashville Sanitarium Food Factory (1915), closing of plant (1917), purchase by Madison Foods and move to Madison campus, Kloss's move to Virginia. Early work with soyfoods (1924-1938): First work with soyfoods (in home kitchen, 1924), move to Washington, DC, in early 1930's, exhibits at American Soybean Association exhibit in DC (1932). *Back to Eden* (1939): Contents, his later life, death at age 83 in 1946.

See: http://www.soyinfocenter.com/HSS/jethro_kloss_and_back_to_eden.php Address: Lafayette, California. Phone: 415-283-2991.

2240. Shurtleff, William; Aoyagi, Akiko. 1981. History of Seventh-day Adventist soyfoods cookbook authors. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 6 p. Oct. 1. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject. Contents: Introduction: First recipes by Kellogg in 1919. Dittes, *Food for Life,* 1935: see chapter on Madison Foods. Dorothea Van Gundy: *La Sierra Recipes* (1936), *The Soybean Cookbook* (1963), birth, education (1924-28), work with father at La Sierra Industries (1927-35), start of work with Loma Linda Foods (LLF), 1960 marriage to Ed Jones, revision of Mildred Lager's books to create *The Soybean Cookbook,* sales to date, lectures for International Nutrition Research Foundation, disposition, character, editor of *Today's Food* at Loma Linda Foods, trip to Japan (fall 1964), death at age 76 (1979). Jethro Kloss, *Back to Eden,* 1939. Philip Chen, *Soybeans for Health, Longevity, and Economy,* 1956. Frank and Rosalie Hurd, *Ten Talents,* 1968. Edyth Cottrell, *The Oats, Peas, Beans, and Barley Cookbook,* 1974. Address: Lafayette, California. Phone: 415-283-2991.

2241. Holmes, Charlotte Van Gundy. 1981. More on T.A.

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Van Gundy and family. Conducted by William Shurtleff of Soyfoods Center, Oct. 4. 1 p. transcript.
• ***Summary:*** The Van Gundy family was always very poor–throughout their lives. That's an understatement. But both parents gave their kids lots of love. T.A. Van Gundy was an inventor; he made most of the equipment he used to make soyfoods at La Sierra Industries–such as the retort and the roaster.

He believed others were honest like he was; he never seemed to learn the lesson that some people were not honest. Address: California.

2242. Shurtleff, William; Aoyagi, Akiko. 1981. History of Loma Linda Foods. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 8 p. Oct. 4. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject. Contents: Background. Early years (1906-1937): Sanitarium Food Co. (1905-06); first soyfoods (copied from Van Gundy): Smokene (1921), tofu, soymilk, and soy sandwich spread (1933-34); no one at Loma Linda knows how these foods originated. New plant (1938-1950): Started 1938 under Chapman, World War II years. The 1950's: Acquisition of Dr. Harry Miller's company, International Nutrition Laboratories (1951). The 1960's. The 1970's and 1980's: Many new products from 1972, products in 1981, 1980 takeover by Sanitarium Health Foods Co. of Australia, present.

See: http://www.soyinfocenter.com/HSS/loma_linda_foods.php Address: Lafayette, California. Phone: 415-283-2991.

2243. Shurtleff, William; Aoyagi, Akiko. 1981. History of Worthington Foods. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 11 p. Oct. 5. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject. Contents: Introduction. Founding in 1939 and founders: Harding, financing and duties, first product (Proast, with soy), Numete, growth of sales, Hagle joins company, Robinson leaves, Twomley's description of Hagle: "an uncommon businessman." New Developments in the 1940's: 1945 incorporation and sales to $500,000, Buller and Hartman, Boyer's 1949 visit. Acquisitions and analogs (1950-69): Acquisition of Dr. Harry Miller's International Nutrition Foundation in 1950, Soyamel (1954, 1961), new products introduced in 1950's, big break to go ahead with Boyer (1956) and Ralston Purina, how foods made, sales take off, 1962 first products and Soyameat, use of powdered isolates, acquisition of Battle Creek Foods and Madison Foods, Patties, Numete, spinning of soy protein fibers, praised in Stanford study. "The big time and then back home again" (1970's and 1980's): Acquired by Miles Laboratories of Elkhart, Indiana (March 1970), sales leap, expanded research, introduction of Morningstar Farms line 1972-74, rise and fall, reformulation of line and relaunching as cholesterol free, failure, growth of other products and of the "motivated" market, Bayer AG purchase of Miles in late 1977, uncertain future, "third generation" meat analogs (1976), ready-to-eat vegetarian entrees (1980), 1981 product list.

See http://www.soyinfocenter.com/HSS/worthington_foods.php Address: Lafayette, California. Phone: 415-283-2991.

2244. Hagle, James. 1981. History of Worthington Foods (Interview). Conducted by William Shurtleff of Soyfoods Center, Oct. 7. 2 p. transcript.
Address: Worthington Foods, Worthington, Ohio.

2245. Hagle, Jim. 1981. History of Worthington Foods (Interview). *SoyaScan Notes.* Oct. 7. Conducted by William Shurtleff of Soyfoods Center.
Address: Worthington, Ohio.

2246. Shurtleff, William; Aoyagi, Akiko. 1981. History of overseas Adventist food companies. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 8 p. Oct. 7. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject. Contents: Introduction: Start by Miller, rapid growth, extruders, new soymilk, future priorities. Asia. Australia and New Zealand: Before 1954, first soyfood in 1954, recent. Europe. Latin America. Africa.

See http://www.soyinfocenter.com/HSS/overseas_adventist_food_companies.php Address: Lafayette, California. Phone: 415-283-2991.

2247. Boyer, Robert A. 1981. Work with Henry Ford and soybeans (Interview). *SoyaScan Notes.* Oct. 11. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Floyd Radford, a secretary to Ray Dahlinger, did a lot of farm work for Dahlinger, who was a very high assistant to Henry Ford. Radford was involved with farming in southern Michigan, not with soybean processing.

Henry Ford was probably the first American manufacturer of solvent extractors. He made them for use in his factories, including his village industries. The first one was only 6 tons, but later he made a 24-ton extractor.

Henry Ford's soybean operations were conducted in various plants. The plastic molding machines were located in the glass plant within the River Rouge plant. The soybean operations in the glass plant were set up in about 1934-35. Then he decided to build the solvent extraction plant outside in the next lot. There he built a brand new building with 4 big extractors. The soybean meal produced by these extractors went into the plastics made in the glass plant. Then in the coke oven building, constructed in about 1940, Ford built a new extraction plant. He also used this plant for

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forming the plastic rear trunk lid.

CPC (Corn Products Company) purchased the first license to manufacture edible spun soy protein fiber under Boyer's patent; Swift purchased the exclusive rights from 1950-54. CPC was the first company to actually sell this spun soy fiber; they did it as a legal tactic in early 1950 to establish an interstate sale allowing them rights to the name they wanted to use for the product. Worthington accommodated them, and mixed the rest of the batch in with their products to use it up.

In 1955 changed their license from an exclusive to a non-exclusive. Boyer then went to Central Soya [actually probably to Glidden] in Chicago, then Ralston Purina, then Worthington to ask them to license the patent. Ralston agreed and decided to get into edible soy protein. In 1956 they took a non-exclusive license at the same time as Worthington and General Mills.

When Boyer was working with Swift & Co., they were pushing The Glidden Co. to make a food grade isolate. Before Glidden developed this edible soy protein isolate, the only alternative was casein. In Nov. 1957 The Glidden Company announced that it was building a plant to make food-grade soy protein isolates. Their product was named Promine. In 1958 Central Soya purchased The Glidden Co. and built the world's first plant to make food-grade soy protein isolate in Chicago; their Promine D was introduced in Oct. 1959. So in 1956 when Worthington Foods purchased a license to spin soy protein fibers for the health food market, the only food-grade isolate on the market was Promine made by Central Soya–which Boyer felt had a "terrible taste." For this reason, Boyer went to Ralston Purina and urged them to make an edible isolate.

Ralston Purina made the world's first edible spun protein fiber in a pilot plant from about 1956-1960. Boyer first started to consult with Ralston Purina in 1960, when they decided to scale up from a pilot plant to a commercial one in Louisville, Kentucky; he then joined their staff in 1962. Ralston Purina started selling their fiber in about 1961 or 1962; they sold most of it to Worthington. Worthington and General Mills began experimenting with their own pilot spinning units to develop prototype products, but they bought their commercial fiber from Ralston Purina. Later Worthington started to spin their own fiber because of cost and quality factors; aging between the time the fiber was produced and the time it was shipped caused a decline in quality.

Today there is a lot of soy protein spun in Holland. The isolates are probably made at the Ralston Purina plant in Belgium. Address: 632 Edgewater Dr., Apt. 731, Dunedin, Florida 33528. Phone: 813-734-2415.

2248. Boyer, Robert A. 1981. Development of meatlike products based on spun soy protein fibers. Part I (Interview). *SoyaScan Notes.* Oct. 11. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** This history is compiled from 5 interviews conducted with Robert Boyer from Oct. 1980 to Oct. 1981.

One day at the Ford plant in 1942, Boyer, while sampling fibers of his "soybean wool," realized that these same soy protein fibers, if made tender by omitting the protein denaturation, hardening, and insolubilization, could be used as a basic ingredient in making meatlike textured soy protein foods. Already he had developed an analog for the protein fibers that grow on the *outside* of a sheep (wool), why not develop an analog for those on the *inside*, a meatless meat or meat analog?

Throughout the years of World War II, the idea of using spun soy protein fibers as the basic of human foods, in the form of meat analogs, returned to Boyer again and again. In late 1943 The Drackett Co. in Cincinnati, Ohio (which had a fairly large soybean crushing operation and also made consumer household cleaning products such as Drano and Windex), purchased the Ford Motor Company's soy protein and protein spinning operations. Boyer went with the equipment and processes to Cincinnati. Boyer, now Drackett's director of research, told the company of his interest in producing foods from soy proteins, but Drackett was only interested in industrial products at the time. In early 1949 H.R. Drackett died; the company shut down its plant that was spinning Soybean Azlon fibers, and closed part of its protein R&D laboratories. Boyer left Drackett to work on his own.

On 28 September 1949 Boyer filed for his first patent on edible protein fiber (application serial no. 118,445). It was issued in 1951, then rewritten that year in a much broader format and issued in final form in 1954 (No. 2,682,466). According to this patent (which expired in 1971 and has come to be regarded as a classic), no one can use a man-made protein fiber in a food without violating the basic claim. The patent called for the use of various proteins (including soy, casein, and peanut protein) to make edible protein fibers that could be transformed into meat analogs or extenders that are low in saturated fats and virtually free of cholesterol.

In September 1949 Boyer took his patent idea to his first company, Worthington Foods, Inc., a small company in Worthington, Ohio, operated by a group of businessmen and doctors, that produced meat analogs and vegetarian foods primarily for Seventh-day Adventists and Adventist institutions. Boyer had now been on his own for over eight months and was almost out of money. He still wasn't sure of whether the whole idea was a screwball one or not. He later commented that if Worthington had shown no interest, he probably would have just given up then and done something else. Advised to keep away from the large meat companies, who might buy up the patent and "bury" it, he went to Worthington and disclosed his concept and a pork chop prototype. Mr. Hagle, president of Worthington, was

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immediately very excited with the idea, but the company was reluctant to take a license until there was a source of soy protein fiber. Harrison Evans, a top Worthington employee, later recalled: "I'll never forget the day Bob Boyer came by. They brought him down with this textured protein wrapped in a piece of aluminum foil and all it looked like was rope. Just unattractive, white... It certainly did not look like real meat."

Worthington waited, so Boyer went to Virginia Carolina Chemical Company (VCCC) in Taftville, Connecticut; they were spinning fibers for textiles and Boyer hoped they would be able to produce soy fibers for Worthington. VCCC allowed Boyer to use their protein spinning pilot plant for research; he provided his own materials. Here he made the world's first edible protein fibers, which were used to make meat analog prototypes. Incorporating egg albumen binder plus vegetable fats and flavorings into the spun fibers, he fabricated the first man-made meatless pork chops and then made hams from soy protein. After the first successful run, nearby Corn Products Company (CPC) got very interested and ended up buying the first license on Boyer's patent (an exclusive option), which gave Boyer his first income from the project. Boyer then consulted for CPC for 9 months. The first sale of commercial edible protein fiber (produced from corn gluten) was made by CPC to Worthington. Eventually, however, it was realized that corn gluten would not work well in foods because of its unpleasant and dominant flavor. The project was dropped. Continued. Address: 632 Edgewater Dr., Apt. 731, Dunedin, Florida 33528. Phone: 813-734-2415.

2249. Boyer, Robert A. 1981. Development of meatlike products based on spun soy protein fibers. Part II (Interview). *SoyaScan Notes.* Oct. 11. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Now somewhat desperate, Boyer decided to try a meat company anyway. He went to Swift & Co. in Chicago, Illinois, in 1950 and they immediately liked these ideas and bought exclusive rights to the patent from 1950-1954 (in 1955 they converted to nonexclusive). In 1950, the war scarcity psychology still prevailed. American consumers and food produces had watched in astonishment during the war as meats became so scarce and expensive that only a few could afford them. Thus it was easy to sell the notion that even after the war, as world population continued to rise, plant proteins would play an increasingly important role in diets throughout the world. Boyer worked with Swift for five years, but in considerable secrecy. Swift told him that if their Livestock Relations Department found out that Swift was doing research on meat analogs, "all hell would break loose." Eventually Swift made and test marketed new soy protein products. However in 1952-53 livestock producers in America were in such bad shape economically that they marched on Washington, DC, demanding a better price for their products. Swift, fearing the possibility that the media might get word of their new project and come out with headlines reading "Swift Making Synthetic Meats from Soy Protein," decided to shut down the project. None of the products was ever marketed commercially.

In 1951-52 Unilever bought a license from Boyer for spun protein isolate production throughout the rest of the world. Boyer went to England and worked with Unilever in their peanut protein isolate plant and research labs near Liverpool. Here, for the first time, his process was used in the making of sausages containing fibers of peanut protein isolate.

In 1956 Boyer returned to America and went immediately to Worthington, who had now been thinking about taking a license on Boyer's spinning patent for seven years. The first food-grade soy protein isolates were just becoming available, so the company bought the patent rights for the health food industry and asked Boyer to work with them as a consultant. Worthington eventually did more with Boyer's discovery than any company in America.

After Worthington purchased Boyer's license (for the health food trade), other large food companies followed suit: Ralston Purina, General Mills, and Nabisco. General Foods developed their own related process. In 1962 Boyer joined the research staff of Ralston Purina as a Protein Scientist; he worked there until his retirement in 1971, at which time he became a Protein Consultant for Miles/Worthington.

After General Mills took a license on Boyer's product, they built a commercial-sized fiber spinning plant at Cedar Rapids, Iowa, and developed their Bontrae line which featured Bac-O's, a spun fiber analog resembling cooked bacon bits and launched in 1965. The venture was impressive in scope and the product was a real sensation, the biggest thing that had happened to Boyer's idea to date. (The product is now made with extruded soy flour.) The whole venture had a profound effect on the thinking of other large food producing companies concerning soy protein foods. Boyer was now spending 50% of his time with Worthington and 25% each with General Mills and Ralston.

Boyer's years of research eventually began to pay off in terms of handsome royalties from his patents, of which he now had more than thirty, some shared with Ford. These lasted until the patent expired in 1971. Now any company can use the protein spinning process without having to buy a license or pay fees. In 1981 the main American companies using spun protein fibers in foods were Worthington Foods, Dawson Mills in Minnesota (which bought General Mills' equipment), Loma Linda Foods in California, and Ralston Purina. In Europe there are two companies in the Netherlands, one in Denmark (Nutana), and one in Belgium using food-grade spun protein fibers. In Japan, Nisshin Oil Mills Ltd. built the first plant to spin edible soy protein fibers in 1968. In 1976 Fuji Purina Protein Ltd., a subsidiary of Fuji Oil Co. and Ralston Purina, introduced Fujipur SP-90 spun

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soy protein fibers.

Most manufacturers of meat analogs in the U.S. agree that the general market has been disappointing, but that the idea is simply ahead of its time, which will inevitably come as meat prices continue their rapid rise. The vegetarian or "motivated" market (and especially the Seventh-day Adventist sector) showed a steady increase each year. No sales figures are available on the total market size.

When asked in 1980 how he liked the newest generation of meat analogs, Boyer replied that he found the quality disappointing, since the producers have to make compromises in equipment and processing to keep costs down. A researcher can get much better textures and flavors in his lab working by hand. Another problem is the subtle beany flavors that result from isolates and from typical defatted soy meal rather than specially defatted soy meal that can be made to contain almost no beany flavor. Boyer eats store-bought meat analogs (including bacon bits) from time to time but not as a regular part of his diet. He prefers Worthington products to Loma Linda. He likes meat, too, and also uses tofu quite a bit.

How about the future? Harkening back to the years of his work with Ford, Boyer said in 1981, "We're at the Model T stage right now with analogs. I'm impatient to get to the Lincoln Continental stage." He feels that the products still have a very bright future, and that when the price of meats rises to 10 or 20% above those of the analogs, sales will start a period of steady growth. Address: 632 Edgewater Dr., Apt. 731, Dunedin, Florida 33528. Phone: 813-734-2415.

2250. Photographs of Worthington Foods' products and buildings. 1981. Worthington, Ohio

• ***Summary:*** These 8 x 10-inch black-and-white photos were sent to Soyfoods Center by Frank Poston (Manager, Product Marketing) of Worthington Foods on Oct. 13, 1981. (a) First generation products–canned. (b) Second generation products, canned and frozen. (c) Third generation products–canned and frozen. (d) Worthington's bacon-like product, Stripples, being reviewed by its counterpart.

(e) Spun soy protein coming out of a spinnerette head. (f) An old photo showing spun soy protein fiber being processed; the line is now much more automated. (g) Veja-Links–Worthington Foods' meatless frankfurter being packed. This is an earlier photo–the line is more streamlined now. (h) Miles Laboratories and Worthington Foods personnel breaking ground for a new plant–1970.

(i) The Worthington Foods' facilities on Jan. 26, 1972 (a Division of Miles Laboratories). Lower right building is shipping. Center is the plant. Upper left is storage, R&D, and general offices. Address: 900 Proprietors Road, Worthington, Ohio 43085. (j) New addition to Research and Development building. (k) Worthington Foods' smoked beef-like roll and sausage, like Prosage, being wheeled into the freezer after processing.

Worthington Foods letterhead (Oct. 1981). Address: Worthington, Ohio.

2251. Shurtleff, William; Aoyagi, Akiko. 1981. Dr. Artemy Alexis Horvath: History of work with soybeans and soyfoods. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 7 p. Oct. 15. Unpublished typescript. Available online at www.soyinfocenter.com.

• ***Summary:*** A comprehensive history of the subject. The full history is available on our website at www.soyinfocenter.com. Just search for Horvath in the search box. Or, in the left navigation bar, click "A Comprehensive History of Soy," then scroll down to Chapter 70, "Dr. Artemy Alexis Horvath..."

Contents: Introduction. Early years in Russia (1886-1919): Birth (6 July 1886 in Russia), graduated with PhD from University of Kazan, taught chemistry at Vladivostok Institute of Technology, 1877 his father made soy coffee for market in South Russia.

Work with soy in China (1919-1927): To China and Manchuria to study soy firsthand (Harbin, Dairen, Tientsin, Peking), worked in Tientsin as chemist for a firm processing oils and fats from soybeans, in charge of soybean research at the Peking University Medical College (established by the Rockefeller Foundation), list of papers, *Chinese Economic Monthly* articles (1926), *The Soybean as Human Food* published by Chinese Government Bureau of Economic Information in 1927 (one of best early sources of information on many subjects related to soyfoods), article for Dr. J.H. Kellogg's *Good Health* on soy.

Work with soy in the USA (1927-39): Joins staff of Rockefeller Institute at Princeton, New Jersey in 1927, articles 1927-29, research chemist at U.S. Bureau of Mines Experiment Station in Pittsburgh, Pennsylvania, articles 1930-32, Soy Institute in the USSR (1930), to Delaware Agricultural Experiment Station, Newark, Delaware, as head of chemistry department (1933), long quotes about arrival in Delaware, articles 1933-39, 1938 book *The Soybean Industry*, retirement from Delaware Agric. Exp. Station in Dec. 1939, nothing known of his life, work, or relatives thereafter. Address: Lafayette, California. Phone: 415-283-2991.

2252. Shurtleff, William; Aoyagi, Akiko. 1981. Mildred Lager: History of work with soyfoods. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 9 p. Oct. 19. Unpublished typescript. Available online at www.soyinfocenter.com.

• ***Summary:*** A comprehensive history of the subject. The full history is available on our website at www.soyinfocenter.com. Just search for Lager in the search box. Or, in the left navigation bar, click "A Comprehensive History of Soy," then scroll down to Chapter 76, "Mildred Lager..."

Contents: Introduction. Early years (1908-32): Birth, arthritis from 1925, self-cure with diet, arrival in Los

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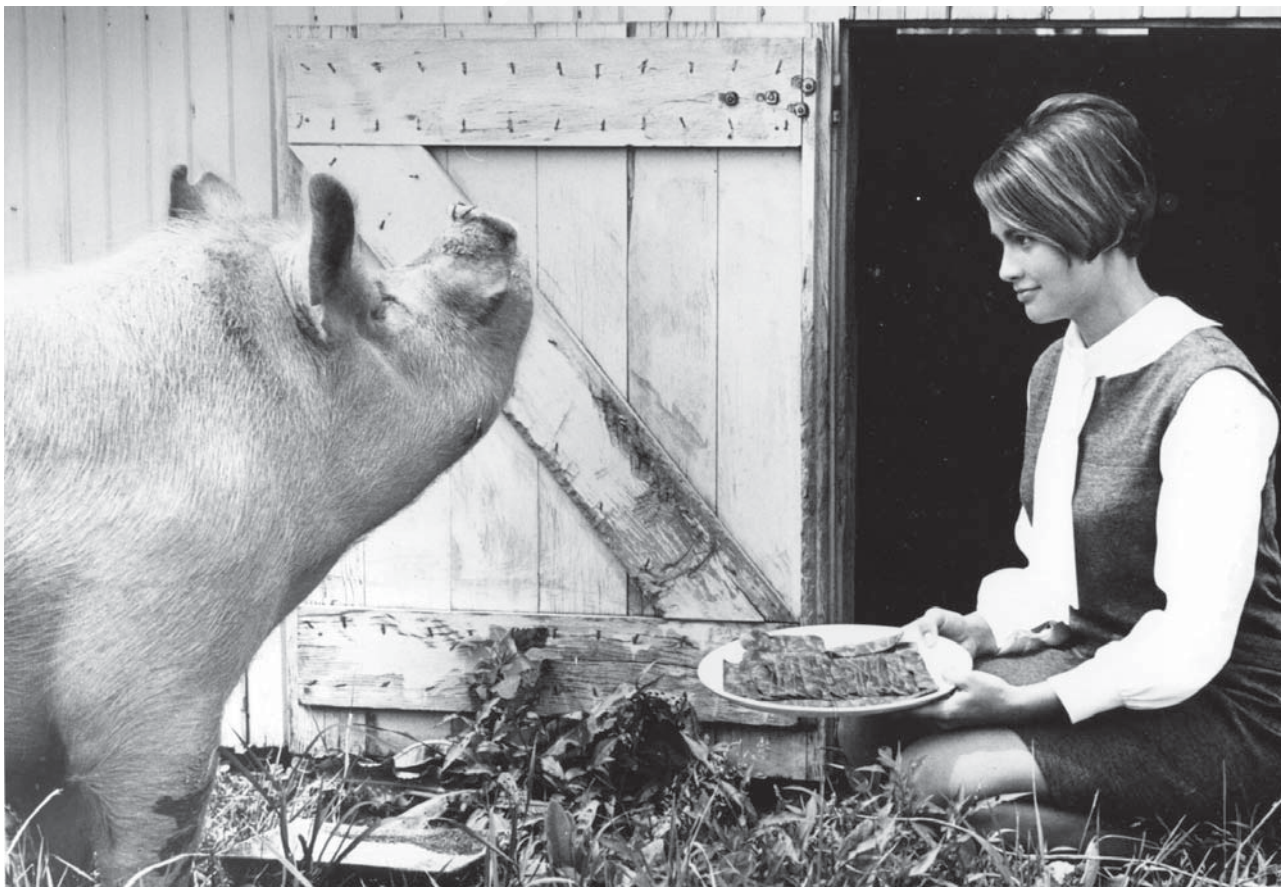

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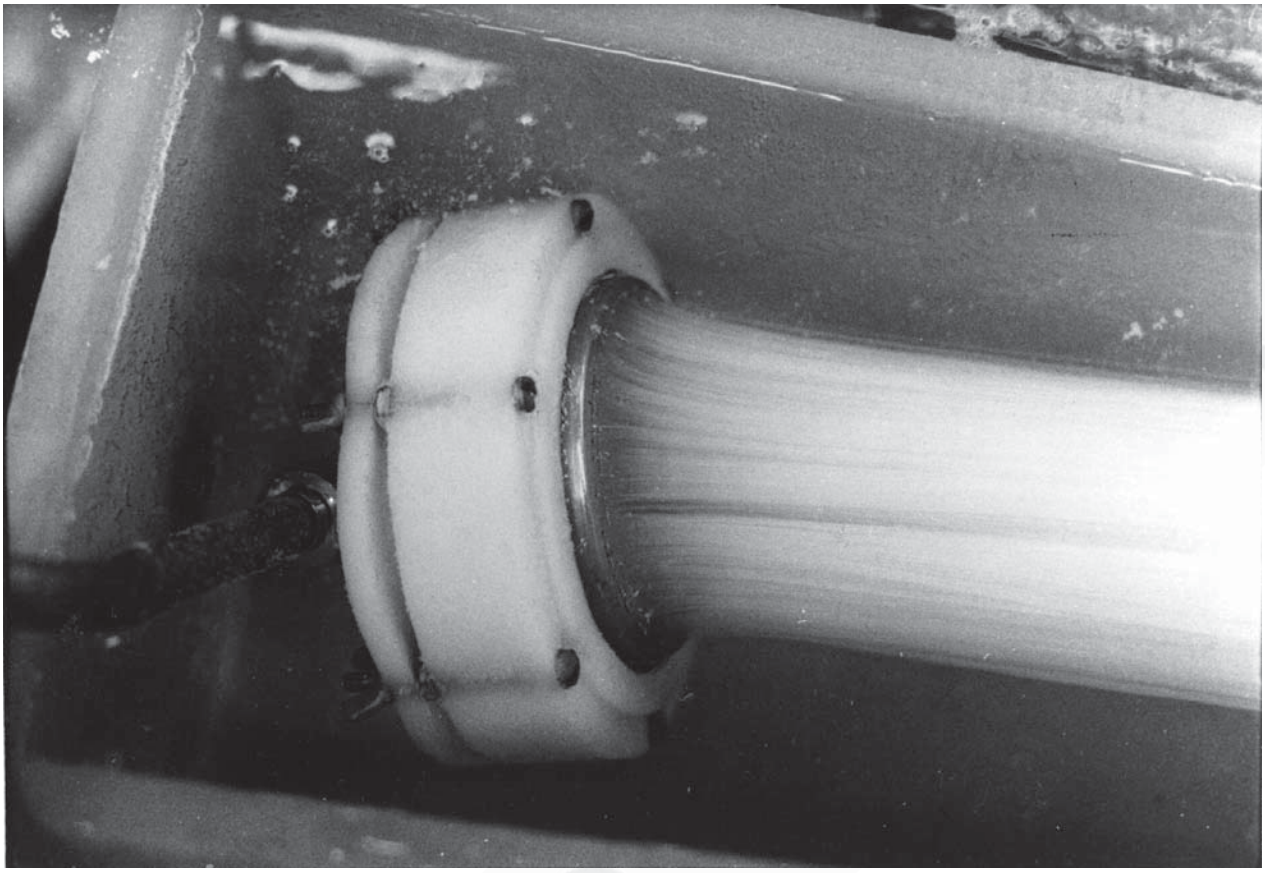

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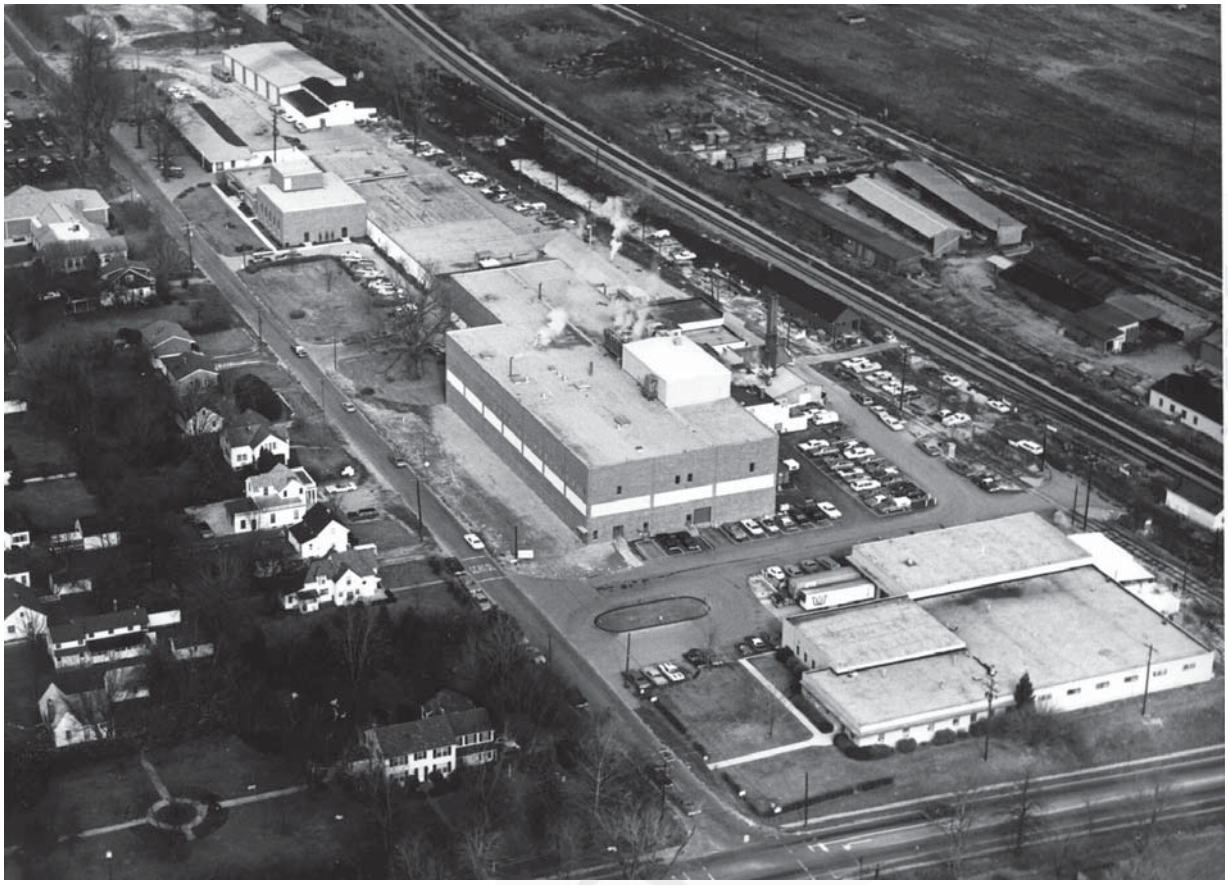

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Angeles, center of interest in health foods and a perfect place to study and influence soyfoods. The House of Better Living and early work with soy (1933-1939): House established 1933, its aims, Jan. 1934 radio program on K.F.A.C., 1935 monthly newsletter, free classes (one on soy flour in 1936), unclear how interest in soyfoods developed, diet research, 3 early books and booklets, influence of Ed Jones and Dorothea Van Gundy, "Food Facts" column in *California Health News* from 1936, one of the first to distinguish between natural and health foods. Two early catalogs: March 1936 catalog with listing of the 27 soyfoods marketed in Los Angeles, 1938 enlarged catalog with 26 new soyfoods listed. Mildred and her books about soyfoods: What kind of person she was, 1942 booklet *Soy Bean Recipes: 150 Ways to use Soy Beans as Meat, Milk, Cheese and Bread,* 1945 major work, *The Useful Soybean: A Plus Factor in Modern Nutrition,* president of National Dietary Association and vice president of Health Food Dealers of Southern California, married Ed Jones 1946, stopped health work, self-published *How to Use the Soybean: A Plus Factor in Modern Nutrition* in 1955, new edition of her diabetic diets booklet, death in 1960 from cortisone treatments for arthritis, marriage of Ed Jones to Dorothea Van Gundy in 1960, their revision of her book, conclusion.

As of Sept. 2009, this history is available on the Soyinfo Center website, www.soyinfocenter.com. Address: Lafayette, California. Phone: 415-283-2991.

2253. Miller, Harry Willis, Jr. 1981. Work with soymilk in the United States and China (Interview). Conducted by William Shurtleff of Soyfoods Center, Oct. 25. 2 p. transcript.
• ***Summary:*** "Willis" Miller was born in 1912. In 1921 he did the first tests with soymilk at the Washington Sanitarium in Maryland. Discusses the work in Shanghai, with soymilk of T.A. Van Gundy, at the Van Gundy plant after T.A. died, with Loma Linda Foods, and with Madison Foods. Address: 450 Neeleys Bend Rd., Madison, Tennessee 37115. Phone: 615-868-2483.

2254. *Chicago Tribune.* 1981. 'Tofu' and other soy books: Reader's guide to good eating. Oct. 29. p. W_A21, or N_ B19.
• ***Summary:*** This is a briefly annotated list of useful books about soy products: (1) *Soybeans for Health and Longevity,* by Philip S. Chen. (2) *The Soybean Book: Growing and Using Nature's Miracle Protein,* by Phyllis Dobson. (3) *The Farm Vegetarian Cookbook,* edited by Louise Hagler. See recipes for making ice bean [soy ice cream], soy yogurt, and soysage. (4) *The Book of Tofu,* William Shurtleff and Akiko Aoyagi. Profusely illustrated, with hundreds of recipes. "There is no more thorough book on the history and myriad Oriental forms of tofu... First published in 1975, it is credited by most tofu cookbooks as the one that 'spread the light.'" (5) *The Tofu Cookbook,* by Cathy Bauer and Juel Anderson. Incorporates tofu artfully into familiar international dishes Many recipes assume access to the by-products of making tofu at home: okara (soy pulp) and whey. (6) *The Great American Tofu Cookbook,* by Patricia McGruter. (7) *Tofu Goes West,* by Gary Landgrebe. For those who enjoy the chewy texture of "frozen tofu." (3) *The Book of Miso,* by Shurtleff & Aoyagi. The best-known book about miso. (8) *The Book of Tempeh, by Shurtleff & Aoyagi.* A thorough study of this traditional Indonesian food.

2255. Armstrong, Bruce K.; Brown, J.B.; Clarke, H.T.; Crooke, D.K.; Waehnel, R.; Masarei, J.R.; Rarajczak, T. 1981. Diet and reproductive hormones: A study of vegetarian and nonvegetarian postmenopausal women. *J. of the National Cancer Institute* 67(4):761-67. Oct. [37 ref]
• ***Summary:*** Seventh-day Adventist (SDA) women, some 50% of whom are vegetarians, have a lower mortality from breast and endometrial cancers than do other women. In this study 50 volunteer SDA vegetarian post-menopausal women aged 50-79 years were matched by age to 50 volunteer nonvegetarian women resident in similar circumstances. The "vegetarian women were found to have lower urinary levels of estriol and total estrogens, lower plasma prolactin levels, and higher plasma sex hormone-binding globulin (SHBG) levels. These differences were not explained by differences in body weight or obesity. Plasma SHBG levels were highly correlated with plasma high-density lipoprotein cholesterol levels, which were also higher in vegetarians than in nonvegetarians. These hormonal differences may explain the lower rates of endometrial and possibly breast cancer that have been observed previously in vegetarian women."

The increase in the years of menstruation and the onset of menopause are the result of the effects of the additional estrogens in a younger and older woman's body caused by the high fat in her diet. Address: 1&3. Univ. Dep. of Medicine, The Univ. of Western Australia, Nedlands, Western Australia 6009.

2256. Nestel, Paul J.; Billington, T.; Smith, B. 1981. Low density and high density lipoprotein kinetics and sterol balance in vegetarians. *Metabolism* 30(10):941-45. Oct. [32 ref]
Address: Cardiovascular Metabolism & Nutrition Research Unit, Baker Medical Research Inst., Melbourne 3181, Australia; and Warburton Health Centre Care Clinic, Victoria, Australia.

2257. Shurtleff, William; Aoyagi, Akiko. 1981. History of small Seventh-day Adventist food companies and sanitariums in the USA. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 8 p. Oct. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject.

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Contents: Boulder Sanitarium Food Co. (1897-1945?, Boulder, Colorado). St. Helena Sanitarium Food Co. (1898-1918, St. Helena, California). New England Sanitarium (1899-1957?, Stoneham, Massachusetts). Washington Sanitarium (1907-19??, Takoma Park, Maryland). Nebraska Sanitarium (1930?-1955?, Lincoln, Nebraska). Hilkrest / Hillcrest Health Products co. (1932?-1955?, Takoma Park, Maryland). Butler Food Products (1939-1946, Cedar Lake, Michigan): Address and start, Soya Butter started 1942, meat analogs and Vegetarian Chops, 1943 products from ads and listings, 1945 ad, lease to Cedar Lake Academy in 1946, end of business in 1949. Sunnydale Academy Foods (1946-1968, Centralia, Missouri). Cedar Lake Foods (1949-, Cedar Lake, MI). Lange Foods (1950-1968, Portland, Oregon). Texas Protein Sales (1972-, Keene, TX). Millstone Foods (1977-, Penryn, CA).

See: http://www.soyinfocenter.com/HSS/small_adventist_food_companies.php Address: Lafayette, California. Phone: 415-283-2991.

2258. Shurtleff, William; Aoyagi, Akiko. 1981. Adventist influence today. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 6 p. Oct. Unpublished typescript.

• ***Summary:*** Contents: Reasons for writing this chapter. Number of Adventists worldwide. Influence of Adventist diet on health: Life-span of major soyfoods pioneers 88.8. Influence of Adventist health message on U.S. population. Influence of Adventist health foods on U.S. foods: E.G. White's teachings and early pioneers, the dilemma, commitment to highly processed, artificial ingredients in soyfoods, out of contact with soyfoods movement, advertising good. Influence of Adventist medical institutions and teaching on American medicine. Need for another reform.

See: http://www.soyinfocenter.com/HSS/adventist_influence_today.php Address: Lafayette, California. Phone: 415-283-2991.

2259. Twigg, Julia. 1981. The vegetarian movement in England 1847-1981: A study in the structure of its ideology. PhD thesis at the London School of Economics, University of London, England. 456 p. [538 + 932 footnotes]

• ***Summary:*** Contents: Acknowledgements. Part I. 1. Why vegetarianism? (p. 1-26). 2. The definition and unity of the ideology (p. 27-38). 3. Meat and blood (p. 39-57).

Part II. 4. Historical introduction (p. 59-65). 5. The early-nineteenth century: 1847-1860: Introduction, the Concordium (Alcott House, James P. Greaves, Pestalozzi, Bronson Alcott), the Bible Christian Church (William Cowherd, John Clowes, Emanuel Swedenborg, Salford, Rev. William Metcalfe, congregation in Philadelphia, Pennsylvania, science and reason), The Vegetarian Society (James Simpson, Henry S. Clubb, Joseph Brotherton, William Harvey, the *Vegetarian Messenger*, table showing membership in the Society was 478 in Feb. 1850, 889 in Feb. 1853, and 851 in Jan. 1858, with types of members enumerated each year, an urban, working-class movement, Manchester, Isaac Pitman, Jonathan Wright, James Scholefield) (p. 66-112).

6. The late nineteenth and early twentieth centuries: 1861-1913 (Francis Newman, W.E.A. Axon, J.E.B. Mayor, vegetarian restaurants, food-reform groups in London, Arnold Hills, cycling, the Danielites), Socialism (Henry Salt, Fabianism, Tolstoy, Dugald Semple), the simple life (Thoreau's influence, Carpenter, Adolf Just and Return to Nature), social health and the body (F.J. Furnivall, Ruskin, Walt Whitman, Edward Carpenter, dress reform and naturism, sandals, nudity), sexuality (meat's stimulating effect, lower and higher natures, abstinence), feminism (Lenora Cohen), medicine (Medical Reform Act of 1858, opposition to vaccination, Henry Pitman, alternative therapies, homeopathy, hydrotherapy, Thomas R. Allinson, brown bread preferred to white, constipation), animal welfare (anti-vivisection, The Humanitarian League), religious background (liberal Christianity, American transcendentalism, religious ideas from India, Annie Besant, Theosophy, religion of socialism, religion of nature, evangelicalism. Anna Kingsford M.D., Edward Maitland. Ananda K. Coomaraswamy, Darwin and evolution) (p. 113-209).

7. The interwar period: 1914-1938: Diet in the war, vegetarianism between the wars, sunlight & nature, Rolliers heliotherapy, sunbathing, medicine and the nature cure (osteopathy, dowsing, Edward Bach's flower tinctures, naturopathy, the healing power of nature, illness results from the accumulation of toxins or waste in the body, germ theory of disease, William Arbuthnot Lane, food and health debate, political links, Fenner Brockway, Peter Freeman, Ellen Wilkinson, Stafford Cripps was a vegetarian {1889-1952}, the peace movement Quakers, conscience / conscientious objection, pacifism), internationalism and Esperanto (Esperanto Vegetarian Society, Dr. Zamenhof), progressive education, Theosophy, the religious connections, Lutyens family, The Order of the Cross, Herald of the Cross, Mazdaznan, Quakers, Seventh Day Adventism (Dr. John Harvey Kellogg) (p. 210-89).

8. The modern period: 1939-1981: The Second World War and austerity, veganism and the Vegan Society (founded in Leicester in 1944, cow's milk and cruelty), the counter culture, vegetarianism in the 1970s (Seed magazine, vegetarian restaurants, health-food shops, wholefood shops and co-operatives, differences between old and new vegetarian concerns, alcohol as an issue), nutrition and the critique of the food industry (roughage / dietary fiber, chemical pollution, junk food), feminist and homosexual associations, alternative medicine (holism, rejection of dualism, idea of nature, self help), religious and spiritual links, animal rights, ecology and nature. (p. 290-383). Note

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on class background (p. 384-87).

Part III. The structure of the ideology: Nature and wholeness, life, death and Eden, the pure body, newness, non-structure, boundaries (p. 388-429). Bibliography: Journals. other journals, yearbooks, other published material (p. 430-56). Address: London, England.

2260. Strayer, George M. 1981. Re: Pioneers in introducing and producing soybeans in America, and in starting the American Soybean Association. Letter to William Shurtleff at Soyfoods Center, Nov. 5. 2 p. Typed, with signature on letterhead.

• ***Summary:*** Concerning Iowa: The first work was done by H.D. Hughes, who was the head of the Department of Farm Crops and Soils. He was assisted by F. Scott Wilkins and E.S. Dyas, both of whom were extension agronomists. Martin G. Weiss came on the scene in Iowa at the same time that Probst started in Indiana and Williams started in Illinois, all of them part-time USDA and part-time local experiment station employees specializing in soybean breeding work. "Martin Weiss is a highly skilled plant breeder, a geneticist and a mathematician. He is responsible for the development of the cross-pollination and back-crossing techniques which have become the basis of practically all soybean breeding being done in the United States, and practically every soybean variety which has been developed since about 1940 has been developed through the techniques developed by Weiss...

"There are a number of theories on why so many men gave so generously of their time and effort to support the introduction of soybeans into the United States, and to support ASA. Certainly W.J. Morse was a part of the reason. Many changes were taking place in agriculture, and the people in the land grant colleges were looking for new crops and new uses for crops. The whole face of agriculture was changing from the use of horses and the large consumption of oats, corn and hay by those horses to the use of tractors and other petroleum fueled mechanical units. This meant we had to find new crops to grow on the acreages no longer needed for oat and hay production.

"For some reason the soybean crop always had a kind of halo around it, placed there by men such as Henry Ford, W.K. Kellogg, I.C. Bradley, W.J. Morse, 'Soybean' Johnson and others who had access to the news media and who used it. This was an era when farmers were still expanding acreage, looking for new crops and new uses for those crops and the publicity given to soybeans was being well received by farmers.

"This was also an era when the farmer was leaving the typified hayseed status and becoming a businessman. Extension work through Farm Bureau and the local extension offices was becoming an important factor in decision-making among farmers. Extension agronomists and other persons were listened to. Farm cooperatives, farmers elevators, and other organizations of farmers were coming into prominence. It was an era of growth in information and growth in knowledge in the field of agriculture, and soybeans lent themselves to the enchantry of the period.

"You're having a tough time getting anyone to do comparable work for the Soycrafters Association because you are dealing with an entirely different type of people. Most of them are small entrepreneurs who have come out of an era when it was every man for himself and the Devil take the hinder-most. The farmers whom we were considering were looking for ways to cooperate and work with their neighbors. When someone got sick the neighbors did the field work. When a new barn was to be built there was a barn-raising held. Contrast this with the people in the cities, where most of your tofu plants are located, and where no one stepped in to help his neighbor. This is still pretty much true. You are talking about people with two very different philosophies, two quite different backgrounds. When a farmer gets sick, even today, his neighbors do his chores for him. When a small business operator gets sick he closes the doors and no one particularly cares." Address: President, Agricultural Exports, Inc., P.O. Box 266, Hudson, Iowa 50643. Phone: 319-988-4593.

2261. Sanchez, Albert; Kissinger, D.G.; Phillips, R.L. 1981. A hypothesis on the etiological role of diet on age of menarche. *Medical Hypotheses* 7(11):1339-45. Nov. [24 ref]

• ***Summary:*** Diet (rather than body size or body composition) may be the main cause of the trend toward early menarche over the last 100 years. "Our data shows that the present trend toward early menarche can be reversed when a balanced vegetarian diet is selected in place of the ordinary American diet." Address: 1. Dep. of Nutrition; 2. Dep. of Biostatistics and Epidemiology. All: School of Health, Loma Linda Univ., Loma Linda, California 92350.

2262. Harris, Ralph D.; Phillips, R.L.; Williams, P.M.; Kuzma, J.W.; Fraser, G.E. 1981. The child-adolescent blood pressure study. I. Distribution of blood pressure levels in Seventh-day Adventist (SDA) and non-SDA children. *American J. of Public Health* 71(12):1342-49. Dec. [38 ref] Address: 1. Assoc. Prof. and Chief, Div. of Pediatric Nephrology, Dep. of Pediatrics, Loma Linda Univ., School of Medicine, Loma Linda, California 92354.

2263. Insel, Paul M.; Fraser, G.E.; Phillips, R.L.; Williams, P.M. 1981. Psychosocial factors and blood pressure in children. *J. of Psychosomatic Research* 25(6):505-11. Nov/Dec. [20 ref]
Address: 1. Dep. of Psychiatry, Stanford Univ., Stanford and American Healthway Services, Palo Alto; 2-4. Dep. of Biostatistics and Epidemiology, Loma Linda Univ. Loma Linda. All: California.

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2264. White, Arthur L. 1981-1986. Biography of Ellen G. White. 6 vols. Washington, DC, and Hagerstown, Maryland: Review and Herald Publishing Assoc. Illust. 23 cm. *
• ***Summary:*** This biography, considered the best to date of Ellen G. White, was written by her grandson, Arthur. The titles of the individual volumes are:

(1) "The Early Years, 1827-1862."
(2) "The Progressive Years, 1862-1876."
(3) "The Lonely Years, 1876-1891."
(4) "The Australian Years, 1891-1900."
(5) "The Early Elmshaven Years, 1900-1905."
(6) "The Later Elmshaven Years, 1905-1915."

Each of these volumes has an index, which helps locate materials. The Health Reform visions are mentioned in volume 2 on pages 11, 16-22 (3rd. vision), 71, 73, 80-81,83, and 111.

Ellen apparently never used the word "gluten" in her own writings. This word "gluten" appears in connection with her, in her biography, Vol. 4, p. 433. Her biographer quotes an article from the *Union Conference Record* (a Seventh-day Adventist publication in Australia) of 1 Dec. 1899, to show what products are being made by the Sanitarium Food Co. in Australia. "They are now manufacturing granose biscuits, granose flakes, bromose, nuttose, antiseptic tablets [charcoal tablets], granola, caramel cereal [grain coffee], nut butter, wheatmeal biscuits, gluten biscuits, and gluten meal."

2265. **Product Name:** Granose Soya Dessert (Vanilla, Chocolate, Strawberry, or Banana).
Manufacturer's Name: Granose Foods Ltd. (Marketer). Made in Germany by DE-VAU-GE.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1981.
New Product–Documentation: Lindner. 1987. The World Soymilk Market.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by DE-VAU-GE, was introduced in 1981 in Vanilla, Chocolate, Strawberry, and Banana flavors. The desserts were made by Alpro in Feb. 1984.

Form filled out by Philippe Vandemoortele of Alpro. 1991. Sept. 4. The desserts were first made for Granose by Alpro in Feb. 1984 in Vanilla and Chocolate flavors.

2266. **Product Name:** Loma Linda Griddle Steaks (Meatless Beefsteak. Based on Spun Protein Fiber).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1981.
Ingredients: Soy protein concentrate, wheat gluten, corn oil, water, egg whites, onion, soy protein isolate, natural (vegetable) flavors, corn starch, whole wheat flour, artificial flavor, soy lecithin, guar gum, caramel color, salt, garlic powder, stabilizer (cellulose gum, gum arabic), spices, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 10 oz paperboard box.
How Stored: Frozen.
Nutrition: Per 1 steak (1.7 oz–47 gm): Calories 160, protein 11 gm, carbohydrate 4 gm, fat 11 gm, cholesterol 0 mg, sodium 385 mg, potassium 250 mg.
New Product–Documentation: Ad. 1980. "Two new ways to nourish your business. The meatless meals they'll be asking for." Label reads: "Meatless. Hearty Steak Flavor. Cholesterol Free. 8 Steaks." Sold frozen. Soya Bluebook. 1982. p. 60.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1981.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2267. **Product Name:** [Maxten {Textured Vegetable Protein}].
Manufacturer's Name: Miles-Kyowa Co. Ltd.
Manufacturer's Address: Aoyama Building 2-3, Kita-Aoyama 1-chome, Minato-ku, Tokyo, Japan.
Date of Introduction: 1981.
New Product–Documentation: Soya Bluebook. 1981. p. 58.

2268. **Product Name:** Sanitarium Health Foods Textured Vegetable Protein TV [Flavour-Like Beef, Flavour-Like Fish, or Minced].
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1981.
Ingredients: 1990: Soya flour, vegetable oil, salt, Savex, artificial flavour.
Wt/Vol., Packaging, Price: 430 gm can.
How Stored: Shelf stable.
New Product–Documentation: Letter from Sanitarium Health Food Co. 1981. Label. 10 by 4 inches. Full color. Photo shows round slices or minced chunks on a bed of rice. "Just heat and eat."

Letter and Labels sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1981, and address as Sydney, N.S.W.

2269. **Product Name:** [Soymilk].
Manufacturer's Name: Seventh-day Adventist Food Company in Colombia.
Manufacturer's Address: Colombia.
Date of Introduction: 1981.

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New Product–Documentation: Shurtleff. 1981. Overseas Adventist Food Companies. p. 8.

2270. Shultz, T.D. 1981. Comparative nutrient intake and biochemical interrelationships among healthy vegetarian and nonvegetarian Seventh-day Adventists, nonvegetarians, and hormone-dependent cancer subjects. *Dissertation Abstracts International* 41:4068-B. *

2271. Waaler, H.; Hjort, P.F. 1981. Hoyere levealder hos norske adventister 1960-1977: Et budskap om livsstil og helse? [Low mortality among Norwegian Seventh-day Adventists 1960-1977: A message on lifestyle and health?]. *Tidsskrift for den Norske Laegeforening* (*J. of the Norwegian Medical Association*) 101:623-27. [Nor]*

2272. **Product Name:** Dixie Dogs (Meatless Hot Dogs in Batter) [Regular, or Institutional].
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1981.
Ingredients: Regular: Batter: Water, wheat flour, yellow corn meal, sugar, partially hydrogenated soybean oil, modified corn starch, soy flour, egg yolk, nonfat dry milk solids, baking powder, sodium caseinate, salt, wheat starch, lecithin, potato flour. Textured vegetable protein (soy protein concentrate and isolate, wheat gluten and flour), egg whites, soybean and/or corn oil, sodium caseinate, water, partially hydrogenated soybean and cottonseed oil, flavorings (artificial flavors, monosodium glutamate, onion and garlic powder, spices, disodium guanylate, disodium inosinate), salt, corn syrup solids, dextrose, sodium phosphates (tripolyphosphate, pyrophosphate, hexametaphosphate, monophosphate), artificial colors, calcium chloride, niacinimide [niacinamide], iron (as ferrous sulfate), vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12.
How Stored: Frozen.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. The food chemists went berserk on the ingredients for this one, treating it as a PhD exam for every long-named ingredient in the book.

2273. Cottrell, Edyth Young. 1981. Mrs. Cottrell's stretching-the-food-dollar cookbook. Santa Barbara, California: Woodbridge Press. 127 p. Recipe index. 22 cm.
• ***Summary:*** A natural foods, vegetarian cookbook. Incorporates *Stretching the Food Dollar* and *Supplement to Stretching the Food Dollar.* A color photo on the cover shows the author.

Page 15 discusses soy milk, soy milk powder, soy flour, and nut milk. Many recipes (especially recipes for breads and other baked goods) call for the use of these products. Soy-related recipes include: Basic wheat-soy bread I & II (with soy flour, p. 21-22). Golden triple-rich bread (with soy flour and soy milk, p. 23). Rice-soy bread (with soy flour p. 27). Soy-nut bread (with soy flour and ground cooked soy beans, p. 30). Soy mayonnaise (with soy milk powder, p. 71). Savory soy loaf or patties (with soy sprouts, p. 80). How to sprout soybeans (p. 89). Soy sauce (p. 90). Address: Formerly, Research Nutritionist, Loma Linda Univ., Loma Linda, California; As of March 1993, living in Spokane, Washington.

2274. Fraser, G.E.; Swannell, R.J. 1981. Diet and serum cholesterol in Seventh-day Adventists: A cross-sectional study showing significant relationships. *J. of Chronic Diseases* 34(9/10):487-501. [40 ref]
Address: 1. Dep. of Community Health, Auckland School of Medicine, Univ. of Auckland; 2. Auckland Adventist Hospital, St. Heliers Bay Rd. Both: Auckland, New Zealand. Fraser's current address is: Dep. of Biostatistics and Epidemiology, Loma Linda Univ., Loma Linda, California 92350, USA.

2275. Kloss, Jethro. 1981. Back to Eden: A human interest story of health and restoration to be found in herb, root, and bark. Loma Linda, California: Back to Eden Books. xxxii + 684 p. Illust. Index. 18 cm. Kloss Family Heirloom Edition.
• ***Summary:*** One of the most creative and original sources of early soyfoods recipes, which include "Soybean Cream" and "Soybean Ice Cream." This revised edition contains the complete original text of this classic work on healing herbs, home remedies, diet, and health–plus 16 pages of new family recollections by Jethro Kloss' daughter, son, and granddaughter at the beginning of the book, and 16 pages of previously unpublished photographs in the middle of the book. This edition was first copyrighted in 1972. The book has been published continuously by the Kloss family since 1946. A blurb on the cover of the 1981 printing (which retails for $2.95) states: "Two million copy bestseller. The complete original text [with the same page numbers]. New family additions!" A color illustration by Harry Anderson shows a man and woman seated by an idyllic river, surrounded by birds and animals, in the Garden of Eden. The rear cover states that this is "The heirloom authorized Kloss family edition."

The contents of the book, except for the new sections mentioned above, are identical to the original 1939 edition. But the recollections of Jethro Kloss by his children and granddaughter contain a wealth of new and interesting information. The recollections by his daughter Promise Kloss Moffett note: "My father was born on a large farm near Manitowac, Wisconsin, on April 27, 1863. The ninth of eleven children born to his pioneering parents lived a healthy

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and happy life in that primitive Indian country...

"When he was about twenty, he went to Florida and worked in the orange groves, finally owning a large grove at Deland. Later he attended school in Nebraska and then in Battle Creek, Michigan. While in Battle Creek he worked closely with the then revolutionary medical leadership of the world-renowned Battle Creek Sanitarium. He saw clearly the disastrous results of the use of dangerous drugs then prevalent in caring for the sick. He developed further his own philosophy and understanding of the laws of nature...

"He was married March 5, 1900 to Miss Carrie Stilson, who had trained as a Bible worker and teacher and had labored in a mission in Madison, Wisconsin and taught several terms of grade school. At that time he was a licensed minister in Wisconsin and they established their home at Rose Lawn. Two children were born to this union, Promise Joy and Paul, who died when only four weeks old of whooping cough. During these years, besides my father's ministerial work, my parent's operated a branch of the Battle Creek Sanitarium and also sold Battle Creek Sanitarium health foods. My mother died in July of 1905.

"In March, 1907, my father married Mrs. Amy Ponwith, a widow with a small daughter, Mabel. My father and step-mother owned and operated an attractive sanitarium in pleasant surroundings in St. Peter, Minnesota, which they named *The Home Sanitarium*... Their daughter Lucile was born here in St. Peter in 1908 and their son, Eden, in 1910.

"Next the Kloss's became interested in the self-supporting work being conducted in the south and visited some of the schools in North Carolina and Tennessee. About 1911 they sold the sanitarium in Minnesota and moved to Fountain Head, Tennessee, where their youngest daughter, Naomi, was born in 1913. Here they bought a 250 acre farm, built a large house and barn, and raised many kinds of fruits and vegetables...

"A later development in good health was his creation of a significant health food manufacturing operation in Amqui, Tennessee after receiving a call from them to take charge of their food factory...

"Before this factory was sold to the Nashville Agricultural Normal Institute he was shipping health foods all over the United States and Canada. It was during this time at this place that he originated many new health food recipes. This establishment later became a part of what has since become the well-known Madison College near Nashville, Tennessee.

"Our next move was to Brooke, Virginia where [in 1921] papa established a health food factory and retail market. Each of us children was pressed into service in one way or another with this family enterprise. At times we would be helping with some food experiment, or perhaps in typing and retyping the material that later became *Back to Eden*, which was many years in preparation. Jethro Kloss's son Eden was for many years his right hand helper. Whatever my father did in spreading the gospel of health and natural living, he did with all his might and trained his children in that same pattern of living...

"One of my favorite memories as a family is the daily worship hour when Father would gather his family of seven about him and we would sing hymns, read Bible verses around the circle, and pray together. He was a gentle but firm family leader.

"Although a strict disciplinarian, my father was warm-hearted and affectionate–devoted to his family. When he was away from home, we invariably received a letter from 'papa' every day...

"Eventually this health food factory at Brooke, Virginia was taken over by my step-sister, Mabel and her husband.

"The Kloss's then moved to Washington, D.C. and carried on his work of treating the sick, lecturing on health and a more intensive study of herbs and preparation of his book, *Back to Eden.* I still have in my possession an attractive menu... for a Demonstration Dinner he gave March 27, 1933, at the Dodge Hotel in Washington, D.C. The menu was completely vegetarian and included 'Sweetbreads a la Kloss.' The pumpkin pie and strawberry sundae were made with soy milk...

"*Back to Eden* was at last published in 1939, the fruition of much toil and sacrifice for many years by the entire Kloss family... [Jethro's] wife Amy [Pettis] Kloss died in 1944 at Fredericksburg, Virginia...

"In 1945 papa became acquainted with Mr. and Mrs. Deloe Robert Hiatt on a trip to Madison, Tennessee. Together they found a property at Coalmont, Tennessee, where the Hiatts took over the promotion and publication of *Back to Eden*... [Jethro] peacefully went to sleep in June of 1946, his eighty-fourth year [but he was age 83], and today rests in a little cemetery in Tennessee."

The recollections by his son, Eden, note: "I was born in St. Peter, Minnesota, on February 10, 1910, to Jethro and Amy Kloss... After the move to Tennessee, my parents developed a plant for the manufacture of a line of vegetarian meat substitutes, cereals, crackers, and other items, at Amqui, near Nashville. (Our business was called the Nashville Sanitarium Food Factory.) Many of my early memories center on that large two-story factory, where raw materials were transformed into good-tasting, healthful food products...

"My father was an untiring worker. He would be up hours before the rest of the family–building fires, starting cracker dough, and making everything ready so that the work could go full speed ahead when the workers arrived in the morning... One day when Eden was burned while canning tomatoes, Jethro rushed him to the Madison Sanitarium for treatment. Kloss also made gluten there.

"When I was nine or ten years old, the factory was sold to the private school at Madison and transferred to that campus, and our family traveled in our pickup truck,

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camping en route, from Tennessee to Virginia. Here, at a town named Brooke, we found an ideal location–a plot of ground with a building in which we could make and sell health foods and teach people about healthful living...

"It was here at Brooke, Virginia, that Papa started to put in uncounted hours working on the beginnings of his book, *Back to Eden.*

"After some years, my oldest sister and her husband took over the food factory, and my parents moved to Takoma Park (on the outskirts of Washington, D.C.)...

"Papa's travels to give lectures and food demonstrations took him to places like Miami, Florida, and Houston, Texas."

There are also recollections by his granddaughter, Doris Joyce Kloss Gardiner. In about 1939-40 she used to be with her grandparents when they visited relatives in Falmouth, Virginia, just north of Fredericksburg. There she helped make soymilk: "Nor was I happy to stand at the stove stirring and stirring large kettles of soybean milk (so the milk wouldn't stick and be scorched)–a laborious and time-consuming process. But Grandpa's soybean milk was delicious, and so were the twenty or so other soy products that he originated and produced–including meat substitutes and soybean bread, butter, cheese, and ice cream...

"Often Grandpa would prepare soybean ice cream to serve at the close of his lectures or cooking demonstrations. One of my favorite treats was to lick the paddle from the ice-cream freezer before we left home to go to the lecture...

"Grandpa and Grandma Kloss died when I was in my mid-teens." The frontispiece (facing the title page) is a portrait photo of Jethro Kloss. An original of this photo was sent to Soyfoods Center in 1985 by Doris Kloss Gardiner of Loma Linda, California. On the 4th page of photos in the center section is an ad by "Jethro Kloss Health Food Company, Brooke, Virginia." Photos show two hand grinders, a large-scale gas-fired pressure cooker, a large stove-top pressure cooker, and a hand scaler. The text begins: "We manufacture a large line of health foods." In 1921 Kloss opened this health food factory in Brooke, VA, and it as on this site that he began writing *Back to Eden.* Address: P.O. Box 1439, Loma Linda, California 92354.

2276. Kloss, Jethro. 1981. The Back to Eden cookbook. Loma Linda, California: Back to Eden Books. 159 p. Illust. by Daniel Guild. Index. 22 cm.
• ***Summary:*** The yellow cover of this 1981 edition ($2.95) features a color illustration (by Harry Anderson) showing a man and woman seated by an idyllic river, surrounded by birds and animals, in the Garden of Eden. The cover text states: "From the renowned author of Back to Eden. This is a golden treasury of recipes and priceless information on natural foods for health and healing. Based on the work of the late Jethro Kloss. Published under the supervision of Promise Kloss Moffett and Doris Kloss Gardiner. The copyright page of the 1981 printing states that the book is published and distributed by Back to Eden Books, P.O. Box 1439, Loma Linda, California 92354. The book is copyrighted by Doris Kloss Gardiner, Promise Kloss Moffett, and Eden P. Kloss. The book was previously published by Woodbridge Press under ISBN 0-912800-05-4.

Contents: Jethro Kloss... Pioneer nutritionist. Return to Eden... Return to happiness. Soy milk, cheese, butter, and cream. Nut milk, cheese, butter, and cream. Main dishes. Using sprouted seeds (including soybean sprouts). Bread... A health food. Life-giving breads. Natural breakfast foods. Soups... Total nutrition. Salads and dressings. Vegetables. Sauces, seasonings, and spreads. Desserts for health. Coffees, teas, and broths (including a recipe for making soybean coffee at home, p. 151).

The chapter titled "Nut milk, cheese, butter and cream" has recipes for: Nut milk (made from raw peanut butter). Nut cheese (from raw peanut butter and soy butter). Dieters nut cheese (from raw peanut butter). Malted nut cream (from raw peanut butter and malt powder). Superb peanut butter. Blanched peanut butter (add water to make into milk or cream). Simple peanut butter. To blanch peanuts. Nut meal. Nut butter cream (add warm water to nut butter).

Photos (p. 6 and 9) show: daughter Promise Kloss Moffett, son Eden Kloss, and granddaughter Doris Kloss Gardiner. Address: P.O. Box 1439, Loma Linda, California 92354.

2277. Kuzma, J.W.; Beeson, W.L. 1981. The relationship of lifestyle characteristics to mortality among California Seventh-day Adventists. In: 1981. Proceedings of the 19th National Meeting of the Public Health Conference on Records and Statistics, DHHS [Dept. of Health and Human Services] Publication No. (PHS) 81-1214. *

2278. Osman, Jack D. 1981. Thin from within: Vegetarian edition. Washington, DC: Review and Herald Publishing Association. 159 p. 21 cm. [31+ ref]
• ***Summary:*** Discusses the psychological aspects of losing weight via a low-calorie, vegetarian diet. Page 102 lists soybeans as a good source of iron; 2 tablespoons provide 2.0 mg. Page 130 lists soybeans and tofu as good iron sources. Address: Towson, Maryland.

2280. Shultz, T.D.; Leklem, J.E. 1981. Urinary 4-pyridoxic acid, urinary vitamin B6 and plasma pyridoxal phosphate as measures of vitamin B6 status and dietary intake in adults. In: J.E. Leklem and R.D. Reynolds, eds. 1981. Methods in Vitamin B-6 Nutrition: Analysis and Status Assessment. New York: Plenum Press. xi + 401 p. See p. 297-320. *

2281. Windish, Leo G. 1981. The soybean pioneers: Trailblazers, crusaders, missionaries. Galva, Illinois: Published by the author. viii + 239 p. Illust. No index. 26 cm.
• ***Summary:*** Contains many interesting biographies, often

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based on the author's first-hand knowledge. Contents: Section I: 1. A time to pause and reflect. 2. Dr. W.B. Morse. 3. The Cinderella crop of this century and some orchids long overdue. 4. First soybean crushing plant. 5. George M. Strayer (Contains a good history of the American Soybean Association and Strayer's role in it). 6. Ersel Walley. 7. Dr. Harry Miller. 8. Henry Ford. 9. Northern Regional Research Laboratory. 10. Dr. Reid Milner. 11. Soybeans in China. 12. The first combine harvesters, the western migration, and the passing of an era (a good history of combines in the USA from the 1850s to the present). 13. Prof. W. Ralph Nave (agricultural engineer, specializing in improving combine design for harvesting soybeans). 14. Soybean harvesting equipment.

Section II: 15. August Eugene Staley, Sr. 16. Eugene D. Funk, Sr. (and the Peoria Plan, p. 74). 17. Dale W. McMillen [of Central Soya]. 18. Jacob Hartz, Sr. 19. Archer-Daniels-Midland Company, Inc. 20. Jay Courtland Hackleman. 21. Dr. Robert W. Howell. 22. Dr. W.O. Scott. 23. Program. 24. Crop improvement associations. 25. Illinois Crop Improvement Association. 26. Professor Emeritus Alvin L. Lang. 27. Morrow Plots.

Section III: 28. Dr. Clyde Melvin Woodworth. 29. Dr. R.L. Bernard. 30. Theodore Hymowitz. 31. A reluctance to accept change or progress. 32. Episodes. 33. Russian Tour. 34. South Farm buildings. 35. Soybeans again assert their value. 36. Taylor Fouts. 37. Excerpts from the Mumford Files. 38. Excerpts from the Hackleman Files. 39. Soybean variety and inoculation demonstrations. 40. The frosted green soybean dilemma. 41. Soybeans in the Deep South. 42. Mr. H.G. [sic, George Heartsill] Banks. 43. Dr. E.E. Hartwig. 44. U.S. soybean production. 45 Aquaculture... the world's untapped resource (From 1974 to 1979 the harvest from aquaculture more than doubled to nearly 7 million metric tons). 46. Almost a century of progress. About the author (autobiographical): Leo Gilbert Windish was born in 1909. A retired seedsman, he attended the University of Illinois in 1927 and 1928. He was close friends with Hackleman, and wrote this book in fulfillment of a promise he made to Hackleman, whom he described as "the soybean's greatest missionary." Windish also knew Burlison (the first to promote soybeans heavily) and Woodworth (the first soybean geneticist).

Note: Most of the chapters about people contain a portrait photo of the person on the first page. Address: 101 Exchange St., Galva, Illinois 61434.

2282. **Product Name:** [GranoVita Sojagen Instant].
Foreign Name: GranoVita Sojagen Instant.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Phone: 04 13 11 89 41.
Date of Introduction: 1981?
Ingredients: Soybeans.
Wt/Vol., Packaging, Price: 450 gm. Wholesales for DM 11.60.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p.

Soyfoods Center Computerized Mailing List. 1982. July 23.

Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products. Rein pflanzliche Soja-Nahrung. Retail price is DM 10.24 for 450 gm.

Manufacturer's brochure. 1989? "GranoVita Soja-Drinks und -Desserts... ein erfrischender Genuss [a refreshing enjoyment]. 6 pages, with many color photos. Contains a brief description of Sojagen and Sojagen Plus, with a color photo of both packages/boxes. The Sojagen box is red, dark green, light green and white. A color illustration shows a glass of milk in front of soybean leaves and pods. "A soya food made purely from plants. Milk free. Lactose free. Gluten free. Weight: 350 gm. Neuform certification symbol.

2283. **Product Name:** [GranoVita Sandwich Spread].
Foreign Name: GranoVita Soja-pikant.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1981?
Ingredients: Water, vegetable oils and fats, egg protein, soya protein, spices, wheat gluten, glucose, salt, yeast, rolled oats, soya sauce, bread crumbs, onions.
Wt/Vol., Packaging, Price: 80 gm wholesales for DM 2,35 or 200 gm for DM4,55.
New Product–Documentation: Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p. Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products.

2284. **Product Name:** [GranoVita Hunter's Ragout].
Foreign Name: GranoVita Jaegerragout "Hubertus".
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1981?
Wt/Vol., Packaging, Price: 400 gm wholesales for DM 5. Pre-cooked.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. May 1. Sortiments-Preisliste. 4 p. Lists product names,

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weights, and prices.

2285. **Product Name:** [GranoVita Soynuts (Chocolate Coated, or with Sea Salt)].
Foreign Name: GranoVita Soja-Knabberei (Schokoliert, or mit Meersalz).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1981?
Ingredients: Chocolate coated: Roasted soybeans, whole milk chocolate.
Wt/Vol., Packaging, Price: 75 gm poly bag. Retails for DM 2.75.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p. Label sent by Anthony Marrese. 1989. Nov. 3.5 by 6.5 inches. Poly bag. Light green, gray green, red, yellow, and black. "From toasted soybeans (Aus getoasteten Soja-Kernen). Chocolate covered. Light–Nourishing." Neuform certification symbol.

Granovita Leaflet sent by Anthony Marrese of Bremen Germany. 1991. Oct. 7. "Hallo Muttis, hallo Vatis" [Hello mothers, hello fathers]. Among the ten products whose labels are shown is GranoVita Soja-Knabberei. "Toasted soy kernels coated with whole-milk chocolate–light and delicious."

2286. **Product Name:** [GranoVita Lentil Hot Pot].
Foreign Name: GranoVita Linseneintopf.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1981?
Wt/Vol., Packaging, Price: 400 gm wholesales for DM 4,30. Pre-cooked.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. May 1. Sortiments-Preisliste. 4 p. Lists product names, weights, and prices.

2287. **Product Name:** [GranoVita Chinese-style Soya Stew].
Foreign Name: GranoVita Chinesisches Soja-Ragout.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1981?
Wt/Vol., Packaging, Price: 400 gm wholesales for DM 5.

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Pre-cooked.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. May 1. Sortiments-Preisliste. 4 p. Lists product names, weights, and prices.

2288. **Product Name:** Loma Linda Vitaburger, and Vitaburger Chunks (TVP-brand Textured Soy Flour).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1981?

2289. **Product Name:** Loma Linda Chili Beans with Vita-Burger.
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1981?

2290. **Product Name:** [Nutana Soya-Protein 92, and Soya Lecithin Capsules].
Manufacturer's Name: Nutana Helsekost (Marketer).
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product.

2291. **Product Name:** [Nutana Soya-Beans in Vegetable Bouillon].
Foreign Name: Sojaboenner i Vegetabilsk Bouillon.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Soya-beans, spices, sea salt.
Wt/Vol., Packaging, Price: 400 gm, of which 210 gm are soya-beans.
How Stored: Shelf stable.
Nutrition: Per 400 gm: Calories 140, protein 14 gm, fat 5 gm, carbohydrate 9 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "Heat in a saucepan together with sliced and fried onions. Serve with boiled or mashed potatoes, or grated raw vegetables. Also well suited for vegetarian loaf." Labels in Danish, Dutch, and Finnish.

2292. **Product Name:** [Nutana Fricassee].
Foreign Name: Nutana Frikasse.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Peas, SoyaPro with Calf-Like Flavour, water, carrots, vegetable margarine, wheat flour, spices, maize starch, parsley, vegetable aroma, caramel color (not ammonized).
Wt/Vol., Packaging, Price: 425 gm can.
How Stored: Shelf-stable.
Nutrition: Per 100 gm: Calories 130, protein 6 gm, fat 8 gm, carbohydrate 7 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "Use for dinner or to fill tartlet cases." It is "ready to serve. Just heat in a saucepan. Serve with boiled or mashed potatoes, and you will have an easy and delightful dish." Labels in Danish, Dutch, and Finnish.

2293. **Product Name:** [Nutana Vegetarian Paste].
Foreign Name: Nutana Vegetabilsk Postej.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Soya beans, water, onions, egg, soya oil, yeast extract, spices, sea salt.
Wt/Vol., Packaging, Price: 120 gm and 215 gm can.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "Used on sandwiches, e.g. garnished with mushrooms, tomatoes, beetroots or cucumber salad, etc." Label. Labels in Danish, Dutch, and Finnish.

2294. **Product Name:** [Nutana Frikalett/Rissole].
Foreign Name: Nutana Rissole.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Soya protein, egg white powder, spices, water. Gravy: Wheat flour, soya sauce, vegetable bouillon, onions.
Wt/Vol., Packaging, Price: 450 gm can.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "Ready to serve. Just heat in saucepan. To be served with boiled or mashed potatoes and vegetables." Labels in Danish, Dutch, and Finnish.

2295. **Product Name:** [Nutana Soya Goulash].

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Foreign Name: Nutana Soja-gullasch.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Water, Soya Pro with Beef-Like Flavour, carrots, celery, onions, wheat flour, sunflower oil, tomato puree, yeast extract, sea salt, spices, vegetable aroma, colour (caramel, not ammonized).
Wt/Vol., Packaging, Price: 425 gm can.
How Stored: Shelf-stable.
Nutrition: Per 100 gm: Calories 110, protein 6 gm, fat 6 gm, carbohydrate 7 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "For dinner or lunch. Ready to serve. Heat in a saucepan and serve with mashed potatoes, fresh grated vegetables, and beet roots." Labels in Danish, Dutch, and Finnish.

2296. **Product Name:** [Nutana Soya Sausages].
Foreign Name: Nutana Soja-poelser.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Water, sunflower oil, textured soya protein, gluten, grape sugar, sea salt, egg white powder, oat flakes, soya sauce, vegetable consistency, spices, vegetable flavouring, smoke flavour, colour (caramel, not ammonized). Water: water, vegetable bouillon.
Wt/Vol., Packaging, Price: 385 gm can, of which 230 gm is sausages.
How Stored: Shelf-stable.
Nutrition: Per 100 gm: Calories 200, protein 13 gm, fat 15 gm, carbohydrate 4 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "For dinner or lunch. Ready to serve. Heat or fry. Serve with bread, potato salad, or mashed potatoes." Labels in Danish, Dutch, and Finnish.

2297. **Product Name:** [Nutana Dinner Balls].
Foreign Name: Nutana Maddagsboller.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Water, gluten, textured soya protein, soya oil, bread crumbs, egg white powder, yeast extract, defatted soya flour, onions, grape sugar, spices, sea salt, vegetable flavouring. Gravy: Water, soya oil, wheat flour, spices, sea salt.
Wt/Vol., Packaging, Price: 400 gm can, of which about 180 gm are Dinner Balls.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "May be served in curry-sauce prepared by adding a level teaspoon of curry to the gravy in the tin. To be served with cooked rice and grated raw vegetables." Labels in Danish, Dutch, and Finnish.

2298. **Product Name:** [Nutana Bean Paste].
Foreign Name: Nutana Grov Boennepostej.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Soya beans, onions, egg, textured soya protein, sunflower oil, spices, and water.
Wt/Vol., Packaging, Price: 210 gm can.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "Used on sandwiches, e.g. garnished with mushrooms, tomatoes, pickled beetroots or cucumber salad." Labels in Danish, Dutch, and Finnish.

2299. **Product Name:** [Nutana Soya-Beans in Tomato].
Foreign Name: Nutana Sojaboenner i Tomat.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Water, soya-beans, tomato puree, wheat flour, spices, sea salt, vegetable aroma.
Wt/Vol., Packaging, Price: 425 gm can.
How Stored: Shelf stable.
Nutrition: Per 100 gm: Calories 100, protein 8 gm, fat 3 gm, carbohydrate 8 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "Heat in a saucepan together with sliced and fried onions. Serve with boiled or mashed potatoes, or grated raw vegetables. Also well suited for vegetarian loaf."

2300. **Product Name:** [Nutana Spaghetti Sauce].
Foreign Name: Nutana Spaghettisovs.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Gluten, red paprika, onions, tomato puree, maize starch, sunflower oil, textured soya protein, wheat

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flour, colour (caramel, not ammonized), spices, water.
Wt/Vol., Packaging, Price: 430 gm can.
How Stored: Shelf-stable.
Nutrition: Per 100 gm: Calories 70, protein 5 gm, fat 3 gm, carbohydrate 6 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "For lunch or dinner, and in pizzas, heat in a pot and serve with mashed potatoes or rice."

2301. **Product Name:** [Nutana Mexican Bean Casserole].
Foreign Name: Nutana Mexicansk Boennegryde.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: SoyaPro with Calf-Like Flavour, water, potatoes, kidney beans, maize, tomatoes, peas, vegetable margarine, spices, wheat flour, tomato puree, paprika, onions, maize starch, vegetable aroma, caramel color (not ammonized).
Wt/Vol., Packaging, Price: 450 gm can.
How Stored: Shelf-stable.
Nutrition: Per 100 gm: Calories 160, protein 7 gm, fat 9 gm, carbohydrate 12 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "Ready to serve for dinner. Serve with cooked rice or salad and rolls." Labels in Danish, Dutch, and Finnish.

2302. **Product Name:** [Nutana Soya-Beans].
Foreign Name: Nutana Sojaboenner.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Whole dry soybeans.
Wt/Vol., Packaging, Price: 500 gm cello bag.
How Stored: Shelf-stable.
Nutrition: Per 100 gm: Calories 420, protein 37 gm, fat 18 gm, carbohydrate 27 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "Soya-beans contain more protein than any other pulse and meat. Soak the beans in water for 24 hours, then boil for approx. 1 hour. If the soaked soybeans are frozen, the boiling time can be shortened." Labels in Danish, Dutch, and Finnish.

2303. **Product Name:** [Nutana PRO with Beef-Like Flavor (Granulated, or Diced), or PRO with Neutral Taste (Granulated, TVP Vegetable Protein)].
Foreign Name: Nutana PRO med boefkrydderi (Granuleret, terninger, or Diced), or PRO med neutral smag (granuleret), TVP.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Defatted soy flour, salt, vegetable spices.
Wt/Vol., Packaging, Price: 250 gm box. Becomes 750 gm after soaking.
How Stored: Shelf-stable.
Nutrition: Per 100 gm: Calories 350, protein 52 gm, fat 0-1 gm, carbohydrate 32 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product.

2304. **Product Name:** [Nutana Goulash].
Foreign Name: Nutana Gullasch.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Carrots, celery, oil, textured soya protein, onions, maize starch, tomato puree, vegetable margarine, spices, water.
Wt/Vol., Packaging, Price: 415 gm can.
How Stored: Shelf-stable.
Nutrition: Per 100 gm: Calories 60, protein 4 gm, fat 2 gm, carbohydrate 7 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. "For dinner, heat in a pot and serve e.g. with mashed potatoes and green salad."

2305. **Product Name:** [Nutana Soya Pro (With Beef-Like Flavor, or with Chicken-Like Flavor)].
Foreign Name: Nutana Soya Pro (Soja-Oxlett, or Soja-Kylett).
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1981?
Ingredients: Beef-Like: Water, textured soya protein, sunflower oil, wheat flower, egg white powder, yeast extract, soya sauce, grape sugar, sea salt, spices, vegetable aroma.
Wt/Vol., Packaging, Price: 400 gm can, of which 170 gm is Soya Pro. The rest is sauce.
How Stored: Shelf-stable.
Nutrition: Beef-Like: Per 100 gm: Calories 130, protein 12 gm, fat 7 gm, carbohydrate 4 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and

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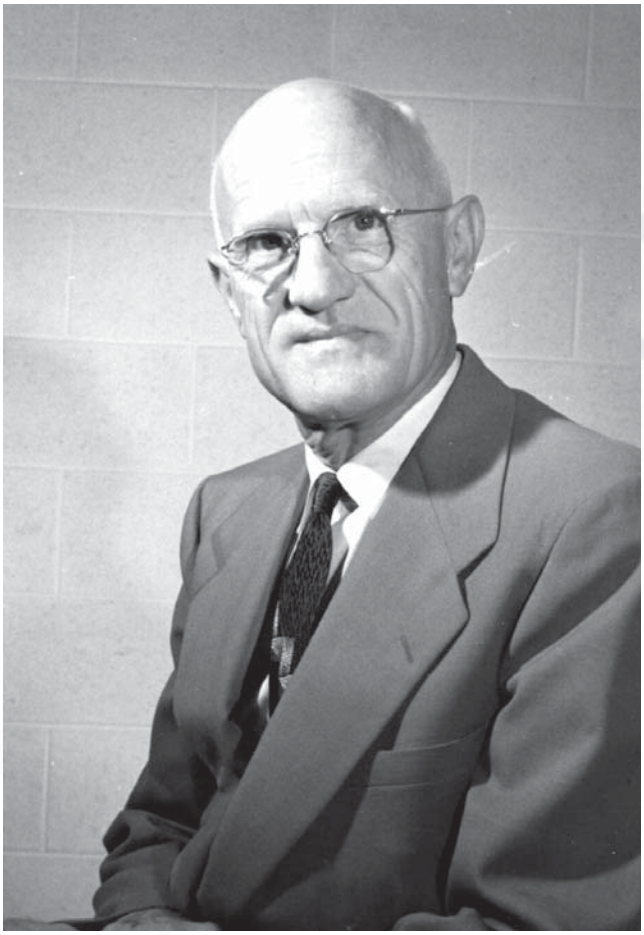
detailed information about every product. "For dinner. Ready to serve, just heat in a saucepan. Serve with potatoes and vegetables. The sauce may be varied with fried onions, tomatoes, chopped parsley, and mushrooms. Soya Pro can also be dipped in egg and bread-crumbs and fried. Shurtleff. 1981. Overseas Adventist Food Companies. p. 6. "In 1981 Nutana was doing the most advanced work with soy of any Adventist food company outside the U.S. They started in the early 1960s importing spun protein fibers (SPF) from the U.S. Now they import soy fibers spun by DE-VAU-GE in Germany and use them to make a range of meat analogs. Labels in Danish, Dutch, and Finnish.

Alfa-Laval. 1988, June. Soyfoods: Old traditions with new potentials. p. 9. Shows a color photo of the front of the can. The product is now named Nutana Soja-Kylett. On the label is a photo of several round deep-fried cutlets, one cut in half, on a bed of rice.

2306. Portrait of Edwin M. Bisalski (Photograph). 1981? Undated.



• ***Summary:*** This 5 by 7 inch black-and-white photo was sent to Soyfoods Center in 1983 by Ed Bisalski who was then age 80 and resided at 3123 East Miller Road, Bancroft, Michigan 48414. Phone: 517-634-5203. He worked at Madison Foods.

2307. **Product Name:** [Soymilk].
Manufacturer's Name: Produtos Alimenticios Superbom.
Manufacturer's Address: Caixa Postal 8633, 01051 Sao Paulo, Brazil.
Date of Introduction: 1981?
New Product–Documentation: Shurtleff. 1981. Overseas Adventist Food Companies. p. 8.

2308. Boismenue, Clyde. 1982. Textured soy protein products in America today (Interview). *SoyaScan Notes.* Jan. 26. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The biggest present outlet for TVP (more precisely textured soy flour or TSF) is in the pet food industry, and some is used in the U.S. school lunch program. Occasionally a foreign country, such as Poland or the USSR, will buy some to extend meats.

The Briggs Amendment is a California state amendment of about 1975; it regulates the labeling of meat products containing soy. If you add soy to hamburger you must label it "imitation hamburger," and even restaurants and institutions must state the names on the menu or, if there is no menu, in a sign on the wall, if the extender is bread crumbs. But the health inspectors overlook a lot of violations, as in small restaurants. Companies are not even allowed to use fanciful names such as "Superburger." Because of all this, customers in California have stopped using soy in droves and brought sales to a crashing halt. Clyde thinks there may be a similar law in New York; he does not know how many other states have such restrictive laws.

Nationwide, imitation cheese must have the word "imitation" as the largest word on the box; it looks absurd.

A company that wants to make TSF must buy a number of large extruders. Each one makes 3,000 to 5,000 lb/hour, and most companies own 3 to 5. Every one of the major manufacturers for TSF or textured soy protein products is losing money. Prices are terribly low and the industry is operated at an estimated 10% of capacity in 1981.

ADM's TVP is the most dense, but it gets too soft on cooking. Textured concentrates are too hard, and are like gristle or rubber in the finished product; they have less flavor but cause less flatulence. Textured isolates are too expensive, costing more than the meat they are intended to replace. All companies are desperate for a breakthrough.

ADM has never spent much money on developing imitation beef, ham, or chicken. Yet it the company has developed meatless entrees to increase profit margins. Uncle Archie's line of meatless entrees included Pepper Steak (the first one developed), Chicken Almadine, Sweet and Sour Pork, and Hearty Stew. ADM wanted to move from TVP extender to meatless entrees about 2 years ago. Like everybody, they rushed to GNC (General Nutrition Corp.), which reformulated the pepper steak by removing the mushrooms. It didn't sell well before or after the

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reformulation, so ADM tried to market it themselves under the Uncle Archie's brand. From the start, they appealed to the Safeway mentality, using lots of artificial ingredients. The product now tastes good but it looks like they will flop anyway.

Worthington and Loma Linda are also having big, indeed disastrous, problems. All the TSP (textured soy protein) products are dying on the vine. Central Soya can't sell textured concentrates. Loma Linda plans to try to duplicate the success of Sanitarium Food Co. [Australia] with breakfast cereals. Some health food stores have carried Loma Linda products, but natural food stores object to all the additives. And now even some Seventh-day Adventists are starting to be critical for the same reason. None of the natural- or health food stores will carry Clyde's TVP because it contains so much artificial stuff.

Nabisco is no longer in the business, and Central Soya has discontinued the line of material they bought from General Mills. Cargill and Lauhoff are now in quite a precarious position. Cargill makes a good line of soy flours, but they also have a line of textured protein products that they have never been able to position correctly; they are operating at about 10% of capacity. Cargill got in early then in 1976 spent several million dollars more upgrading their plant so it is one of the nicest in the industry. A man with the inside scoop on Cargill is ADM's manager in the western region, Bill Potter, phone 213-833-1389. He was Cargill's sales manager and now lives in Los Angeles.

The three people and companies that hold all the process patents and pooled them were Nabisco, Swift & Co. and ADM; that jump-started this industry. All three had a slightly different process, so they cross licensed to get the TVP process going. Lynn Adolphson of ADM is the best man in the USA to ask about his; he really knows the industry.

General Mills was one company that really went into TSP in a big way. They had a line of flavored products that has never been duplicated since–all the TVP items that were used as meat extenders, including the Bontrae line which were very fancy products. They introduced spun isolates in a really big way in both the bacon bits type products and their whole line of frozen meat analogs. One day they shut down the whole operation without any warning. They sold the frozen line to Dawson Mills, and sold the Bontrae process to Central Soya, both of whom have shut down these products in the last 18 months or so. Dawson Mills got completely out of the ISP business, but may still have a weak line of textured products. People keep hoping the market will materialize, but it never happens, so eventually they have to get out to cut their losses.

Three companies went out in the first washout: General Mills, Swift & Co., and finally the Marschall Division of Miles Laboratories. A division of National Can called National Protein Products or something like that made a compressed soy grit very similar to that made by Nabisco.

We're now heading for a second washout. Lauhoff is weak but has a little niche in the pet food industry. With the market collapsing and export sales bleak, everyone is going hook and tong after the pet food industry. Lauhoff was just bought by Bunge. Worthington is probably in a pretty precarious position. They have huge capacity with a market of 2-10% of capacity.

Lauhoff and Cargill will probably be the next ones out. Dawson Mills is sort of dragging along at the rear, a little weak. Clyde is not sure if they still sell textured products. They banked an awful lot on textured soy concentrate. They still have a few fairly large customers–such as SAGA Food Services. All three companies need big volume to run their machines economically.

ADM is definitely in the strongest, premier position among the makers of new soy protein products. ADM has strength across the board–not just in pet foods. They are the only company with a truly complete line of products and a decent line of flavored products. ADM is way out in front with the edible soy products because of better texture and flavor. Cargill, Dawson Mills, and Central Soya have sort of a nondescript product–not outstanding and not positioned well. They are losing money.

Central Soya is having problems with its textured soy protein concentrate. Staley is a dogged competitor. They have concentrated on a few items which they sell inexpensively; they do a good job with those, but they have no flavored products. Farmland (Far-Mar-Co) is also a dogged competitor. They have a line of flavored TSF that has never gone any where.

Each strong manufacturer has at least one pet food account from which they draw their financial life. All the companies are losing money on their pet food TSF but they have to have it to keep their overhead spread thin enough to make money on anything else. So the competition in the edible soy products industry is brutal.

What killed them all was Wenger Manufacturing Co. In the early days the pet food makers were happy to get TSF at 60 cents/pound, which was much cheaper than beef. But soybean meal was 6 cents/pound. So pet food makers started to buy a lot–dozens of carloads. Then Wenger shows up and says, "Why not buy an extruder, buy soybean meal for 6 cents/pound, and make your own TSF?" This forced TSF processors to drastically lower rates to cost of meal plus a fixed processing charge. That still allowed the processors to work off a lot of scrap. Some bought Wenger extruders. That was the end of profits in the pet food industry.

Dwayne Andreas took an early liking to TVP. Dwayne is a very homey person, a Quaker [sic, Mennonite] in the true sense. He developed and made a flaked breakfast cereal out of TVP; it contained 100% of the RDA for everything and you just poured milk on it–not a hot cereal. Or it could be used as a tuna extender. But in about 1972 the cereal makers rejected it; they thought it was too concentrated. That

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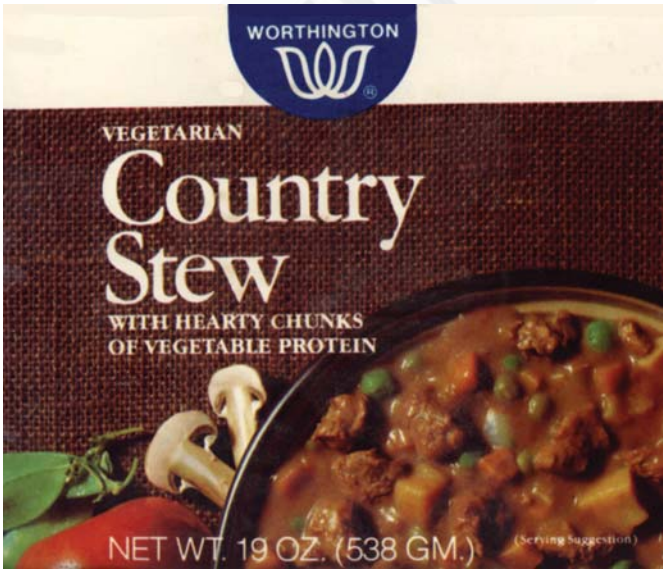
was one of the first times ADM got burned–a sort of TVP tragicomedy. Bob Sullenberger is another key man and good source of information. Address: Basic Foods Co., 1211 E. Olympic Blvd. #204, Los Angeles, California 90021. Phone: 213-623-6686.

2309. Gray, Gregory E.; Williams, P.; Gerkins, V.; Brown, J.B.; Armstrong, B.; Phillips, R.L.; Casagrande, J.T.; Pike, M.C.; Henderson, Brian E. 1982. Diet and hormone levels in Seventh-Day Adventist teenage girls. *Preventive Medicine* 11(1):103-07. Jan. [19 ref]
• ***Summary:*** "Seventh-Day Adventist women in California have a decreased mortality rate from breast cancer." Address: 1&3. Dep. of Family and Preventive Medicine, Univ. of Southern California, 2025 Zonal Ave., Los Angeles, California 90003; 2. School of Health, Loma Linda Univ., Loma Linda, California 92354; 4. Dep. of Obstetrics and Gynecology, Univ. of Melbourne, Parkville, Victoria, Australia.

2310. **Product Name:** Country Stew (Vegetarian): With hearty chunks of vegetable protein.
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1982 January.
Ingredients: Water, textured vegetable protein (soy protein concentrate, wheat gluten, wheat flour), carrots, potatoes, peas, celery, soybean oil, flavorings (hydrolyzed vegetable protein, monosodium glutamate, onion and garlic powder, artificial flavor, lemon juice, spices, disodium guanylate, disodium inosinate), sodium caseinate, onions, tomato paste, yeast extract, salt, caramel color, mono- and diglycerides, niacinamide, etc.
Wt/Vol., Packaging, Price: 19 oz can. Retails for $1.95 (7/90, California).



How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Food Report (Lehmann). 1982. Jan. Fully prepared; just heat and serve.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. 19 oz. can. Ingredients are the same as those shown above. Label copyright 1983.

2311. **Product Name:** Beef Vegetable Soups (Meatless).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1982 January.
Wt/Vol., Packaging, Price: 19 oz cans.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Food Report (Lehmann). 1982. Jan. Fully prepared; just heat and serve.

2312. **Product Name:** Chicken Noodles (Meatless).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1982 January.
Wt/Vol., Packaging, Price: 19 oz cans.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Food Report (Lehmann). 1982. Jan. Fully prepared; just heat and serve.

2313. Holmes, Charlotte Van Gundy. 1982. The life of T.A. Van Gundy (Interview). Conducted by William Shurtleff of Soyfoods Center, Feb. 26. 2 p. transcript.
• ***Summary:*** She will send three pamphlets. She has a fine photo at her daughter's home of the family in which she was a child; it was taken at the Christian Brothers Winery at St. Helena

"Ransom Brown worked for Loma Linda, she thinks, 3-6 months, then was fired. It served him right. When he left her Dad and family he had to work like crazy, which she thinks may have contributed to his early death [sic, he is still alive]. He was out of work for a long time (about a year) after working for Loma Linda Foods. They got out of him what they wanted then dismissed him.

Dad offered his formulas to Loma Linda Foods, but they would rather steal them.

To lose their main man, Ransom Brown, was a huge loss to the company.

When Dot [Dorothea], went back to Illinois, in 1933 or 1934 [or maybe even 1932] she attended something

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sponsored by A.E. Staley Manufacturing Co. She had a booth of her father's soy products and gave out samples. She was the only one with soyfoods. Others had plastics, etc. She did not speak. But her 1936 American Soybean Association (ASA) speech was definitely that year. It was a soybean convention. She demonstrated and exhibited all of Dad's products.

Maybe her opportunity to go to Japan in 1964 was related to the soybean books she wrote and to that speech. The family soy bean factory no longer existed in 1936. Address: Jackson, California.

2314. **Product Name:** Loma Linda Savory Dinner Loaf (Dry Mix).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1982 February.
Ingredients: Soy protein concentrate, egg whites, wheat gluten, onion, natural (vegetable) flavors, rice flour, corn starch, artificial flavor, guar gum, garlic powder, caramel color, spices, whole wheat flour, monosodium glutamate, cottonseed oil, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 4.5 oz can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per ¼ cup (16 gm): Calories 50, protein 9 gm, carbohydrate 4 gm, fat less than 1 gm, cholesterol 0 mg, sodium 380 mg, potassium 140 mg.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1982.

2315. **Product Name:** Loma Linda Corn Dogs (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1982 February.
Ingredients: Meatless wiener: Wheat gluten, corn oil, water, dried yeast, soy protein concentrate, artificial and natural (vegetable) flavors, wheat germ, soy flour, onion, vegetable mono- and di-glycerides, garlic powder, salt, soy lecithin, caramel color, L-lysine, paprika, artificial color, spice, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). Batter: Enriched flour, corn flour, enriched corn meal, sugar, salt, soy flour, soy oil, whey, egg yolks, dried honey, sodium acid pyrophosphate, sodium bicarbonate, monocalcium phosphate, artificial and natural (vegetable) flavors.
Wt/Vol., Packaging, Price: 10 oz paperboard box.
How Stored: Frozen.
Nutrition: Per 1 corn dog (2.5 oz–71 gm): Calories 250, protein 12 gm, carbohydrate 7 gm, fat 19 gm, cholesterol 0 mg, sodium 300 mg, potassium 120 mg.
New Product–Documentation: Food Report (Lehmann). 1982. Aug. The frozen corn dogs are meatless wieners dipped in corn batter.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1982.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2316. **Product Name:** [Haimaru / Haimiru Soyalac {Soymilk} (Plain, or Cocoa)].
Foreign Name: Haimaru Kokoa, Haimaru Soiyarakku.
Manufacturer's Name: San-iku Foods.
Manufacturer's Address: 1-1 Nagaurataku, Sodegaura-machi, Kimizu-gun, Chiba-ken 299-02, Japan.
Date of Introduction: 1982 February.
Wt/Vol., Packaging, Price: 180 gm foil retort pouch (standing pouch).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: See next page. K. Tsuchiya. 1982. Dec. *Tonyu* [*Soymilk.* 2nd ed.]. p. 74. States that Haimaru Kokoa, and Haimaru Soiyarakku were introduced in Feb. 1982 by Saniku Fuuzu in a 180 gm standing pouch and distributed nationwide.

2317. Shurtleff, William; Aoyagi, Akiko. 1982. Tofu & soymilk production: A craft and technical manual. Lafayette, California: Soyfoods Center. 336 p. Illust. by Akiko Aoyagi Shurtleff. Index. Feb. 28 cm. [223 ref]
• ***Summary:*** The contents is identical to that of the original Aug. 1979 edition, but the publisher's name has changed to Soyfoods Center from New-Age Foods Study Center. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2318. Kojima, Yoshiko. 1982. Re: The soymilk industry in Japan. Letter to William Shurtleff at Soyfoods Center, March 25–in reply to inquiry. 4 p. Typed, with signature on letterhead.
• ***Summary:*** In Japan, at present the four largest soy milk makers are given below in descending order of production [largest first]:

1. Kibun Health Foods K.K., 1-11-8, Shin-Sayama, Sayama-shi, Saitama pref. 350-13. Tel. No. 0429-53-7001.

2. Okazaki Marusan K.K., 1, Aza Arashita, Niki-cho, Okazaki-shi, Aichi-pref. 444-21. Tel. No. 0564-45-3111.

3. Mitsubishi Chemical Foods Co., Ltd., 5-13-12, Ginza, Chuo-ku, Tokyo 104. Tel. No. 03-542-6499.

4. Kyushu Milk Co., Ltd., 4311 Moto-machi, Oita-shi, Oita-pref. 870. Tel. No. 0975-43-4135.

About 40 companies are producing soy milk in Japan. Those who are the members of Soy Milk Association are shown on the attached sheets.

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The first commercial soy milk in Japan was made in 1959 by Saniku Foods–Food Div. of Seventh Day Adventist group in Japan under the instruction of Dr. Harry Miller.

With best regards, Sincerely,...

The attached sheets are titled "List of soy milk producing companies in Japan who belong to the Japan Soymilk Association." The name, address, and phone number of 17 companies are given. These include the four largest soymilk makers given on page 1. Address: Associate Country Director for Human Nutrition, American Soybean Association, 11th Floor, Akasaka Tokyu Building, 2-14-3 Nagata-cho, Chiyoda-ku, Tokyo 100, Japan.

2319. Freedland-Graves, Jeanne H.; Greninger, Sue A.; Vickers, J.; Bradley, C.L.; Young, R.K. 1982. Nutrition knowledge of vegetarians and nonvegetarians. *J. of Nutrition Education* 14(1):21-26. March. [13 ref]

• ***Summary:*** In the second half of this century, new reasons for becoming a vegetarian have appeared which often are associated with a desire for good health, philosophical orientations, new spiritual beliefs, or ecological issues. People who initiate vegetarianism for those reasons have been called the "new" vegetarians and represent the majority of those currently involved in this lifestyle in the United States. New vegetarians are of interest to nutritionists because their food habits differ considerably from those of traditional vegetarians, such as the Seventh Day Adventists and Trappist Monks. Address: Dep. of Home Economics and Psychology, Univ. of Texas, Austin, TX 78712.

2320. *SoyaScan Notes.* 1982. Chronology of Great Eastern Sun Trading Company in North Carolina. 26 Jan. 1994. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** 1982 March–The company is founded by Barry Evans. Martin Roth is the first manager. The original purpose is to be a distributor for the miso made by American Miso Company. But the company soon decides to import Japanese

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macrobiotic products from Mitoku (the first order was placed in Jan. 1982) and later to become a manufacturer.

1984 July–Great Eastern Sun starts to import Ah Soy (soymilk, in chocolate, vanilla, and original flavors). Made in Japan by San-iku Foods, and sold in a stand-up foil retort pouch, it soon becomes very popular. Don DeBona is the first product manager. Address: 92 Macintosh Rd., Asheville, North Carolina 28806.

2321. Holmes, Charlotte Van Gundy. 1982. Re: More about the life and work T.A. Van Gundy. Letter to William Shurtleff at Soyfoods Center, April 21–in reply to inquiries. 1 p. Handwritten answers between the typewritten questions from Shurtleff.
• ***Summary:*** Q2. In 1936 in *La Sierra Recipes* Dot [Dorothea] described Soy Cream made by mixing equal parts soymilk and oil with a little vanilla, sugar, and salt, then running the mixture through a homogenizer to make a substitute for whipped cream. Did your father ever mark this commercially? Ans: No.

Q3. Did he ever make it for the family? Using the homogenizer? Ans: Always. I had also a mamenoka [roasted soy flour] flour folder. The address of La Sierra Industries in Ontario was Campus and Maitland, Box 203. No Zip code of course.

"Bill: In going thru old material I also found a memo book for Mildred Lager. She used soy beans at Dr. McCoy's clinic in 1933 and she mentions the soy products in her literature. I believe they are all Dad's products but [she] does not give brand name–1934.

Bill: See if you can get Dad's school record in L.A. [Los Angeles]. He taught East Side L.A.–I think Junior High. Lived in San Gabriel 1927-1929 Fall. Moved to La Sierra 1929 Fall. Dad started soy products commercially. I drove from La Sierra to Loma Linda medical school, Aug. 1931-1933. In June 1933–moved to Ontario after [my] school closed. Factory was on Campus and Maitland. Will try to find booklet [which she found and sent]. Daddy in full swing–New label–Beautiful. Never saw a prettier one. Soy bean plant on can. Soft greens & a speck of red. Dot [Dorothea] went to soy convention in either Fall 1933 or 1934. Wish we could find convention date. This is where she had a booth.

Mom & Ted sold soy ice cream in carrot, vanilla, carob & avocado flavors at L.A. Household show in 1933 or 1934.

Father passed away June 3rd 1935–all folded up.

Mildred Lager says soy beans 1933 mentioned soy bean products, listed 1934. Address: Jackson, California 95642.

2322. Shurtleff, William; Aoyagi, Akiko. 1982. History of okara (soy pulp) and soy bran. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 11 p. April 22. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject. Contents: Introduction. Part I: History of okara (soy pulp). Etymology of okara. Part II: History of okara in East Asia. General. China. Japan. Other East Asia. Part III: History of okara in the West. Europe. United States. Part IV: History of okara in the Third World. Part V: History of soy bran. Address: Lafayette, California. Phone: 415-283-2991.

2323. Shurtleff, William; Aoyagi, Akiko. 1982. History of whole dry soybeans. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 28 p. May 19. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject. Contents: Introduction: How to categorize. Etymology. Part I: History of whole dry soybeans in East Asia. General. China. Japan. Other East Asia. Part II: History of whole dry soybeans in Europe and Australia. Early developments (1793-1899). 1900-1939. 1940-1982. Part III: History of whole dry soybeans in the United States. Cultural background: Poor man's food with poor image. Early developments (1855-1899). 1900-1929: World War I commercial products, USDA work, Seventh-day Adventists. 1930-1959: World War II growth of interest and commercial products, recipes, drop of interest 1946-1959. 1960-1982. Part IV: History of whole dry soybeans in Third World countries. Address: Lafayette, California. Phone: 415-283-2991.

2324. Johns, Warren H. 1982. Ellen G. White: Prophet or plagiarist? *Ministry* 55(6):5-19. June. [32 ref]
• ***Summary:*** See next page. The Seventh-day Adventist church's position on E.G. White's alleged plagiarism. Contents: "Although dressed in different garb, the issues facing the church in the 19805 are strikingly similar to those faced in the 1800s. This special report is a fresh analysis of Ellen White's use of literary sources, culminating more than five years of research by one of Ministry's associate editors.

"1. Closed Windows or Open Doors (p. 5): For the past one hundred years the church has been aware of Ellen White's literary borrowing. What is new today is not the fact of her borrowing, but the extent of the borrowing. Some have charged the church with cover-up, but how can she cover up that which she did not know?

"2. Literary Thief or God's Messenger? (p. 13): Plagiarism involves much more than the nonuse of quotation marks. The author discusses the five ingredients of literary theft.

"3. Human Thoughts or Divine Truths? (p. 16): Granted that Ellen White did use material without quotation marks more extensively than previously thought, does this make her any less inspired, any less a messenger to God's church today, and her counsels any less trustworthy than one hundred years ago?"

Note: The recent charge of plagiarism was raised in 1982 in the book *The White Lie,* by Walter T. Rea. Address:

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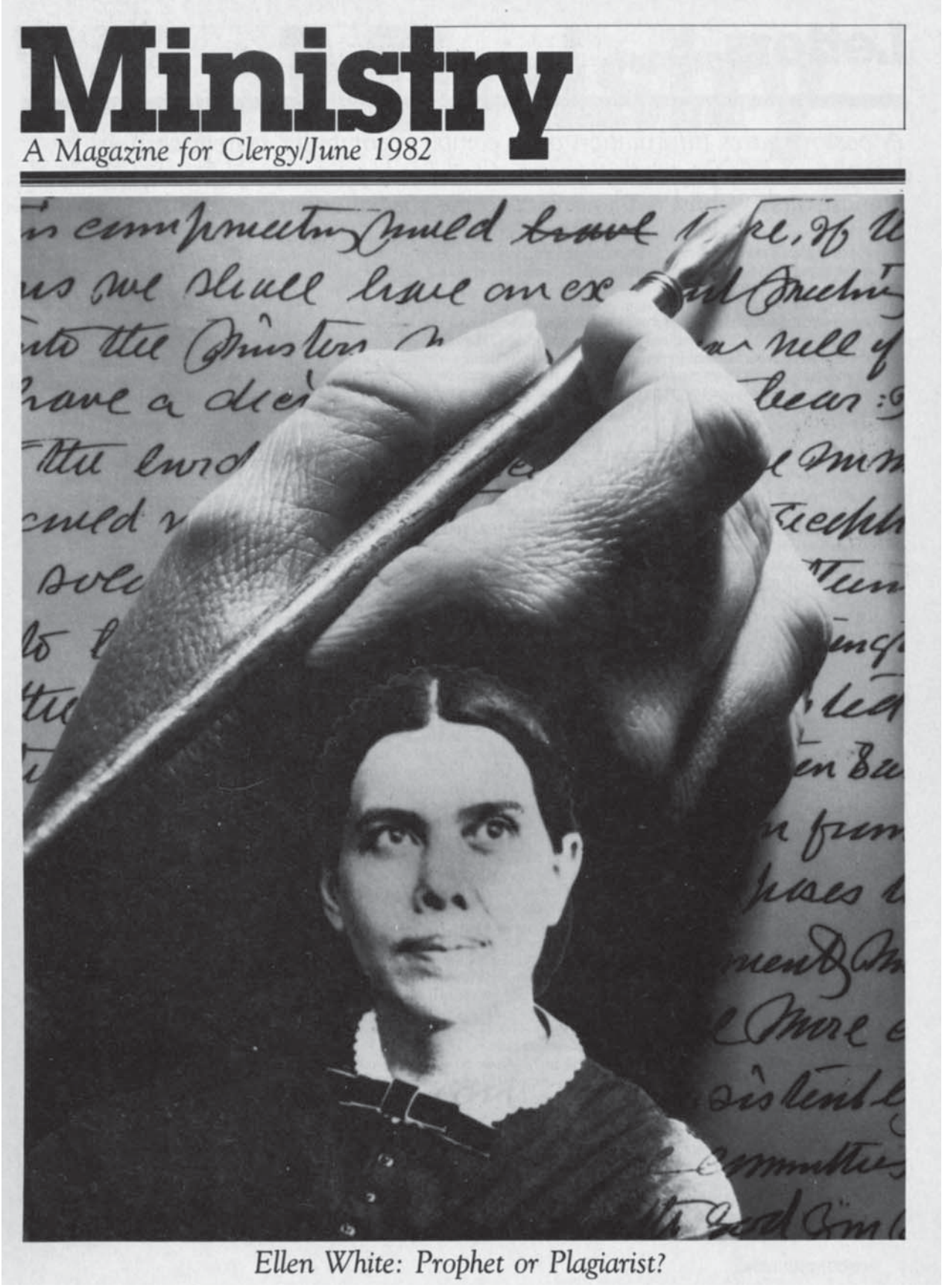

Ellen White: Prophet or Plagiarist?

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Assoc. editor of Ministry.

2325. Rouse, Ian L.; Armstrong, B.K.; Beilin, L.J. 1982. Vegetarian diet, lifestyle and blood pressure in two religious populations. *Clinical and Experimental Pharmacology and Physiology* 9(3):327-30. May/June. [5 ref]
• ***Summary:*** "The association between vegetarianism and blood pressure was studied in relation to obesity, sex and aspects of lifestyle in 180 Seventh-day Adventists and 113 Mormons aged 25-44 years... Obesity correlated positively with blood pressures in males and females of both diet classes... Adjustment of blood pressures for age and Quetelet Index indicated that there is an additional blood pressure reducing effect associated with a vegetarian diet." Address: Dep. of Medicine, Univ. of Western Australia, Royal Perth Hospital, Victoria Square, Perth, Western Australia 6000, Australia, and National Health and Medical Research Council Research Unit in Epidemiology and Preventative Medicine.

2326. U.S. Department of Agriculture. 1982. The annual report on activities carried out under Public Law 480, 83d Congress, as amended, during the period October 1, 1979 through September 30, 1980. Washington, DC: U.S. Government Printing Office. 32 + [40] p. See table 18. 27 cm.
• ***Summary:*** Contents: Summary and highlights: Sales programs, food for development, use of foreign currencies, foreign donations, world food program. Title I sales program: Agreements signed in fiscal year 1980, accounting for Title I costs, self-help provisions, food for development, use and administration of Title I foreign currencies. Title II foreign donations: Program highlights, world food program, the food aid convention of the international wheat agreement. Appendix–statistical tables.

Table 18 is titled "Title II, Public Law 480, total commodities shipped by program sponsor, fiscal year 1980." The main program sponsors and distributing agencies, listed alphabetically, are AJJDC (American-Jewish Joint Distribution Committee), CARE, CRS (Catholic Relief Service), CWS (Church World Service), LWR (Lutheran World Relief), SAWS (Seventh-day Adventist World Service), UNICEF, UNRWA (United Nations Relief and Works Agency), and WRC (World Relief Commission). All of these are Private Voluntary Organizations (PVO/PVOs), registered with USAID. The following foods containing soy protein were distributed: CSM (corn soya mix), WSB (wheat soya blend), and small amounts of soya flour. The vegetable oil which was shipped to many countries was soybean oil; it is not recorded here.

Foods containing soy protein were distributed to the following countries or areas: Near East: Egypt, Gaza, Jordan, Morocco, Tunisia. Latin America: Bolivia, Chile, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Panama, Paraguay, Peru, St. Lucia.

Africa: Angola, Benin, Botswana, Cape Verde Islands, Comoro Islands, Ethiopia, Gambia, Ghana, Guinea-Bissau, Ivory Coast, Kenya, Lesotho, Liberia, Malawi, Mauritania, Mauritius, Mozambique, Senegal, Sierra Leone, Somalia Republic, Swaziland, Tanzania, Togo, Upper Volta, Zambia.

Asia: Bhutan, India, Indonesia, Kampuchea, Nepal, Philippines, Sri Lanka. Address: Washington, DC. Phone: 703-875-4901 (1991).

2327. *Toyo Shinpo* (*Soyfoods News*). 1982. Tônyû no peeji: 2-3 baizô no urigae o tassei. Sudeni 150 oku shijô keisei no koemo [The soymilk industry and market in Japan: Sales have increased 2-3 fold to an estimated 15,000 million yen per year]. July 21. p. 26. [Jap; eng+]
• ***Summary:*** Industry sources say that the Japanese soymilk market has already reached about 15,000 million yen. The order in which companies started making or marketing soymilk is: 1959 San-iku Foods. 1969 House Shokuhin. 1972 Ishihara Food Center. 1974 Tokyo Soymeal, Kenbi-Sha, Okazaki Marusan. 1976 Asahi Shokuhin, Soken-sha, Kyushu Nyugyo. 1977 Kibun, Natural Foods. 1979 Mitsubishi Kasei Shokuhin. 1980 Chiba Seisen Shokuhin Kogyo, Meiji Nyugyo. 1981 Yakuruto, Nagano Tomato, Morinaga Nyugyo. 1982. Seven-Up Inryo. Among these, House Shokuhin and Tokyo Soymeal have discontinued.

Major Japanese brands of soymilk, aseptically packaged in Tetra Brik cartons are (percentages indicate market share): Kibun Foods (Plain, Yogurt flavored, Fruit, Barley Malt & Coffee), 41.7%; Okazaki Marusan (Plain, Orange, Barley malt), 23.3%; Mitsubishi Kasei (Maburon plain, Orange, Coffee, Honey), 10.0%; San-iku Foods (Soya Neo Cocoa), 8.0%; Kyushu Nyugyo, 6.0%; Meiji Nyugyo (Sun-Glow), 5.8%; Kenbisha, 2.5%; Asahi Shokuhin (Plain, Orange, Coffee), 2.5%; Soken-sha, 1.3%; and Natural Foods, 1.3%. Most sizes are 200 ml, which retail for 75 yen with a 60 day shelf life.

Companies with the largest number of different soymilk products are: (1) Okazaki Marusan has 15 products including soymilk in a Pure-Pak carton (500 ml for 150 yen) and in a can (195 gm); (2) Kyushu Nyugyo has 13 products incl. Midori Tonyu; (3) San-Iku Foods has 10 products, including canned soymilk; (4) Kibun has 8 products. Mitsubishi Kasei is taking a different approach; they have only 5 items (honey, coffee, fruits, sour, and plain) but are aiming at large production.

Kibun's sales have been very good, especially after they switched to the Brik Pak-type carton. Last year they had sales of 2,500 million yen and they are aiming to double that this year. Industry analysts believe that Kibun will be the industry leader for a while.

Mitsubishi Kasei established Mitsubishi Kasei Shokuhin in January of this year, and transferred all soymilk sales to

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that new department. They are hoping this year's sales will be three times as large as last years, hopefully 1,800 to 2,000 million yen. They are now constructing a new soymilk plant in Okayama, and when it is done they hope sales will reach 8,000 million yen.

Okazaki Marusan has grown 20-fold in the past 5 years. They predict this year's soymilk sales to be 2,000 million yen.

A photo shows 24 soymilk products. Most are in Brik Pak Aseptic cartons. Three Soyalac products are in cans. One product is in a retort pouch.

2328. **Product Name:** [PHAG Carob Drink].
Foreign Name: PHAG Caroba-Drink.
Manufacturer's Name: PHAG Sàrl (Produits Hygièniques Alimentaires Gland) (Marketer-Distributor). Made in Belgium by Alpro.
Manufacturer's Address: La Ligniere, CH-1196 Gland, Switzerland. Phone: 022/64 11 18.
Date of Introduction: 1982 July.
Wt/Vol., Packaging, Price: 0.5 liter Tetra Brik Aseptic carton.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Letter from Remy Mayer of PHAG. 1990. Oct. 2. This product was introduced in July 1982. His company distributed the product, which was made by a manufacturer in Belgium [probably Alpro].

2329. Ostling, R.N. 1982. The church of liberal borrowings: Plagiarism and fraud charges rock the Seventh-day Adventists. *Time*. Aug. 2. p. 49.
• ***Summary:*** The Seventh-day Adventist (SDA) church has been rocked by two scandals: The second, which may be the more damaging of the two, concerns the charge that many of the writings of Ellen G. White about health reform may have been plagiarized from other earlier or contemporary writers. This charge was raised by Walter T. Rea in his book *The White Lie*, published in April 1981.

Rea, a veteran SDA pastor from Patterson, California, began to come across duplicate passages in the course of his PhD research. He found (and documented very carefully) that large numbers of long passages by previous writers on health appeared with identical wording in books by Ellen G. White, who never cited her sources, but rather attributed to passages to divine inspiration. The SDA church has been forced to admit (in *Ministry*, its magazine for clergy) that "White's use of 'outside sources' was much more extensive than Adventists realized."

2330. Gardiner, Doris Kloss. 1982. Re: Jethro Kloss' work with soyfoods. Letter to William Shurtleff at Soyfoods Center, Aug. 3. 1 p. Answers handwritten after typewritten questions on Soyfoods Center stationery.
• ***Summary:*** Doris is Jethro Kloss' only grandchild. She was born on 28 Feb. 1929 in Miami, Florida. Concerning her grandfather's work with soy ice cream she recalls: "My mother and I, my uncle Eden, and my grandfather spent the winter of 1935-36 in Miami, Florida. I know he was preparing soy ice cream to serve at the close of his lectures and food demonstrations at that time. I used to get to lick the freezer paddles before he left for the lectures.

"I have no idea where and when and why Jethro Kloss became interested in soybeans. The soy foods that I remember that he made and that I ate as a child were the soy ice cream (of course!), delicious soy bean bread, soy bean butter, soy milk, soy cheese, pie crust, soy coffee, broth, soy mayonnaise, and soy bean roast.

"I just talked with my aunt (Promise Kloss Moffett), who lives in Hagerstown, Maryland, and who turned 79 today, and she does not recall if Jethro used any soy in the commercial health foods he made at the Nashville Sanitarium Food Company (which was sold in 1919-1920). She said that she does recall his experimenting with soy beans when they lived in Brooke, Virginia (in about 1924)." Address: Back to Eden Books, P.O. Box 1439, Loma Linda, California 92354. Phone: (714) 796-9615.

2331. **Product Name:** Ceres Natural Soy Milk.
Manufacturer's Name: Ceres Natural Foods Pty. Ltd. (Importer & Distributor). Made in Japan.
Manufacturer's Address: East Bentleigh, Victoria, Australia.
Date of Introduction: 1982 August.
Wt/Vol., Packaging, Price: 180 ml pouch.
How Stored: Shelf stable.
New Product–Documentation: Talk with Don Lazzaro of Ceres Natural Foods. 1995. June 6. Their first imported product was named Ceres Natural Soy Milk. The label was an "oversticker" on a narrow plastic (not foil) stand up pouch in those days. It was made by either Marusan or Saniku.

Letter (fax) from Don Lazzaro of Ceres Natural Foods. 1995. June 15. In Aug. 1982 they introduced a soymilk product in a 180 ml pouch with a Ceres label, made by and imported from Saniku Foods in Japan. In Oct. 1983 this pouch was redesigned and became available in four flavours [probably natural, vanilla, barley malt, and one other]. During the mid-1980s, Ceres also imported and sold the Westbrae Westsoy and Ah Soy brands from the USA.

2332. Henderson, Brian E.; Ross, R.K.; Pike, M.C.; Casagrande, J.T. 1982. Endogenous hormones as a major factor in human cancer. *Cancer Research* 42(8):3232-39. Aug. [129 ref]
• ***Summary:*** Higginson and Muir (1979) calculated that about one-third of male cancers and two-thirds of female cancers are probably caused by environmental factors related to "life-style." This latter, vague term includes such factors as diet, sexual activity, and reproductive behavior [such as

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pregnancy, child bearing, etc.].

Hormonal cancers include endometrial cancer, breast cancer, prostate cancer, and epithelial ovarian cancer; less important than the above are testes cancer, thyroid cancer, and osteosarcoma.

The binding property of isoflavones to estrogen receptors may reduce breast cancer, which is estrogen dependent. Address: Depts. of Family and Preventive Medicine, Univ. of Southern California School of Medicine, Los Angeles, California 90033.

2333. Berney, DeDee; Smith, Scott. 1982. Vegetarian celebrities: Who's a vegetarian and who's not. *Vegetarian Times.* Oct. p. 70-71.
• ***Summary:*** Lists the vegetarians by occupations, with photos of 9 prominent ones: Show business and models (45 people), authors and writers (32), sports (39), music (53), historical (35), other famous people (32).

The following 25 people are on the "Historical" list: "Louisa May Alcott, General William Booth, Buddha, Clement of Alexandria, Charles Darwin, Leonardo da Vinci, Albert Einstein, Ralph Waldo Emerson, St. Francis, Benjamin Franklin, Mahatma Gandhi, Horace Greeley, J.H. [John Harvey] Kellogg, Dalai Lama, John Milton, Isaac Newton, Ovid, Plato, Plutarch, Alexander Pope, Pythagoras, Jean Jacques Rousseau, Albert Schweitzer, Seneca, George Bernard Shaw, Percy Bysshe Shelley, Upton Sinclair, Socrates, Rabindranath Tagore, Henry David Thoreau, Leo Tolstoy, Voltaire, H.G. Wells, John Wesley."

2334. Yoshimura, Sam. 1982. Dr. D.W. Harrison and Africa Basic Foods (Interview). *SoyaScan Notes.* Nov. 11. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Dr. D.W. Harrison is a black Seventh-day Adventist (SDA) missionary doctor. He supports his own work largely through his medical practice, with financial assistance from CARE. He receives no money from the SDA church and probably none from the Government of Uganda. He began this work at age 37-40 and is especially interested in children. He now also has a medical practice in Washington, DC; the SDA General Conference would have his address.

Sam went to work with Dr. Harrison and his company, Africa Basic Foods, when he was connected with Worthington Foods. Worthington paid his full salary and travel expenses; Dr. Harrison paid his living expenses. He had close ties with a hospital in Kampala, Uganda, to study kwashiorkor, etc. Sam thinks the soybean project came to an end (at least for a while) about 2 years after Sam left, because of the unsettled, dangerous political situation in Uganda [under General Idi Amin, who was a brutal dictator from 1971 to April 1979]. Dr. Harrison was not kicked out by the Government of Uganda. He worked closely with UNICEF and with Uganda's Ministry of Health. Address: 8200 Colonial Meadows, Westerville, Ohio 43081. Phone: 614-882-0625.

2335. Harrison, D.W. 1982. Work with soyfoods in Ghana, Uganda (Africa Basic Foods) and Kenya (Interview). Conducted by William Shurtleff of Soyfoods Center, Nov. 12. 4 p. transcript.
• ***Summary:*** Reminiscences of his pioneering work in Africa, starting in Ghana in the early 1960s. Address: 7503 Kipling Parkway, District Heights, Maryland 20028.

2336. Folkenberg, Robert. 1982. The Seventh-Day Adventist Inter-American Food Company, and Dr. Steven Youngberg's soymilk plant in Honduras (Interview). Conducted by William Shurtleff of Soyfoods Center, Dec. 10. 1 p. transcript.
• ***Summary:*** Dr. Steven Youngberg arrived in Honduras in about 1959-61. He is a self-supporting SDA medical missionary. He operates an orphanage and a small clinic, and has done quite a bit of work with foods, including soyfoods. Folkenberg lived there from 1970-74 and knew him well. Youngberg began making soymilk at an early date. He had a large plant as well as a portable plant. He set up the portable one at a fairground in San Pedro Sula. He had a fine product and it was well accepted, but it was not well marketed or distributed. Address: Inter-American Food Co., P.O. Box 340760 (760 Ponce de Leon Blvd.), Coral Gables, Florida 33134. Phone: 305-443-7471.

2337. Miller, A.B. 1982. Risk factors from geographic epidemiology for gastrointestinal cancer. *Cancer* 50(11):2533-40. Supplement. Dec. [74 ref]
• ***Summary:*** "Seventh Day Adventists and Mormons show a low risk of colon cancer. Internationally intake of fat is correlated with colon, rectal, and pancreatic cancer, and starch with stomach cancer." Address: MB, FRCP(C), Director, NCIC Epidemiology Unit, McMurrich Building, 3rd Floor, Univ. of Toronto, Toronto, Ontario M5S 1A8.

2338. Tsuchiya, Kanji. 1982. Tônyû. Shinban [Soymilk. 2nd ed.]. Tokyo: Shoku no Joho-sha. 223 p. First edition was published in 1980. Illust. 17 cm. [Jap]
• ***Summary:*** This is the best book seen to date on soymilk in Japanese. A detailed chronology of tofu and soymilk is given on pages 173-76. Over 20 years ago, when Mr. Tsuchiya was plant manager of the *Kyôdo Nyûgyo* dairy milk plant at Matsumoto, he became interested in using soy protein to replace dairy protein. Although soybean crushers had investigated the use of defatted soybean meal, the techniques for removing the beany flavor and smell were not yet good enough to allow substitution of soy protein for milk solids. At that time there was a shortage of imported nonfat milk for use in ice cream bars. It was said that a small numbers of manufacturers of the inexpensive ice cream products were

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already using some soy protein to increase their over-run. "Discovering this, Nisshin Seiyu, after some research, found a method of removing the beany smell by fermentation with a yeast; they asked if Kyodo Nyugyo could make a test run of 10 kg of spray-dried soymilk in our plant. So they dissolved soy powder (*daizu-ko;* which had been defatted at a low temperature) in water, added yeast, waited until the reaction was finished, diluted it with some water, and put it in a spray dryer. Yet the spray drying caused some protein denaturation and an increase in the viscosity of the soy powder, which made it difficult to pump the solution to the top of the spray dryer. Glucose was used to replace half the soy powder. The spray-dried powder would not dissolve in water and the resulting mixture had a muddy brown color, a flavor that was too sweet, and a beany flavor. It was useless. They had discovered that defatted soybean meal and nonfat dried milk behave differently. Defatted soybean meal contains about 20% sugars, but less than 1/3 of these are water soluble and many have a very complicated structure and high viscosity."

Therefore they started to study the basic nature of defatted soybean powder (*dasshi daizu-ko*) and after much trial and error, in 1961 they applied for a Japanese patent on "The method of refining defatted soybean powder" (*Dasshi daizu-ko no seisei hôhô*). They were issued the patent (#16,658) in 1962. The key to the success of this patent was the use of meta potassium bisulfite (*meta jûaryusan karium*), which lowers the viscosity, bleaches it and increases the amount of soluble nitrogen. Not enough of the beany flavor had been removed, yet at that time it was an excellent product, which could be used in place up to 30% of nonfat dried milk to make an ice cream product without a beany flavor. Mr. Masaharu Sato (who is presently head of the soybean department of Kyodo Nyugyo's central research lab) was the person who contributed most to the discovery. He is now conducting research on tofu and soymilk. "I still see him often since we are both members of Soyfoods Development Study Group (*Daizu Shokuhin Kaihatsu Kenkyû-kai*). He recently told me, 'After that incident, I became captivated by soy protein.'"

"After about 2 years of research, during the summer we received an order from Nisshin Seiyu for 200 tons of soy protein. Our plant had been losing money for a long time, and this discovery helped to make some profit during my time of work there. I will never forget it. I feel real gratitude to Nisshin Seiyu for helping us to become captivated by soybeans."

At about that time dairy farmers throughout Japan began to compete with one another in a price war which lowered milk prices. The battle between them and the owners of dairy milk companies got worse and worse. Among the leaders of this struggle were progressive dairy farmers in Matsumoto. "Although we made soy powder very secretly, one of the plant workers, who was the son of a dairy farmer, leaked the secret. This caused an uproar (we were using soy powder instead of dairy milk) and the local farmers asked us to stop immediately. However we decided to continue making soy powder for various reasons: (1) We had to fulfill the order that we had accepted; (2) Since we simply processed soy and sold it to another company, this had no effect on our plant's use of unprocessed dairy milk; (3) The soy business allowed out plant to operate profitably and this allowed us to return some money on the dairy farmers' investment." For a variety of complex reasons related to this conflict, Mr. Tsuchiya was fired as plant manager for Kyodo Nyugyo's Matsumoto dairy milk plant. Though his retirement was very near, he left the dairy industry without regret to continue his research on soy powder (p. 14-19).

"Meeting with Dr. Miller: During the period 1965-1969 I was involved in the founding of Taiwan Ryokusô Kogyô Kôshi, and I took a leadership role in constructing modern plants to make powdered soymilk and chlorella. One of the leaders in the chlorella industry, the late Dr. Yoshio Takechi, was in charge of the chlorella cultivation department and I was in charge of chlorella product development and of powdered soymilk production. In 1966 Dr. W.A. [sic, Harry W.] Miller (who was a founder of Loma Linda Foods) and his son visited our company, under the guidance of Dr. Taisei of Taikei University. At that time Dr. Miller stood on the platform atop our spray dryer, which was 20 meters tall and had 500 liters/hour capacity. Admiring it, he said: 'I've never seen a soymilk plant which has this much facilities!' He also tasted the soymilk (from which the beany flavor had been removed) and said 'I wonder if you have to refine soymilk to this degree for Chinese people.' His words left a strong impression in my memory. Sure enough, when the factory was completed and we launched our canned soymilk powder, we heard Chinese saying, 'This is not real soymilk. It's an imitation.' But we did a good marketing campaign and soon the soymilk started selling. When my 2-year contract ended, I returned to Japan. After that, the products produced in this plant were used as food for the Taiwanese army and were not sold to the public. Moreover, because of the chlorella boom in Japan, the spray dryer was used for chlorella and soymilk production stopped. Since I had great expectations for this plant, I was greatly disappointed.

"Right after I returned to Japan in 1970, I was asked to provide technical assistance to Keijô Shison Shokuhin Kenkyusho, a research lab in Korea headed by pediatrician Son Zaien. I visited there several times and even drafted a floor plan, then suddenly the Japanese government told me that the money which had been available for helping Koreans was no longer available, so I could do no more" (p. 18-21; see p. 53 for more on soymilk in Korea). Continued. Address: Technical consultant, Okazaki Marusan, Japan.

2339. Tsuchiya, Kanji. 1982. [Soymilk in Japan, and its history (Document part)]. In: Kanji Tsuchiya. 1982. Tônyû.

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Shinban [Soymilk. 2nd ed.]. Tokyo: Shoku no Joho-sha. 223 p. First edition was published in 1980. [Jap]

• ***Summary:*** Building a plant specialized in making soymilk (p. 21-24): After my two overseas attempts ended in failure, I returned to studying the basics. With the help of a friend, I had a soymilk test plant (55 liters/hour) built on the outskirts of Sendai, in the Tohoku region. There I worked on making soymilk with less beany flavor and better digestibility. Over a period of about 2½ years I completed development of a new heating system (Japanese Patent No. 19,928 issued in 1973), and also completed a report on digestibility of soymilk with my co-worker Kazuhiro Ootomo. In order to test the results of my research, I went to Tokyo in 1974. I found an investor, taught my techniques to Tokyo Soymeal K.K., spent 9,000,000 yen, and started to build a soymilk plant in the Tokyo area. At about this time other early soymilk manufacturers like House Luppy, Soyalac, etc. were building the market slowly but steadily, making about 10,000 to 20,000 packs/day. Our company, Tokyo Soymeal, cut into this market share, and spent 3 very tough years. But finally we were producing 6,000 packs/day and we first started to break even financially. Our soymilk product, named Soymeal, marketed as a soft drink, had a good flavor and was accepted as a new type of soymilk by consumers.

"However I realized at that time that soymilk was being sold only in the health food market. Because of that, no regular mainstream consumers bought our soymilk since distributors placed it only in Diet- and Health food stores, and in the drug section of other stores. Thus our share of the milk or beverage markets was extremely small, and expansion was difficult. Our next step was to change consumers preconceptions about soymilk.

"I want to make a tasty soymilk: Rather than placing emphasis on health or medical care, beauty care, changing one's constitution, etc. I wanted to make a soymilk product that was simply delicious and nutritious. But unfortunately our Soymeal company had to close its plant in December 1978 because the landlord sold the land on which the plant was located. This land was located next to the Tachikawa U.S. military base, and when the U.S. army gave the land back to the Japanese government, the price of land in the whole area rose. Thus our landlord wanted to sell his land too.

"In order to use my past effort and experience to make a new start, I was planning to build a plant in the Chûbu area. I did not have the means to do this by myself, but by good fortune, in 1979 Okazaki Marusan K.K. decided to help this enterprise and I was accepted as a member of their company. And furthermore it is planned to build a plant that can produce 4 times as much soymilk as plants that existed in May 1980. I would like to produce the best soymilk in Japan. The Japanese Department of Food, Agriculture, and Forestry is now studying soymilk with the intent of establishing a JAS standard in 1980."

Pages 50-52 show a chart of different brands of soymilk and soy-based infant formulas sold in the USA, with the name of the manufacturer, ingredients, and/or composition. These include: Loma Linda Food Co. of Arlington, California (Soyagen [liquid or powder], Soyalac); Mead Johnson & Co. of Evansville, Indiana (Metrecal, Sobee); Dietetic Food Co. Inc. of Brooklyn, New York (Diamel no Sorina); Ovaltine Food Products of Villa Park, Illinois (Ovaltine, 2 types which contain soy protein); Gerber Food Products of Fremont, Michigan; Plus Products of Los Angeles, California; Borden Co. of New York (Mullsoy, 2 types); Pavo Co. Ice of Minneapolis, Minnesota.

Early history of soymilk: In the *Teikun Orai*, written during the Muromachi (Ashikaga) period in Japan, the word *tofu-kan* appears in the section titled *Shojin Ryori* (Buddhist Vegetarian Cookery). That word used to mean "tofu soup" but it actually refers to what Japanese today call soymilk (*tônyû*). In the book *Sôgo Daisô-shi*, written in about 1417-1473 by Ise no Jôshin, there is a section on cooking okara (*unohana*). Mr. Tsuchiya thinks this soup was similar to today's soymilk except that the okara had not been removed. The author was the ancestor of Ise no Teijô, who lived during the Tokugawa (Edo) period and wrote that the word *Tofu-kan* should actually be pronounced *Tofu-ko*, and means "soup" (*shiru*). When the last character is pronounced "kan" it means "yokan." Note: Could Mr. Tsuchiya be confusing Manpukuji's tofukan (hard tofu) with the word tofukan that means soymilk?

A table (p. 72-75) lists all Japanese soymilk products made to date, including the name of the manufacturer, the exact date of introduction, range of distribution, package size and type, and retail price. Products sold by the following companies are listed: Kibun, Okazaki Marusan, Mitsubishi Kasei Shokuhin, Meiji Nyugyo, Kyushu Nyugyo, Nisshi Seiyu, Asahi Shokuhin, Kyodo Nyugyo, Yakuruto Honsha, Furuta Shokuhin Kogyo, Morinaga Nyugyo, Sugiyo, Koshin Nyugyo, Kenbi-Sha, Saniku Foods / Fuuzu, Nagoya Seiraku, Nagano Tomato, Zenkoku Nokyo Chokuhan (Nokyo), Yamato Shokuhin, Sokensha, Ishihara Fuudo Senta, Chiba Seisen Shokuhin Kogyo, Asahi Fuuzum Sebun-Irebun (7-11), Fukushima-ken Rakuren, Nacuraru Fuuzu (Natural Foods), Sebun Appu Inryo (7-Up). This entire table has been translated by Soyfoods Center; printed copies are filed with the book. The word processing filename is d:\w\hss\MilkJap1.doc. In addition, most of these soymilk products have a commercial soy products (CSP) record in the SoyaScan database. Address: Technical consultant, Okazaki Marusan, Japan.

2340. **Product Name:** [Trisoy Cereal {Puffed Wheat-Soy Blend}].
Manufacturer's Name: Alimentos Colpac.
Manufacturer's Address: Km 13 Carratera Huatabampo, Apartado No. 502, Navojoa, Sonora, CP8500, Mexico.

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Date of Introduction: 1982.
New Product–Documentation: Soya Bluebook. 1985. p. 102. Talk with Gil Harrison of American Soybean Assoc. 1989. April 21. This puffed wheat and soy product was probably introduced in about 1981-82. "Its very good. Its one of my favorites. I buy it and eat it as a snack."

2341. **Product Name:** [GranoVita Soy Steaklet: Textured Soya Pieces].
Foreign Name: GranoVita Soja-Steakli: Texturierte Soja-Stuecke.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1982.
Ingredients: Defatted soy flour.
Wt/Vol., Packaging, Price: 250 gm wholesales for DM 5,95.
How Stored: Shelf stable.
Nutrition: Per 100 gm. dry: Protein 55 gm, fat 2 gm, usable carbohydrates 27 gm, calories 343. 1 BE = 44 gm.
New Product–Documentation: Manufacturer's catalog. 1981. May 1. DE-VAU-GE Sortiments-Preisliste. 4 p. Form filled out and Labels sent by DE-VAU-GE. 1990. June 11. The product was introduced in 1982. Label.

2342. **Product Name:** [Soja-Delikat {Vegetarian Slices for Sandwiches}].
Foreign Name: GranoVita Delikat.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1982.
Ingredients: Soya protein, corn germ oil, mushrooms, water, egg protein, onions, salt, dextrose, spices, yeast.
Wt/Vol., Packaging, Price: 250 gm can retails for DM 3,69.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products. "Tasty vegetarian slices to be used in various dishes, on bread or dressed and fried, in salads or stews."

2343. **Product Name:** Loma Linda Chicken Supreme (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1982.
Ingredients: Soy protein concentrate, egg whites, wheat gluten, natural (vegetable) flavors, artificial flavor, corn starch, onion, guar gum, monosodium glutamate, whole wheat flour, spice, cottonseed oil, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 4.5 oz can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per ¼ cup (16 gm) dry mix: Calories 50, protein 9 gm, carbohydrate 4 gm, fat less than 1 gm, cholesterol 0 mg, sodium 450 mg, potassium 190 mg.
New Product–Documentation: Ad in Natural Foods Merchandiser. 1984. Feb. p. 113. "A lot more than meats the eye. Loma Linda Foods taste great."

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1982.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. Says the product is a "dry pack."

2344. **Product Name:** Loma Linda Ocean Platter (Meatless Fish Dish).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1982.
Ingredients: Soy protein concentrate, egg whites, wheat gluten, onion, artificial flavors, natural (vegetable) flavors, potato flakes, guar gum, whole wheat flour, garlic powder, lemon juice powder (malto-dextrin and lemon juice solids), spice, monosodium glutamate, cottonseed oil, salt, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 4.5 oz can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per ¼ cup (16 gm) dry mix: Calories 50, protein 8 gm, carbohydrate 5 gm, fat less than 1 gm, cholesterol 0 mg, sodium 260 mg, potassium 170 mg.
New Product–Documentation: Ad in Natural Foods Merchandiser. 1984. Feb. p. 113. "A lot more than meats the eye. Loma Linda Foods taste great."

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1982.

2345. **Product Name:** Loma Linda Patty Mix (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1982.
Ingredients: Soy protein concentrate, egg whites, wheat gluten, rolled oats, onion, natural (vegetable) flavors, artificial flavor, potato flour, guar gum, garlic powder, caramel color, whole wheat flour, monosodium glutamate, cottonseed oil, spice, vitamins (niacinamide, D-calcium

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pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 4.5 oz (128 gm) can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per ¼ cup dry mix (16 gm): Calories 50, protein 9 gm, carbohydrate 4 gm, fat less than one gm, cholesterol 0 mg, sodium 320 mg, potassium 150 mg.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1982.

2346. Nnakwe, N.; Kies, C.; Fox, H.M. 1982. Calcium and phosphorus utilization by omnivores and vegetarians. *Proceedings of Nebraska Academy of Sciences and Affiliated Societies* 92:29. *

2347. **Product Name:** [Soyees].
Foreign Name: Soiizu.
Manufacturer's Name: San-iku Foods.
Manufacturer's Address: 1-1 Nagaurataku, Sodegaura-machi, Kimizu-gun, Chiba-ken 299-02, Japan.
Date of Introduction: 1982.
New Product–Documentation: Letter from San-iku Foods. 1990. June. This product was introduced in 1982.

2348. **Product Name:** [Vege Hamburg {Meatless Hamburger}].
Foreign Name: Beji Hanbaagu.
Manufacturer's Name: San-iku Foods.
Manufacturer's Address: 1-1 Nagaurataku, Sodegaura-machi, Kimizu-gun, Chiba-ken 299-02, Japan.
Date of Introduction: 1982.
New Product–Documentation: Letter from San-iku Foods. 1990. June. This product was introduced in 1982.

2349. **Product Name:** Tuno (Vegetarian Tuna).
Manufacturer's Name: Worthington Foods, Inc. Div. of Miles Laboratories, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1982.
Ingredients: Textured soy concentrate, soybean and/or corn oil, flavorings (artificial flavors, disodium guanylate, disodium inosinate [both flavor enhancers]), modified tapioca starch, salt, citric acid, niacinamide, iron as ferrous sulfate, vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12.
Wt/Vol., Packaging, Price: 12 oz. Plastic chub pack.
How Stored: Frozen.

New Product–Documentation: Label. 1982, undated. Green and blue on white. "A soy protein product. Artificial tuna flavor. Contains no tuna. No preservatives."

2350. Ferguson, L.R.; Alley, P.G. 1982. Faecal mutagens from population groups within New Zealand at different risk of colo rectal cancer. In: Marja Sorsa and Harri Vainio, eds. 1982. Mutagens in Our Environment: Proceedings of the Twelfth Annual Meeting of the European Environmental Mutagen Society. New York: Alan R. Liss, Inc. xix + 504 p. See p. 423-29. Held 20-24 June 1982 at Espoo, Finland. *

2351. Henderson, Bruce R. 1982. Oakland organic: A vegan primer. Albany, New York: Caboose Press. 200 p. Illust. 23 cm. [24 ref]
• ***Summary:*** This is a book about veganism which contains a few vegan recipes near the back. It focuses on the San Francisco Bay Area and urban areas, and contains extensive information about soybeans and soyfoods, much of it inspired by *Yay Soybeans*, from The Farm in Summertown, Tennessee. As follows: Miso, and Soya-Mineral Bouillon (Dr. Bronner's) (p. 19). Soy as an alternative protein source (p. 37-43). Soymilk (p. 53-56; Jethro Kloss). More soy (p. 57-61; soy pulp [okara] pudding, soysage, Garden of Eatin' Soy Jerky (illustration of package), Brightsong Missing Egg Tofu Salad (illustration), soy yogurt (fermented), soy tofu–hard, baked, or fried). Sprouting (p. 67-70; incl. soybeans). Fermented foods (p. 71-74; incl. tempeh, raw tofu). Snacks & quick foods (p. 88-96; incl. Ice Bean–soy ice cream, Ice-C-Bean). Miso and soy sauce (p. 120-21). Soy-related recipes: Baked apples with miso (p. 185-86). Tofu cheesecake (p. 188-89). Soysage (p. 193). Soy ice bean (p. 195). Note: Bruce Henderson was born in 1946. Address: Oakland, California.

2352. Loma Linda Foods. 1982. Pour a glass of fresh nutrition. It's a Loma Linda lunchtime (Poster). Riverside, California. 1 p.

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• ***Summary:*** "Kids and grownups put their bodies through some pretty tough workouts most days."

"Taste is important. Nutrition is essential." A small photo shows 3 cans of Soyagen. A large photo (the lower half of the poster) shows a full glass of soymilk surrounded by (left to right) a sliced loaf of brown bread on a breadboard, a clear glass pitcher of half full of soymilk, a dark-brown woven basket of fruit, sliced cantaloupe and sliced tomatoes on lettuce on a slice of brown bread, and a clear glass bowl of white flowers with yellow centers. Address: Riverside, California.

2353. Rea, Walter T. 1982. The White lie. M & R Publications, Box 2056, Turlock, CA 95381. 409 p. Illust. No index. 23 cm. [100+ ref]

• ***Summary:*** First published in April 1981, this book is a scathing indictment of Ellen G. White, arguing convincingly and with page after page of examples, that she was a plagiarist. Most of this book is about her plagiarism from religious sources. But she also plagiarized in the fields of health, diet, and vegetarianism (see p. 66-76). Those health reformers from whom she drew most extensively were James Caleb Jackson, Russell T. Trall, Larkin B. Coles, Joel Shew, Sylvester Graham, and William A. Alcott. She was asked about this "borrowing" and in October 1867 she replied as follows: "It was at the house of Brother A. Hilliard, at Otsego, Michigan, June 6, 1863, that the great Subject of Health Reform was opened before me in a vision. I did not visit Dansville till August, 1864, fourteen months after I had the view. I did not read any works upon health until I had written 'Spiritual Gifts,' vol. iii and iv, 'Appeal to Mothers,' and had sketched out most of my six articles in the six numbers of 'How to Live,' and I did not know that such a paper existed as the Laws of Life, published at Dansville, New York. I had not heard of the several works upon health written by Dr. J.C. Jackson, and other publications at Dansville, at the time I had the view named above.

"As I introduced the subject of health to friends where I labored in Michigan, New England, and in the State of New York, and spoke against drugs and flesh meats, and in favor of water, pure air, and a proper diet, the reply was often made, 'You speak very nearly the opinions taught in the Laws of Life, and other publications, by Doctors Trall, Jackson, and others. Have you read that paper and those works? My reply was that I had not, neither should I read them till I had fully written out my view, lest it should be said that I had received my light upon the subject of health from physicians and not from the Lord."

Note 1. Before writing this book, Rea (pronounced "Ray") was a longtime devotee of Ellen G. White and her teachings. He was also the prolific author of many very popular and glowing books about Ellen White and her teachings. These books were sold at most Adventist bookstores. And he was a Seventh-day Adventist minister. In the mid-1970s he began to disclose evidence from his research that raised sobering questions as to the official church position on Ellen White. After writing this book, he was de-frocked [dismissed from the church]. He is also said to be a multi-millionaire, having made his money in various businesses.

Note 2. An index would make this book much more useful. Address: [Turlock, California].

2354. Seventh-day Adventist Dietetic Assoc. 1982. Diet manual, including a vegetarian meal plan. 6th ed. Seventh-day Adventist Dietetic Assoc., P.O. Box 75, Loma Linda, California 92354. 537 p. In a 3-ring binder with tabbed dividers. Index. 30 x 29 cm.

• ***Summary:*** This comprehensive guide to planning, selection, and coordination of vegetarian diets was edited by Georgia Hodgkin, M.S., R.D.; Susan Maloney, M.S., R.D., was the managing editor. Previous editions were published in 1960, 1965, 1970, 1975, 1978, and 1982. Each chapter has an author and a reviewer. References are found at the end of each chapter.

Contents: Introduction. Normal nutrient needs. Nutrition for pregnancy and lactation. Pediatric diets. Gastrointestinal diets. Renal diets. Cardiac diets. Diabetic and related diets. Mineral modified diets. Diet for acute care. Nutrition and immunity. Nutritional support and enteric feedings. Geriatric and rehabilitation diets. Test diets. Nutrition and drugs. Nutrition for exercise and weight control. Appendixes (11) including: Ingredients of selected vegetable protein foods (108 products, mostly made by Seventh-day Adventist companies). Nutrient composition of selected vegetable protein foods (the same 108 products whose ingredients are given above). Addresses of selected Seventh-day Adventist hospitals (16 hospitals). Selected vegetarian cookbooks (15 citations). Selected books concerning a vegetarian diet (7 citations). Tables (79 tables). List of figures (10 figures). Address: Loma Linda, California.

2355. Snowdon, D.A.; Phillips, R.L.; Kuzma, J.W. 1982. Age at baptism into the Seventh-day Adventist Church and risk of death due to ischemic heart disease–A preliminary report. In: V.R. Hunt, M.K. Smith, and D. Worth, eds. 1982. Banbury Report No. 11. New York: Cold Spring Harbor Lab. See p. 465-72. *

2356. Thrash, Agatha Moody; Thrash, Calvin L., Jr. 1982. Nutrition for vegetarians. Seale, Alabama: NewLifestyle Books. 155 p. Illust. Index. 28 cm. [249* ref]

• ***Summary:*** Both authors are physicians (MDs) and Seventh-day Adventists. A well-documented and thoroughly researched study. One important section of the book is devoted to the bodily functions of digestion, thirst, appetite, metabolism, and the endocrine system. For 11 years the authors had the rare privilege of directly observing

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and serving the medical needs, if any, of up to 150 pure vegetarians (vegans) at a medical missionary training center in Alabama. Soymilk is discussed on pages 111, 113. Address: Route 1, Box 441, Seale, Alabama 36875-9127.

2357. Turjman, N.; Guidry, C.; Jaeger, B.; Mendeloff, A.I.; Calkins, B.; Phillips, R.L.; Nair, P.P. 1982. Fecal bile-acids and neutral sterols in Seventh-day Adventists and the general population in California. In: H. Kasper, H. Goebell, eds. 1982. Colon and Nutrition: Falk Symposium 32. Lancaster, England: MTP Press, Ltd. xiv + 310 p. See p. 291-97. *

2358. Whorton, James C. 1982. Crusaders for fitness: The history of American health reformers. Princeton, New Jersey: Princeton University Press. xi + 359 p. Illust. Index. 22 cm. [477* ref]

• ***Summary:*** Critical of health reform movements and presented in an unsympathetic, sometimes mocking or sarcastic tone, this provocative book on the American "health fanatic" and "health faddism" is nevertheless extremely well researched and well written. It shows the importance of basing health reform movements on solid nutritional science. In attempting to prove his point, the author is often unbalanced in his presentation.

Contents: List of 11 illustrations (both photos and illustrations). Acknowledgments. Introduction: The kingdom of health. 1. A fig for the doctors. 2. Christian physiology (Reverend Sylvester Graham [1794-1851], Francois Broussais, William Andrus Alcott, Bronson Alcott). 3. Tempest in a flesh-pot (Vegetarianism, Graham, Alcott, George Cheyne, William Lambe, John Frank Newton, Russell Trall, William Cowherd, William Metcalfe). 4. Physical education. 5. Hygiene in evolution (Martin Luther Holbrook, Herbert Spencer). 6. Physiologic optimism (Horace Fletcher). 7. Muscular vegetarianism (John Harvey Kellogg, Ellen G. White). 8. Uric acid and other fetishes (Alexander Haig). 9. Philosophy in the gymnasium (Bernarr Macfadden). 10. The hygiene of the wheel (Rise of the bicycle and cycling). 11. A modern conspectus (J.I. Rodale, Adelle Davis, macrobiotics (p. 342), Frances Moore Lappé, Jay Dinshah, the religion of running and marathons, etc.).

The health reformer "is one of the classic characters bred by American culture." The first health reform movement started in the 1830s, with Sylvester Graham. Devotion, asceticism, and zeal have led to hygienic ideologies and religions of physical purification. A deep trust in the wisdom and beneficence of nature have characterized all American health reform ideologies. Perfection of the body is seen as a first step towards perfection of the whole organism, mind, moral character, and soul–and eventually of society and the world. Any indulgence which is immoral must also be bad for the body. Note: Seventh-day Adventists started the first health reform movement that used soyfoods.

Good health is seen as more than the absence of physical symptoms. Today we have "high level wellness" or well being.

These reform movements have flourished in periods of general reformist ferment and social optimism. Thus, the Jacksonian Era (Andrew Jackson was president of the U.S. from 1829-1837; Jacksonian democracy celebrated the virtues of the common people and of grass-roots democracy) and the Progressive Era of the 1900s and 1910s were years of great reform activity. The 1960s gave birth to the "wholistic health movement" of which the natural foods movement was but a part.

There have been few serious studies of the history of America's unique health reform movements. Recent exceptions include: *Prophetess of Health: A Study of Ellen G. White*, by Ronald L. Numbers (1976) and *Sex, Diet, and Debility in Jacksonian America: Sylvester Graham and Health Reform*, by Stephen Nissenbaum (1980).

America's first major health reform movement was founded by Sylvester Graham during the Jacksonian Era. Against the heroic medical therapeutics of the day (mercury compounds, opium, strong emetics and cathartics, and bloodletting) arose a deep trust in nature and a confidence that hygiene (the key word, which had a different meaning then) could replace medicine.

Sanitary reform began in the mid-1850s following the first invasion of Asiatic Cholera into America in 1832. Health reform grew largely out of Christianity. Hygienic living was considered by many to be a Christian duty, which was necessary for salvation and part of redemption. Its opposite was indulgence. So the emphasis was on what to avoid rather than on what to do. Graham was a Victorian New Englander, based in Boston, Massachusetts. He advocated avoiding consumption of alcohol, meat, spices, and white bread. He was a very strong advocate of whole wheat bread. Flesh food was doubly bad: the cruelty of the slaughterhouse and the fact that it was a "stimulating" food.

William A. Alcott, cousin of the famous Transcendentalist and "vegetarian by instinct" Bronson Alcott, was as busy a lecturer as Graham, but he had a more complete and balanced philosophy.

In the late 1830s, Graham and the American Physiological Society helped to organize the nation's first health food store in Boston, to supply Graham Bread and fresh fruit and vegetables grown in virgin, unfertilized soil.

The Journal of Health (Philadelphia, Pennsylvania), America's first health reform periodical, was inaugurated in 1829, the same year that Andrew Jackson was; it lasted until about 1832.

Donna Maurer of Southern Illinois University, who is writing a PhD thesis in the field of vegetarianism, notes (Jan. 1995): "Regarding Whorton's interpretation of early vegetarians–although I agree with you that his scholarship is unbalanced in terms of giving 'proper' credit to Graham, Alcott, and Kellogg, etc., he has presented the movement

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in *much* more favorable terms than any other interpretation I've read (that deals with vegetable diet as a component of 'irregular' medicine). Also, Whorton has engaged in more archival, primary research on the early vegetarians than any other historian to date." Address: Assoc. Prof. of Biomedical History, Univ. of Washington, Seattle, WA.

2359. **Product Name:** [Textured Vegetable Protein].
Manufacturer's Name: Industrias Covac.
Manufacturer's Address: Alajuela, Costa Rica.
Date of Introduction: 1982?
New Product–Documentation: Letter from Robert Folkenberg. 1983. Feb. 15. "This company, organized in 1967, is presently producing about 3 tons of TVP each week."

2360. **Product Name:** [Soymilk].
Manufacturer's Name: Industrias Covac.
Manufacturer's Address: Alajuela, Costa Rica.
Date of Introduction: 1982?
New Product–Documentation: Letter from Robert Folkenberg. 1983. Feb. 15. "This company, organized in 1967, is presently producing about 1,000 liters/week of soy milk."

2361. Airola, Paavo. 1983. Health forum: Are vegetarians healthier than meat eaters? *Vegetarian Times.* Jan. p. 58.
• ***Summary:*** In short: Yes. "Perhaps the most important and scientifically acceptable evidence of the superiority of the vegetarian diet is the study made on the health status of the Seventh Day Adventists, who are lacto-ovo vegetarians. This official government-sponsored study, which was widely reported in both the medical and lay press a few years ago, showed that the vegetarian Seventh Day Adventists have 40-70% less cancer, heart disease, diabetes and many other diet-related diseases than the general population. And, if you read this magazine regularly, you can see reports in almost every issue on the superiority of the vegetarian diet in terms of health, as well as in regard to a more satisfying and fulfilling lifestyle."

A portrait photo shows Dr. Airola. Address: N.D., Ph.D (in nutrition and biochemistry).

2362. *Food Processing* (*Chicago*). 1983. Miles sells unit [Worthington Foods]. 44(1):185. Jan.
• ***Summary:*** "Miles Laboratories Inc. of Elkhart, Indiana, has sold its Worthington Foods operations and the Morningstar Farms line of products to three former officers of Worthington. Miles acquired Worthington in 1970, later introducing the Morningstar Farms line of cholesterol-free meat analogs and egg substitutes to grocery stores."

2363. McEndree, L.S.; Kies, C.V.; Fox, H.M. 1983. Iron intake and iron nutritional status of lacto-ovo-vegetarian and omnivore students eating in a lacto-ovo-vegetarian food service. *Nutrition Reports International* 27(1):199-206. Jan. [13 ref]
• ***Summary:*** Vegetarians had higher iron intakes than omnivores, suggesting that the vegetarians made better food choices. However hemoglobin, hematocrit, and serum iron levels were not different between the two groups. "Both groups were not considered anemic, but neither did they have enough iron stores to cope with heavy menstrual losses or pregnancy without possible jeopardy to their iron nutritional status." Address: Dep. of Human Nutrition and Food Service Management, Univ. of Nebraska, Lincoln, NE 68583.

2364. Shultz, Terry D.; Leklem, James E. 1983. Selenium status of vegetarians, nonvegetarians, and hormone-dependent cancer subjects. *American J. of Clinical Nutrition* 37(1):114-18. Jan. [27 ref]
Address: Dep. of Foods and Nutrition, Oregon State Univ., Corvallis, OR 97331.

2365. Folkenberg, Robert. 1983. Re: History of work with soyfoods by the Seventh-day Adventist (SDA) Inter-American Division in Latin America. Letter to William Shurtleff at Soyfoods Center, Feb. 15. 3 p. Typed, without signature on letterhead.
• ***Summary:*** The first SDA food factory in South America was Granix in Buenos Aires, Argentina, in 1938. Today Superbom of Brazil is the largest producer, making an estimated 30 tons/month of textured soy flour (TVP). In the Caribbean region, Industrias Covac in Alajuela, Costa Rica, was the first organized in 1967, followed by Alimentos Colpac of Mexico in 1969 and Westico foods in Jamaica in 1970. Today Alimentos Colpac makes about 10 tons/week of TVP and 3,000 liters/week of soymilk. Westico Foods makes 2 tons/week of TVP, which is expected to increase dramatically in the near future. Industrias Covac makes about 3 tons/week of TVP and 1,000 liters/week of soymilk. Alimentos Integronaturales in Montemorelos, Mexico makes about 3,000 liters/week of soymilk. They and Productos Icolpan in Colombia will soon start producing TVP. Address: Field Secretary, Inter-American Div., P.O. Box 340760 (760 Ponce de Leon Blvd.), Coral Gables, Florida 33134. Phone: 305-443-7471.

2366. Fraser, Gary E.; Phillips, R.L.; Harris, R. 1983. Physical fitness and blood pressure in school children. *Circulation* 67(2):405-12. Feb. [51 ref]
Address: Depts. of Biostatistics and Epidemiology, Loma Linda Univ., Loma Linda, California 92350.

2367. *Whole Foods* (*Berkeley, California*). 1983. Worthington Foods, Inc. acquisition. Feb. p. 35.
• ***Summary:*** "Worthington Foods, Inc. [of Worthington, Ohio] announced that it has acquired the assets and business

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of Worthington Foods and Morningstar Farms formerly operated by Miles Laboratories, Inc. Worthington Foods, Inc. is an independent corporation and employs 240 people. The company markets a complete line of over 50 vegetable protein foods that are rich in nutrition and free of preservatives."

2368. Bisalski, Ed. 1983. More on Madison Foods (Interview). Conducted by William Shurtleff of Soyfoods Center, March 1. 1 p. transcript.
• ***Summary:*** Miller [was it Dr. Miller or his son, Willis?] invited Bisalski to he manager of his soymilk factory. Miller is a fine man but he always wants to be in control. Ed went there in about 1948. Before that he was at Madison. After studying at Madison he went to Peabody for graduate work in nutrition. He worked with Dr. Miller for 6 weeks, then he realized he couldn't work with him any longer. Dr. Miller was always changing schedules. Miller couldn't develop an organisation, didn't stick with budgets, bought equipment he couldn't pay for.

Note: My observation: few good saints are good businessmen.

Neither Kellogg nor Sutherland were good businessmen. Kellogg was a tyrant, always in control. Sutherland was more amenable. No one could work with Kellogg; it was either obey or be fired. That was with the food businesses. In medicine he commanded the respect of everyone. One of the greatest surgeons in the world. Bisalski is now age 80, a vegetarian. Vegetarian diet really shows up as one ages. He does 40 push ups every morning, plus lots of exercises. Ed was born on 1 Feb. 1903. "The Lord bless you as you prepare this book"–he says. He is now writing a book on nutrition and lifestyle. Doctors were the last to find out about nutrition, diet, and health. Address: 3123 E. Miller Rd., Bancroft, Michigan 48414. Phone: 517-634-5203.

2369. Oka, Tadashi. 1983. [History of the soymilk industry in Japan]. *Toyo Shinpo* (*Soyfoods News*). March 1. [Jap]
• ***Summary:*** In 1957 (Showa 32) one tofu maker in Hachiôji, Tokyo, was making several hundred 180 cc bottles of soymilk and selling it. This tofu maker was a Seventh-day Adventist and it is said that he received Dr. Harry W. Miller's guidance when learning how to make soymilk.

It is said that after visiting this tofu shop, in 1959 Saniku Gakuin [a Seventh-day Adventist school] decided to serve soymilk in their school lunch program.

So Seventh-day Adventists pioneered modern soymilk in Japan.

Around 1962 Nihon Tanpaku Kôgyô [Kogyo, K.K.] ordered Japan's self-defense forces (*jieitai*) to do taste tests of their soymilk. This company was making soymilk powder and selling it, so they were looking for a market for their product. But there were some problems with its heavy smell, so that flavored soymilks (such as orange) were popular, but their plain soymilk was not well accepted.

Mr. Kanji Tsuchiya, who had been working for Kyôdô Nyûgyô (Kyodyo Nyugyo, a dairy milk company) for more than 10 years, got very interested in developing soymilk. In 1965-69 he helped to set up a soymilk plant in Taiwan (capacity 500 liters/hour). But the soymilk made in his plant didn't have its natural beany flavor, so Taiwanese consumers thought it was fake. Dr. Harry W. Miller, who visited his plant at that time, told him that he didn't have to refine soymilk that much for Chinese customers.

Mr. Teisuke Yabuki, of Japan's Ministry of Agriculture (Monbu-sho, Gakumu, kyoku-cho) started soymilk research because of Ryukichi Sekiya, who was interested in soymilk and used lactic acid bacteria to remove the beany flavor when making soymilk. He conducted taste tests and a kindergarten and an elementary school, but the taste was unacceptable and nobody was interested. He asked other people to do this research but didn't get good results. Mr. Yabuki asked if he could do his research and development on soymilk and asked Onihara (Shinnojo?) at Tokyo Agricultural University (*Tokyo Nôgyô Daigaku*) to do the research. At that time Mr. Yabuki was the president of Yakult (Jôtô Yakuruto Hanbai K.K.). He continued Mr. R. Sekiya, spent 9 years and a lot of money, and at last in 1968 he was able to start a small scale soymilk pilot plant. He bottled his soymilk and gave it away to his friends, to test the product and the process; his energy went into his product No. 1.

In Oct. 1969 Mr. Yabuki named his soymilk Luppy and started selling it. This was exactly 10 years after Nihon Saniku Gakuin started to provide soymilk in their own way.

But Mr. Yabuki was the president of Yakult at that time; he was selling about 13,000 bottles per day of Yakult [a small probiotic beverage] and had about 500 workers. He had to build a soymilk plant in Sept. 1968, found Luppy Tanpaku Kagaku Kenkyûsho and chose the package (Tetra Pak Aseptic) for his soymilk. Finally he was asked to choose between Yakult and Luppy. He suffered a lot but finally chose Luppy, resigning as president of Yakult. Mr. Yabuki had been using the Yakult sales and distribution network to sell his soymilk. On 31 Dec. 1972 he severed his relationship with Yakult.

It happened this way. When Mr. Yabuki was talking to Yakult's main office (*honsha*) House Shokuhin Kôgyô K.K. got interested in soymilk and started trying to persuade Mr. Yabuki into working for them. House Shokuhin Kôgyô K.K. made powdered tofu and had been selling it and were interested in soyfoods.

In April 1973 House Luppy (K.K.) was founded. Mr. Yabuki became its president and took responsibility for making the company's soymilk; House Shokuhin took charge of marketing and selling the soymilk.

A large food manufacturing company like House entering the soymilk was expected to have a big effect on expanding that market.

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In 1973, soymilk brands in Japan were: (1) Soyalac (canned) made by Saniku Foods. (2) Shinko White made by Shinkô Shôbai. (3) Bonlact made by Wakôdo (Wakodo). (4) Luppy made by House Luppy. Because of expensive packaging and the use of fructose and honey, Luppy was quite a bit more expensive than the others (45 yen per 180 cc at that time).

In Nov. 1974 Tokyo Soymeal started. The technician Kanji Tsuchiya, who was from Kyôdo Nyûgyo, helped to make this soymilk plant. Mr. Tsuchiya's main idea was to make good-tasting soymilk in a clean, modern plant, resembling a dairy milk plant.

A chronology looks like this:

1959–Nihon Saniku Gakuin.

1969 Oct.–Luppy Tanpaku Kagaku Kenkyusho (Yakult / Yakuruto).

1971–Saniku Foods.

1972 April–House Luppy (New company from Luppy Tanpaku Kagaku Kenkyusho). They closed in 1979.

1973 Nov.–Tokyo Soymeal. They closed in Dec. 1978.

1975 July–Asahi Shokuhin.

1976–Kyodo Nyugyo.

1976–Marusan.

1977–Kibun / Kibon.

1981–Mitsubishi. But Mitsubishi had started testing soymilk in about 1972.

2370. Abu-Assal, M.; Craig, W.J. 1983. Plasma zinc levels in pregnant vegetarian and non-vegetarian women. *Federation Proceedings* (*FASEB*) 42(3):552 (Abst. #1527). March.
• ***Summary:*** The plasma zinc levels of 28 pregnant women volunteers, 12 vegetarians and 16 non-vegetarians, aged 23-36 years, were measured. None consumed alcohol. A vegetarian diet apparently does not compromise the zinc status of pregnant women. In late gestation, the vegetarians had higher plasma zinc levels than the non-vegetarians (47.9 vs. 42.9 mcg/dl). Buy 1-3 months after birth, the non-vegetarians had higher levels (66.6 vs. 59.2). Further study is needed to determine why plasma zinc levels remain low after delivery in the vegetarians. Address: Loma Linda Univ., Loma Linda, California 92350.

2371. Ling, C.A. 1983. Re: Plamil Foods Ltd. Letter to William Shurtleff at Soyfoods Center, March 3. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "You will gather from the attached completed questionnaire that we were the pioneers of a liquid soya milk in this country in 1965 and the enclosed labels and literature will give you further background information.

In answer to your questions... may we say that we obtain our soya protein isolate from Arkady ADM, Skerton Road, Old Trafford, Manchester M16 ONJ. We shall be obtaining from them shortly some TVP for a Goulash we propose marketing and also some de-fatted soya for a non-dairy chocolate bar we shall be producing i.e., with soya in place of milk. Regretfully we cannot say in answer to 55 and 56 whether the British Soya Products Ltd. or Soy Foods Ltd. are still in business as we have no connection with either company;

"We have already stated that we were pioneers in this country of liquid soya milk in 1965 and at that time the labeling authorities in the country would not permit us to use the definition of 'soya milk' or 'soy milk' and insisted that we used the terminology 'plantmilk'. We have taken this matter up from time to time with the Trading Standards Office (responsible for carrying out the labelling laws) and understand that the matter is at long last being centrally reviewed, so that we hope we may be able before long to use the terminology "soya milk". When you re-write your summary in numerical order relating to the UK, perhaps you would be good enough to make mention that we were the pioneers of a liquid soya milk here in 1965. After it being the sole one on the market for a number of years in the country, Itona decided to bring out one approximately five years ago and Granose also entered the market with one a couple of years ago. So we appear to have stimulated their interest!

"Yours faithfully, Plamil Foods Ltd." Address: Managing Director, Plamil Foods, Plamil House, Bowles Well Gardens, Dover Road, Folkestone, Kent CT19 6PQ, England. Phone: Folkestone (0303) 58588.

2372. *Madison Survey* (*Madison, Tennessee*). 1983. News regarding Worthington Foods. 65(1):7. March.
• ***Summary:*** "Soon after Madison College closed in 1964, Madison Foods was sold to Worthington Foods. Equipment and supplies were moved to Worthington, Ohio, in 1965. In 1970 Worthington sold to Miles Laboratories, and on Oct. 15, 1982, became the owner again. Application is being made for membership in the ASI again, of which the company was a charter member. Worthington Foods is dedicated to the philosophy and policies under which it operated for 30 years, from 1940 to 1970."

Note: ASI, which stands for Adventist-Laymen's Services and Industries, is a group of businessmen who have joined to advance Adventist work such as schools, hospitals, etc. in all parts of the world. They are headquartered at 12501 Old Columbia Pike, Silver Spring, Maryland 20904, USA. Phone: (301) 680-6450.

2373. Marsh, Alice G.; Sanchez, T.V.; Chaffee, F.L.; Mayor, G.H.; Mickelsen, O. 1983. Bone mineral mass in adult lacto-ovo-vegetarian and omnivorous males. *American J. of Clinical Nutrition* 37(3):453-56. March. [13 ref]
Address: Dep. of Home Economics, Andrews Univ., Berrien Springs, Michigan 49104 and the Dep. of Medicine, Michigan State Univ., East Lansing, MI 48824.

2374. Johnson, Dale. 1983. Statistics on soy protein

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production. Full-fat soy flour. Dawson Mills and Loma Linda. Central Soya (Interview). *SoyaScan Notes.* May 23. Conducted by Walter J. Wolf of NRRC, Peoria, Illinois.
• ***Summary:*** Estimates of soy protein production: Textured soy proteins (flours or concentrates) 150-200 million lb/year. Isolates 120-150 million lb/yr, including: Ralston Purina (doing very well), ADM (having lots of problems), and Grain Processing Corp. ("sold out"). Much of the isolate made in the USA is being exported for use in meat products in Europe and Africa. About 10-20 million lb/year of the non-exported isolate is used to make infant formulas in the USA by Mead Johnson, Ross Laboratories, and Syntex (Borden operation). A large amount of textured soy flour is still going into pet foods. Prices (dollars/lb): Soy flours $0.13. Soy protein concentrates $0.40-0.60 (lower priced are for calf starters). Soy protein isolates $1.10 to $1.35.

Full-fat soy flour: There is no significant production in the USA; in the past, production was several hundred tons/month. Some is imported from Germany (Lucas Meyer).

Dawson Mills: As of June 1, they will discontinue production of soy flour and grits, and textured soy flour. Loma Linda (California) purchased one of their two isolate spinning lines and was trying to have AMPI [American Milk Products, Inc.] run it for them [in Minnesota] using isolate purchased from elsewhere. Dale is not sure of the status of this project. Dan Hooten, formerly with Dawson Mills, is now apparently involved in sales of dairy products at Land O'Lakes (now located in Eau Claire, Wisconsin).

Central Soya is no longer using their steam texturization process. Address: Food Ingredients (Minnesota), Inc., 2121 Toledo Ave. North, Golden Valley, Minnesota 55422.

2375. O'Brien, Jane M. 1983. Re: Recent history of soybeans and soyfoods in Ireland. Letter to William Shurtleff at Soyfoods Center, May 28–in reply to inquiry. 1 p. Typed, with signature.
• ***Summary:*** "I was in touch with Tony Walshe at the Golden Dawn Restaurant in Dublin who said that they have been selling tofu more or less regularly since 1979. They use it in the restaurant for various recipes, but at the moment, I believe they could use more than they are able to get.

"There is an oriental [tofu] shop in Dublin which must have been open for about a year now which supplies tofu regularly, I gather. I never seem to be in town when it is open because it opens at 11:00 a.m., and when I shop I am usually in town before 9:00 and ready to leave as early as possible...

"Philip Guiney has been wholesaling Morinaga tofu for about a year now, and it seems to be moving for him...

"Ken Kinsella of Kelkin Naturproducts Ltd. has been wholesaling Granose Soya Milk for about 18 months now, and it is selling quite well for him because of the numbers of people who suffer from lactose intolerance and because of the general interest in getting away from dairy [products]. Ken's daughter, Hillary Kinsella, with a friend of hers, did a project called "Soya–The Modern Food" for the Young Scientists Exhibition in January 1983, for which she won two awards, and she is planning to do it again with further information in 1984, also for the Young Scientists Exhibition.

"For my part, I have taught tofu making in some of my cooking classes a couple of years ago, but I haven't given any cooking classes for the last couple of years for various reasons. Roughly from September 1983 through May of 1983, I provided about 12 pounds of tofu per week which Kelkin Naturproducts delivered to the Golden Dawn restaurant as a kind of pilot project to try to determine the demand for tofu in this area. At the end of that period, we discontinued it for a number of reasons and we felt that the time was not yet right to consider tofu production an economic possibility in this country. In fact, in many ways, we feel that soy milk might be a better starting off point here, but we are still not ready to do anything about it at this time." Address: 7 Woodside Drive, Rathfarnham, Dublin 14, Ireland. Phone: 909-769.

2376. Dwyer, Johanna T.; Andrews, E.M.; Berkey, C.; Valadian, I.; Reed, R.B. 1983. Growth in "new" vegetarian preschool children using the Jenss-Bayley curve fitting technique. *American J. of Clinical Nutrition* 37(5):815-27. May. [42 ref]
• ***Summary:*** A study of 142 vegetarian children, ages 6 weeks to 6 years, showed them to be 500 to 1,000 gm lighter and 1-2 cm shorter as a group when compared to the norms. Females and those children on a macrobiotic diet had the lowest weight and height in the group. Energy intake was low but protein intake was adequate.

The "new" vegetarian families differ from the Seventh-day Adventists and vegetarian immigrants in that very few of the adults in such families were raised as vegetarians, and in various other respects having to do with diet and lifestyle. Address: Frances Stern Nutrition Center, New England Medical Center Hospital, Boston.

2377. Ophir, Orna; Peer, G.; Gilad, J.; Blum, M.; Aviram, A. 1983. Low blood pressure in vegetarians: the possible role of potassium. *American J. of Clinical Nutrition* 37(5):755-62. May. [38 ref]
Address: Dep. of Nephrology, Rokach Hospital, Tel Aviv Medical Center, Tel Aviv, Israel.

2378. Phillips, Roland L.; Snowdon, David A. 1983. Association of meat and coffee use with cancers of the large bowel, breast, and prostate among Seventh-day Adventists: Preliminary results. *Cancer Research* 43(5):2403s-08s. Supplement. May. [44 ref]
Address: Loma Linda Univ., School of Health and School of Medicine, Loma Linda, California 92350.

2379. Semmens, James B.; Rouse, I.L.; Beilin, L.J.; Masarei,

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J.R.L. 1983. Relationship of plasma HDL-cholesterol to testosterone, estradiol, and sex-hormone-binding globulin levels in men and women. *Metabolism* 32(5):428-32. May. [32 ref]
Address: Depts. of Clinical Biochemistry and Medicine, Univ. of Western Australia, Royal Perth Hospital, Perth, Western Australia.

2380. Jensen, Ole Møller. 1983. Cancer risk among Danish male Seventh-Day Adventists and other temperance society members. *J. of the National Cancer Institute* 70(6):1011-14. June. [14 ref]
• ***Summary:*** Cancer risk was studied in 781 male Seventh-Day Adventists [SDA] and 808 male members of other temperance societies. The Adventists had only 65% as much cancer as the others, and had significantly decreased risks of cancer of the colon (only 13% as much as expected), cancer of the respiratory system (only 17% as much), of the lung (15%), and of the bladder including papilloma [an epithelial tumor caused by a virus] (only 13% as much as expected).
Address: Danish Cancer Registry, Strandboulevarden 49, DK-2100 Copenhagen, Denmark.

2381. Liebman, Bonnie. 1983. Are vegetarians healthier than the rest of us? *Nutrition Action.* June. p. 8-11. [32 ref]
• ***Summary:*** "To many Americans, the word 'vegetarian' conjures up an image of a 1960s era flower child eating brown rice, vegetables, and soybeans grown organically in the back yard. In fact, vegetarianism is far older and more common than most people think."

Research on America's major diseases "shows that vegetarians are lowering their risks of developing a host of the most serious diseases confronting our society. That they eat less fat, particularly less saturated fat, and more grains, legumes, and vegetables, appears to make them healthier than the average American." The writer then discusses one disease at a time:

"Heart Disease. 'The vegans have cholesterol levels so low, they'd never get a heart attack,' says Dr. William Castelli, referring to a group of macrobiotic vegetarians in Boston. 'Their average blood cholesterol level is about 125, and we've never seen anyone at Framingham with a cholesterol level below 150 have a heart attack.'

"For more than a decade. researchers have known that lacto-ovo vegetarians have lower blood cholesterol levels than non-vegetarians. and vegans have even lower levels. These findings come as no surprise. After all, vegans eat less saturated fat, less cholesterol, and more fiber than lacto-ovos, who in turn eat less than meat-eaters. More recent studies indicate that vegetarians enjoy a further protection against heart disease: the percentage of their blood cholesterol carried in high-density lipoproteins (HDL) is higher than in meat-eaters."

"But skeptics want evidence that vegetarians have lower heart attack rates, not just lower cholesterol levels. That means following a sizable number of people for several decades. Now the data are finally at hand. In Loma Linda, California. Drs. Roland Phillips and David Snowdon have monitored the health of 25,000 Seventh Day Adventists (SDAs) for over 20 years. About half of the SDAs are lacto-ovo vegetarians. The rest eat meat, though somewhat less often than most Americans. Cigarette smoking is rare in both groups.

"According to Phillips:

"Older male SDAs (aged 55 and above) who eat meat six or more times a week are twice as likely to die of heart disease as vegetarian SDAs;

"Younger male SDAs (aged 40 to 54) who eat meat six or more times a week run four times the risk of a fatal heart attack than their vegetarian brethren;

"Meat-eating SDA women over 55 run 1.5 times the risk of a fatal heart attack encountered by female vegetarian SDAs."

Cancer: SDA vegetarians are only about *one half* as likely as other Americans to develop colon or rectal cancer. Moreover, SDAs have less breast, prostate, pancreatic, and ovarian cancer compared with the average American. The reasons for these differences are unclear.

In short, vegetarians are healthier than average Americans. Address: Nutritionist, Center for Science in the Public Interest (CSPI).

2382. **Product Name:** Tofu.
Manufacturer's Name: Miller's Soy Inc.
Manufacturer's Address: Route 2, Box 2088, Greenbriar, TN 37073. Phone: 615-643-7506.
Date of Introduction: 1983 June.
New Product–Documentation: Soyfoods Center Computerized Mailing List. 1983. June 20. Owners: Harry Miller Jr. (Willis), and Mike Bishop. On the same printout, the company is listed at 206 Amherst Dr., Nashville, Tennessee 37214. Phone: 615-643-7506. Owner: Wayne Miller. Note: It is not clear whether or not either of these companies every produced tofu commercially. Willis later made a successful with R. Fischer called Miller Farms Food Co. in Cedar Falls, Iowa.

2383. Shurtleff, William. comp. 1983. Main Japanese soymilk manufacturers and their products–June 1983. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549 USA. 4 p. Unpublished typescript.
• ***Summary:*** This table contains six columns: Manufacturer, brand name, package size, type of packaging, launch date, and distribution (nationwide).

The manufacturers are: Kibun. Okazaki Marusan. Mitsubishi Kasei Shokuhin. Meiji Nyugyo. Kyushu Nyugyo. Nisshin Seiyu. Asahi Shokuhin. Kyodo Nyugyo. Yakuruto Honsha. Furuta Shokuhin Kogyo. Morinaga

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Nyugyo. Sugiyo. Koshin Nyugyo. Kenbi-sha. Saniku Foods (Saniku Fuuzu). Nagoya Seiraku. Nagano Tomato. Zenkoku Nokyo Chokuhan (Nôkyô). Yamato Shokuhin. Sokensha (Sôkensha). Ishihara Fuudo Sentaa. Chiba Seisen Shokuhin Kogyo (Kôkyô). Asahi Fuuzu. Sebun Irebun (7-11). Fukushima-ken Rakuren. Nacuraru Fuuzu (Natural Foods). Sebun Appu Inryo (Seven-Up). Address: Lafayette, California.

2384. *Soyfoods.* 1983. The soyfoods industry on display [at Natural Foods Merchandiser Expo in Anaheim, California and Whole Life Times Expo in San Francisco]. Summer. p. 7.

• ***Summary:*** Sixteen soyfoods companies exhibited at Anaheim to 7,600 paying visitors. "Six soyfoods companies shared an official Soyfoods Association booth, where they retailed their own products and provided liberal tasting samples as well. Participants included Legume Inc. (tofu pizza, tofu lasagna), Farm Foods (Ice Bean, in cones), Quong Hop (tofu burgers, tofu canolli, soymilk), Sonoma Specialty Foods (tofu salads, tofu cheesecakes), Laughing Moon (vegetable tofu turnovers), and San-Jirushi International (samples of San-J Real Tamari). The Association booth, one of 10 food catering booths at the Expo, was 'packed solid through the whole show,' reports Farm Foods' Robert Tepper."

"William Shurtleff gave a one hour speech and slide presentation on soyfoods to an enthusiastic audience."

Other interesting companies include: Pacific Tempeh, Light Foods, Essential Foods, Garden of Eatin', Living Lightly, Kibun, Westbrae Natural Foods, Edward & Sons, Cedarlane Foods, Morinaga, Worthington Foods.

Interesting products: Light Links tofu "hotdogs," Ravioli, Tofumale Tamale, Tempehroni Pizza, Chili Con Tempeh, Tempeh Enchilada.

Photos (without captions) show: (1) Danielle Lin of Laughing Moon. (2) Steve Snyder of Hinode. (3) The Morinaga booth, with Mr. Seishiro Ikegami.

2385. **Product Name:** Natural Touch Tofu Garden Patties.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1983 June.
Ingredients: Water, tofu, isolated soy protein, carrots, peas, soy oil, flavorings (HVP, onion powder), spices, garlic powder, yeast, natural flavor, essential oil of paprika, turmeric, carrageenan.
Wt/Vol., Packaging, Price: 10 oz box contains 4 white patties. Retails for $1.95 to $2.37.
How Stored: Frozen.
Nutrition: Per 70-gm. patty: 11 gm. protein.
New Product–Documentation: See next page. Talk with Craig Klatt of Seventh-day Adventist Bookstore in Pleasant Hill, California. 1983. Aug. 8. This product is now on the market, with 4 white / unfried patties per package, retailing for $1.95. Craig does not know who is the man behind this new concept or who makes the tofu.

Interview with Frank Poston. 1983. Dec. 16. This is the start of a new line developed for the health foods market. The Tofu Garden Patties were introduced in June 1983. Worthington bought all of the tofu equipment from Rising Sun Soy Farms in Columbus, Ohio, and are now making the tofu for the product at the Worthington plant in Ohio. The product was developed for the health food market, and will be part of the larger new Natural Touch line of products. More new products will be out in April 1984. This is a big and important new trend for the company and they plan to put a lot of energy and money into promoting it. Some (but not all) of the new products will contain tofu.

Worthington news release. 1984. May 25. Gives launch date as March 1984. Spot in Soyfoods. Summer. 1984. p. 45. "Prepared Patty Pair." Label, 4 color box. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center.

Ad (full page, color photo) in Natural Foods Merchandiser. 1985. May. "Natural Wonders. Discover Natural Touch for something new in natural foods taste!" Shows color labels/packages for each of four entrées, including Okara Patties and Tofu Garden Patties.

Talk with Worthington Foods. 1992. Feb. 10. This product has been discontinued.

2386. **Product Name:** Tofu.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1983 June.
New Product–Documentation: Interview with Frank Poston. 1983. Dec. 16. They bought all of the equipment from Rising Sun Soy Farms in Columbus and are making tofu for their second generation products at the Worthington plant in Ohio.

2387. Bialick, Barbara. 1983. A century of natural foods: From Battle Creek to Berkeley. *Whole Life Times* No. 28. July.

• ***Summary:*** This 5-page article gives a good overview of the natural foods movement, which began in the mid-1800s, at about the same time as the industrial revolution and the growth of cities (urbanization). In 1826 some 83% of U.S. citizens made their living from farming; by the 1850s, fewer than 50% did so. Farming and food production were becoming mechanized. Social reformers began to advocate the abolition of slavery and vivisection, expansion of the rights of women, food and dress reform, etc. Rev. Sylvester Graham, a Presbyterian minister, was "one of a group of idealists who in 1850 founded the American Vegetarian Society in New York, rallying around Dr. William A.

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Alcott's historic words 'A vegetable diet lies at the basis of all reform.'" In 1866 Ellen G. White founded the Western Health Reform Institute in Battle Creek, Michigan. Also discusses the work of John Harvey Kellogg, W.K. Kellogg, Henry D. Perky (an Ohio farm boy who invented Shredded Wheat in 1893), C.W. Post (Grape Nuts, Postum grain coffee), etc. "In 1925 the Postum Company combined with the Jell-O Company in the first of a series of mergers that eventually created today's huge General Foods Corporation, the first company originating from the health movement to shift to a strictly commercial purpose."

2388. Shultz, Terry D.; Leklem, James E. 1983. Dietary status of Seventh-day Adventists and nonvegetarians. *J. of the American Dietetic Association* 83(1):27-33. July. [66 ref]
• ***Summary:*** Dietary intakes of both groups were generally adequate. However 26% of the women consumed less than 60% of the RDA for iron, and 19% consumed less than 60% of the RDA for vitamin B-6 (pyridoxine). The non-vegetarians consumed more energy, protein, fat, total saturated fat, oleic acid, cholesterol, calcium, riboflavin, and niacin than the Seventh-day Adventist vegetarians. Address: Dep. of Foods and Nutrition, Oregon State Univ., Corvallis. Shultz's present address: Dep. of Nutrition, Loma Linda Univ., LOma Linda, California.

2389. Worthington Foods, Inc. 1983. Worthington product catalog: Putting good taste into nutrition. Worthington, Ohio. 2 panels each side. Each panel: 28 x 21.7 cm. Undated.
• ***Summary:*** See next two pages. Contents: Canned and dry products (lists 27 products, each with a color photo). At the bottom of the page is printed: "Sound Nutrition / Delicious Taste / Free of Meat and Preservatives." Frozen products (lists 22 products, each with a color photo). Kaffree beverages (lists 6 products, each with a color photo). Kaffree is a caffeine-free coffee substitute made from roasted malt barley, roasted barley, and roasted chicory. Kaffree Tea is also available. Address: Worthington, Ohio 43085.

2390. Klatt, Craig. 1983. Update on Worthington Foods and other Seventh-day Adventist companies making soyfoods (Interview). *SoyaScan Notes*. Aug. 8. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Worthington Foods is going stronger than ever. They are expanding into new, more natural products, such as Tofu Garden Patties, as part of their Natural Touch line. They plan to develop more new products in this line. Worthington bought back their company from Miles Laboratories for less than they sold it for, and got a new factory and the Morningstar Farms line as part of the deal.

Payless and Longs drug stores in California sell Loma Linda infant formula.

Country Life, formerly Cedar Lake, now imports bottled soymilk (free of sugar) from Japan, and has a chain of vegetarian restaurants, including one on Wall Street. Address: Manager, Adventist Book Center, 2300 Nourse Rd., Pleasant Hill, California 94523. Phone: 415-685-4300.

2391. Klatt, Craig. 1983. Update on Worthington Foods (Interview). *SoyaScan Notes*. Aug. 8. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Worthington is now stronger than ever. They are expanding into more natural products in their "Natural Touch" line. Tofu Garden Patties is their newest product. There are four unfried patties per box, sold frozen, for $1.95.

Worthington still has the Morningstar Farms line. Worthington bought back the whole company from Bayer A.G. for less than they sold it for and got a new factory and the Morningstar Farms tossed in too. Address: Adventist Bookstore, Pleasant Hill, California.

2392. **Product Name:** Loma Linda Vege-Scallops (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1983 August.
Ingredients: Vege-Scallops: Wheat gluten, water, wheat flour. Broth: Water, monosodium glutamate, salt.
Wt/Vol., Packaging, Price: 19.5 oz can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 6 pieces (2.75 oz–78 gm): Calories 70, protein 14 gm, carbohydrate 2 gm, fat 1 gm, cholesterol 0 mg, sodium 180, potassium 30 mg.
New Product–Documentation: Ad in Natural Foods Merchandiser. 1984. Feb. p. 113. "A lot more than meats the eye. Loma Linda Foods taste great."

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1983.

2393. Shurtleff, William; Aoyagi, Akiko. 1983. The book of tofu. 2nd ed. Berkeley, California: Ten Speed Press. 336 p. Illust. by Akiko Aoyagi Shurtleff. Index. Aug. 28 cm. [321 ref]
• ***Summary:*** Three parts of this new edition have been extensively revised and updated: (1) "Tofu Makers in the West" (p. 313-16) has been updated and now includes 310 tofu producers in the Western world (with the name, address, phone number, and contact person for each company), arranged by state or foreign country. This is the only tofu book containing such a directory.

(2) The "Bibliography" (p. 319-324) has been greatly expanded and updated. It now contains 321 publications on tofu, including all known scientific and nutritional journal articles, the 33 books about tofu written in North America since publication of the first edition of *The Book of Tofu* in 1975, and other key articles and books about tofu from East Asia and Europe, the earliest from Europe dating back to

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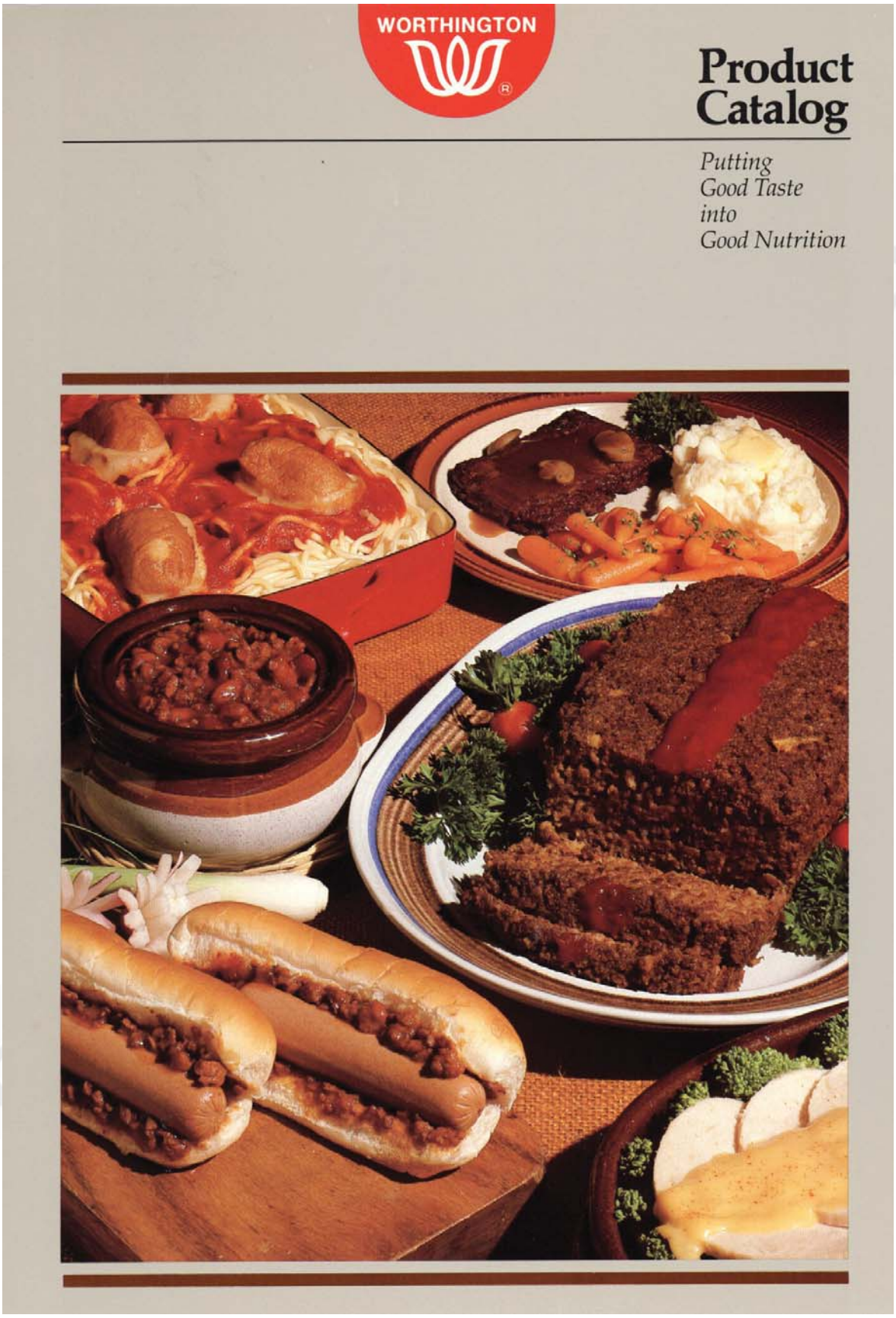

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WORTHINGTON

FROZEN PRODUCTS

1 Meatless "Chicken" Style
Like white meat of chicken. Delicious in sandwiches, casseroles, gravies, cream sauce, soups, salads and more.
Packed: Slices, 8 oz. packages/12 packages per case; Roll, 4 lb. rolls/4 rolls per case; Diced, 5 lb. bags/4 bags per case.
Stock No.: 8 oz. packages #26403; Roll #26419; Diced #26412.

2 Chic-Ketts®
A unique texture, delicious flavor. Serve breaded and deep fat or pan fried. Also ideal in casseroles, soups, chow mein and more.
Packed: 1 lb. rolls/12 rolls per case; 56 oz. rolls/4 rolls per case.
Stock No.: 1 lb. roll #26504; 56 oz. roll #26506.

3 "Chicken" Style Pie
Combines chicken-like cubes with fresh vegetables and creamy sauce inside a flaky crust.
Packed: 8 oz. pie/24 pies per case.
Stock No. #26503.

4 "Beef" Style Pie
Combines beef-like cubes with fresh vegetables and creamy sauce inside a flaky crust.
Packed: 8 oz. pie/24 pies per case.
Stock No. #26303.

5 Chik Stiks™
Golden brown outside, tender chewy inside . . . unique "drumstick" shape, delicious chicken-like flavor.
Packed: 10 oz. cartons/12 cartons per case; 15 lb. carton.
Stock No.: 10 oz. cartons #26441; 15 lb. #26448.

6 Wham™
A scrumptious ham-like flavor with fewer calories and much less fat. Delicious as cold cuts and fried or baked. Casseroles, too.
Packed: Slices, 8 oz. packages/12 packages per case; Roll, 72 oz. rolls/4 rolls per case.
Stock No.: 8 oz. packages #26603; Roll, #26619.

7 Stakelets®
Gourmet flavor, tender texture. Excellent main entrée or sandwich . . . great for cookouts. Just heat and serve.
Packed: 10 oz. cartons/12 cartons per case; 20 lb. carton.
Stock No.: 10 oz. carton #27704; 20 lb. #27705.

8 FriPats®
Flavor and texture make this a super meatless sandwich. Just heat and serve.
Packed: 9 oz. cartons/12 cartons per case; 17 lb. carton.
Stock No.: 9 oz. carton #27804; 17 lb. #27807.

9 Fillets™
Savory fish-like flavor and texture. Just heat and serve for a meal or a sandwich.
Packed: 9 oz. cartons/12 cartons per case.
Stock No.: #27604.

10 Tuno®
Tasty tuna-like flavor and tender texture. Great for a "Tuno-salad" sandwich or baked in your favorite casserole.
Packed: 12 oz. rolls/12 rolls per case.
Stock No.: #27903.

11 Meatless Salami
A great sandwich alone or a really good beginning for a "Super Sandwich."
Packed: Slices, 8 oz. cartons/12 cartons per case; Roll 4½ lb. rolls/4 rolls per case.
Stock No.: Slices #26924; Roll #26936.

12 Corned "Beef" Style
Serve in sandwiches (a delicious Reuben), salads, soups, casseroles, and hors d'oeuvres.
Packed: Slices, 8 oz. packages/12 packages per case; Roll, 72 oz. roll/4 rolls per case.
Stock No.: Slices, 8 oz. #26103; Rolls, #26116.

13 Smoked "Beef" Style
Adds savory flavor to sandwiches, soups, casseroles, salads, hors d'oeuvres.
Packed: Slices, 8 oz. packages/12 packages per case; Roll, 72 oz. rolls/4 rolls per case.
Stock No.: Slices #26203; Roll #26216.

14 Smoked "Turkey" Style
A turkey-like flavor that's sure to please. Serve plain and in casseroles, salads, soups, sandwiches.
Packed: Slices, 8 oz. packages/12 packages per case; Roll, 4 lb. rolls/4 rolls per case.
Stock No.: Slices #27103; Roll #27116.

Prosage®
Scrumptious sausage-like flavor available in links, patties or roll.

15 Prosage® Patties
Packed: 8 oz. cartons/12 cartons per case.
Stock No.: #26802
12½ lb. bulk #26803.

16 Prosage® Links
Packed: 8 oz. cartons/12 cartons per case
Stock No.: #26804
19½ lb. bulk #26815

17 Prosage® Rolls
Packed: 1 lb. rolls/12 rolls per case;
Stock No.: #26806.

18 Stripples®
Crisp up in minutes. These bacon-like strips are great for breakfast, in sandwiches and as a flavor enhancer in casseroles and salads.
Packed: 5 oz. packages/12 packages per case.
Stock No. #27001.

19 Dinner Roast
An elegant entrée sure to add a holiday touch to any family meal.
Packed: 2 lb. cartons/6 cartons per case.
Stock No.: #27414.

20 Bolono™
Makes a simply delicious "bologna" sandwich, sliced or in a spread.
Packed: Slices, 8 oz. cartons/12 cartons per case; Roll, 4½ lb. rolls/4 rolls per case.
Stock No.: Slices #26904; Roll #26916.

Meatless "Beef" Style
(Not Shown)
Frozen 72 oz. roll/4 rolls per case.
Stock No.: #26016.

Leanies® (not shown)
15 lb. Bulk-Pack Links
Stock No.: #26725.

Write for Free Recipes

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1613!

(3) An updated listing of "People and Institutions Connected with Tofu" in the U.S. and around the world, including researchers, major tofu manufacturers in Japan, trade associations, publications, equipment dealers, and tofu apprenticeship programs.

The "Glossary" (p. 325-27) has been condensed to make space for the expanded bibliography and back matter. There is a new page about the Soyfoods Center (p. 333). The page "About the Authors" (autobiographical) has been expanded, and the photograph has been updated. "Sending Tofu to the Four Directions" (p. 335) and the inside rear cover have both been updated. Still contains 500 vegetarian recipes–both western and eastern style.

Note: A news release of 17 Aug. 1983 states: "The Book of Tofu, which introduced the Western world to tofu and inspired the founding of more than 200 tofu shops and soy dairies in North America, has sold 340,000 copies to date, making it the world's best-seller on this popular new 'protein source of the future.'" Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2394. **Product Name:** Stroganoff (Meatless).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1983 August.
Ingredients: Incl. vegetable protein, onion, mushroom, and other savory seasonings in a sour cream sauce.
Wt/Vol., Packaging, Price: Canned.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Food Report (Lehmann). 1983. March.

2395. Holmes, Charlotte Van Gundy. 1983. Re: More about T.A. Van Gundy. Letter to William Shurtleff at Soyfoods Center, Nov. 21. 1 p. Typed, with signature.
• ***Summary:*** "Am enclosing a photo of Dot [Dorothea Van Gundy] and a copy of a Japanese newspaper clipping, and a couple of other items of correspondence which will help document her work.

"I came very close to getting one of my father's labels from the factory at La Sierra. A can had been seen there, but when I went to get it, it could be found nowhere. Hope this is helpful to you in your research. Very truly yours,..." Address: M.D., 10745 Ranchette Rd., Jackson, California 95642.

2396. Davidson, L.; Vandongen, R.; Rouse, I.L.; Beilin, L.J.; Tunney, A. 1983. Sex-related differences in resting and stimulated plasma noradrenaline and adrenaline. *Clinical Science* 67(3):347-52. Sept. [28 ref]
Address: Dep. of Medicine, Univ. of Western Australia, Royal Perth Hospital, Perth, Western Australia.

2397. McDougall, John A.; McDougall, Mary A. 1983. The McDougall plan. New Century Publishers Inc., 220 Old New Brunswick Rd., Piscataway, NJ 08854. 340 p. Foreword by Nathan Pritikin (8/83). General index and recipe index. 24 cm. [804* ref]
• ***Summary:*** This carefully researched and documented book and cookbook argues convincingly in favor of a vegan diet that uses no animal products, that is low in fats, calories, and sodium, and rich in complex carbohydrates. Pages 89-90 give the percentage of calories from fats in various foods under 3 categories: low-fat vegetable foods (incl. oatmeal 16% of calories from fat, apple 9%, broccoli 9%), high-fat vegetable foods (incl. avocadoes 88% of calories from fat, almonds 82%, peanut butter 77%, sunflower seeds 76%, tofu 53%, soybeans 40%, wheat germ 27%, tempeh 25%), and animal foods (bacon 94%, t-bone steak 82%, frankfurters 80%, cheddar cheese 73%, egg 65%, tuna in oil 64%, milk [whole 3.5% fat] 49%, ice cream 49%, milk low-fat 31%, chicken [light-skinned] 18%, tuna in water 6%, buttermilk 3%, skim milk 2%).

Note: The author, however, argues repeatedly against the use of tofu and tempeh based on the "percentage of calories from fat" concept. His figures are correct but we and many nutritionists feel the basic concept, originally popularized by Nathan Pritikin, overlooks two key points: (1) the percentage of water in the food, and (2) the average serving size.

Page 198, in a section on rich [high fat] plant foods, states that tofu, tempeh, soybeans, textured vegetable protein (TVP), and miso contain excessive fat and most are high in calories. "The rich plant foods may account for a small portion of your daily food (less than 10 percent of your calories per day) but only after you have attained the level of health you are striving for. In general, these foods are more harmful than health-supporting. Never eat these foods if you have problems with your health that remain unsolved. If you begin using this group of foods and find that you are also gaining weight or getting back some of your old ailments, then stop eating these foods immediately."

Appendix I, p. 322-28 contains a table listing the percentage of calories from protein, fat, and carbohydrates in many foods. It also gives the calorie concentration (in calories per gram) for each food; foods with a low concentration aid in weight-loss programs. Tofu has only 0.72 calories per gram, and soy sprouts only 0.46; both are low. No soyfoods are used in the many recipes in this book.

Note: According to a colleague, John McDougall suffered a stroke at age 19, which led to much of his current interest in diet and health. He is not a Seventh-day Adventist. Address: 1. M.D. Both: Near Kailua Bay, Oahu, Hawaii.

2398. Semmens, James B.; Rouse, I.L.; Beilin, L.J.; Masarei, J.R.L. 1983. Relationships between age, body weight, physical fitness and sex-hormone-binding globulin capacity. *Clinica Chimica Acta* 133(3):295-300. Oct. [16 ref]

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Address: Univ. Depts. of Clinical Biochemistry and Medicine, Royal Perth Hospital, Perth, Western Australia.

2399. Leviton, Richard. 1983. Short summary of trip to Europe sponsored by the American Soybean Association (Interview). *SoyaScan Notes.* Nov. 19. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The trip was very good, and Richard feels ASA was favorably impressed with his work. Richard did 6 programs, including 5 for ASA in Paris (France), Milan (Italy), Budapest (Hungary, with Tom Brennan from Vienna), and the Netherlands (small seminar for 10 people). He delivered a speech before 150 people at the Euvepro General Assembly in Parma, Italy. In Switzerland he visited Soyana and Verena Krieger.

ASA says they want to sponsor a conference and a newsletter. Richard will be chair of the conference, which will be held in late Sept. 1984 in Amsterdam. They will get more sponsors, put up all up-front costs, and ensure plenty of media coverage. Richard can keep all the profits. The newsletter on soyfoods, funded by ASA, will be sent to 200 people 3-4 times a year.

The most interesting general concept was that virtually all tofu in Europe is vacuum packed; he saw no water-packed tofu. Lima Foods packs their tofu in glass jars. Witte Wonder, Soyana, Manna, and Cauldron Foods (Bristol) sell pasteurized, unrefrigerated tofu dips and spreads in jars. They have a good shelf life without preservatives, and no spongy consistency. Some are quite amazing (like sweet curry)–far better than any products we have in the USA. Nutana has 3 tofu entrees (noodles, chili, in cans like Loma Linda); the word "Tofu" appears on the label. Address: Colrain, Massachusetts.

2400. Shurtleff, William; Aoyagi, Akiko. 1983. Dr. D.W. Harrison and Africa Basic Foods: History of work with soyfoods. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 10 p. Nov. 22. Unpublished typescript. Available online at www.soyinfocenter.com.
• ***Summary:*** A comprehensive history of the subject. D.W. Harrison is an African-American physician and a Seventh-day Adventist. Contents: Introduction. Early years: Birth and education, army, first trip to Africa, attraction of Ghana's Nkrumah, Meals for Millions. Work in Ghana (1960-63): contract as surgeon, start of farm machinery company, start of bakery and small school, return to U.S. in 1963. Work in Uganda (1964-71): Attractions of Uganda, hired by Uganda government, establishment of Africa Basic Foods (ABF, 1965), 3 objectives, expansion of soybean production, early food production, home-roasted soy flour, grants, equipment, church ties, 3 early products, marketing and demonstrations, end of government contract, start of private medical practice, Worthington Foods purchase of ABF stock and loan of Sam Yoshimura, new tofu and soymilk products, soynuts and soynut butter, Wenger's extruder, speech to United Nations Industrial Development Organization (1969), balance of business and service, Idi Amin and 1970's instability to present. Work in Kenya (1974-82): Move to Kisii, work with soybean production, start of New Soya Enterprises. Summary.

See: http://www.soyinfocenter.com/HSS/harrison_and_africa_basic_foods.php Address: Lafayette, California. Phone: 415-283-2991.

2401. Shurtleff, William; Aoyagi, Akiko. 1983. Tofu & soymilk production. 2nd ed. Lafayette, California: Soyfoods Center. 344 p. Illust. by Akiko Aoyagi Shurtleff. Index. Nov. 28 cm. [223 ref]
• ***Summary:*** Some information in Chapter 1, Appendix A, and many advertisements have been changed. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2402. Kahan, Ben. 1983. Recollections of the early health foods industry in Los Angeles: Bill Baker, Mildred Lager, El Molino Mills, Harold Hain, Henry Borsook, Gayelord Hauser, Clark Irvine (Interview). Conducted by William Shurtleff of Soyfoods Center, Dec. 4. 3 p. transcript.
• ***Summary:*** Ben, age 69, was one of the founders of Kahan & Lessin. He has been in the health foods industry since 1932. He became involved with soyfoods through Bill Baker (of Ojai), who pioneered the use of soy flour in Los Angeles bakery products. Bill had the flour ground by El Molino Mills, by elder Vandercook. Starting in about 1936 he developed and started to sell soybean bread. At about the same time he started to make soybean cookies, cereal, pancake flour, and related products. Ben Kahan was the first distributor of Bill Baker's soybean products. Before this, he developed lima bean flour, bread, and pancake and waffle flour, then he switched to soybean flour. Bill Baker got El Molino interested in soybeans. El Molino started in about 1927 with whole-wheat flours. Mr. Vandercook came from Holland, worked for Sperry Mills, was disenchanted, left Sperry and came to Alhambra, where he set up a stone burr just as he had known as a child in Holland. Kahan was also the first distributor for El Molino.

Mildred Lager had one of the first free-standing health food stores (i.e., not in a department store) but she also did promotional work for the health food industry direct to consumers via radio. She was retained by a number of pioneer health food organizations which sponsored here, including Bill Baker. Ben knew here and distributed products to her. Mildred was a slight woman, medium height, former school teacher from Wisconsin, arthritic since youth [about age 16]. Doctors told her to go to California since the weather might help her. She decided to help herself through nutritional means. She was enthused in discovering the relationship between nutrition and health, and she wanted to spread this knowledge to the public. So she started a store,

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radio broadcast, and classes. She would hire a hall in the Royal Palms Hotel (at 6th and El Dorado), invite people to lectures and cooking classes, and publicize it through her radio program. Bill Baker would bake fresh soybean breads and cookies for the demos.

Bill Baker entered America as a poor immigrant from Prussia. He worked as a baker at some of the most prestigious hotels and restaurants in America. His last jobs were as chefs in the White House [sic] for many years. The last administration was the Harding administration. After that each Christmas he would send the official holiday fruit cake, continuing until Franklin Roosevelt's 3rd administration. After retirement in the early 1930s he was in Ventura, then he moved to Ojai; he baked conventional breads and pies for the Thatcher School and other schools in the Ojai Valley.

Then a group of doctors at the Cottage Hospital in Santa Barbara asked him to try to develop an alkaline bread for nutritional treatment of patients with hyperacidity. Baker researched the problem and came up with lima bean bread, using flour from dried immature baby limas. Also lima bean pancake and waffle flour. He then tried to get this out to the doctors' patients. It was the middle of the Great Depression so it was hard to introduce new products. Kahan, a new distributor in need of products, tried to get the new bread into stores, but only health food stores were interested. Others laughed him out of the store. Mildred Lager was one of his first customers. Bill Baker did his promotions through her.

Bill Baker died in about 1945. The heyday of his baked goods was during World War II. Kahan distributed 1,200 loaves a day. Baker probably also sold through many other distributors in other regions. He shipped his bread to San Francisco, Seattle, and as far east as Colorado. The formula was a secret but probably 16-20% soy flour and the rest a high-gluten unbleached white flour.

The Los Angeles health food movement originated in the late 1920s and early 1930s. Clark Irvine was one of the founders. He published *Health Food Digest* [sic, *California Health News*], which later became Let's Live. Kahan, Irvine, and a few others founded the Health Food Dealers Association, which later became the National Dietetic Foods Association.

The key health food people in Los Angeles were Clark Irvine, Bill Baker, Mildred Lager, Van Gundy, Vandercook, La Sierra Industries (founded by T.A. Van Gundy in Arlington, California), and Loma Linda Foods. Kahan knew of T.A. Van Gundy, and he knew Dorothea Van Gundy well. Harold Hain canned the first commercial soybeans in about 1924. His Hain Health Foods company later became today's Hain Food Group. Dr. Fearn was a pioneer but not a mixer in the industry; not at the National Health Food Dealers Association.

Vitamins: Dr. Henry Borsook, a biochemist at the California Institute of Technology (commonly referred to as Caltech) pioneered vitamins in the early 1940s. He attended health food meetings. This is one reason for the rise of the health food industry in Los Angeles. Borsook was the first on the West Coast to do this. The first U.S. vitamins in a health food store were sold by Joe Bishop, manager of the Vegetarian Cafeteria in San Diego, in about 1941. He sold those made by W.T. Thompson Co.–powdered vitamin B-1 sold in little envelopes. The Seventh-day Adventists also played a big role in Los Angeles. In the early days, many stores were marginal operations in private homes, run by women. The manufacturers were primitive. They catered to poor, marginal people, during the Depression, who couldn't afford to go to doctors, so they tried health foods. They also catered to diabetics, people with allergies, and the teachers who preached against salt. Some of the earliest out-of-the-home health food stores were concessions in markets. So, in this sense, now its not new for health food stores to be in supermarkets. Some of the leaders were those disenchanted with the medical profession. Gayelord Hauser played a leading role in making health foods acceptable; before him they were associated with the nuts, kooks, and freaks. Hauser, who associated with Hollywood and Greta Garbo, gave health foods a big image boost. He created the first big chain, the forerunner of the modern health food industry, in the late 1940s. He and his books and charisma gave the industry a new image. Suddenly health foods were seen as being used by people in the know–not just by nuts.

He recalls four stages of health food stores: (1) In private homes run by women. (2) Concessions in larger food markets or stores. (3) Small stores in secondary retail stores, out of the way, because they couldn't afford stores in main shopping districts. (4) A handful of free-standing health food stores. Mildred Lager's store was not a prime place by any means, but it was pretty good. She had a friend named Gilbert Thayer who backed her. He was an early chiropractor interested in nutrition. She worked for him originally, then branched out on her own. Before that she was a primary school teacher in Wisconsin. Address: 5530 Goodland Ave., N. Hollywood, California 91607. Phone: 818-701-6632.

2403. Poston, Frank. 1983. Worthington is now making tofu and Tofu Garden Patties as part of their new Natural Touch line (Interview). *SoyaScan Notes.* Dec. 16. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Tofu Garden Patties is the start of a new line developed for the health foods market. The Patties were introduced in June 1983. Worthington bought all of the tofu equipment from Rising Sun Soy Farms in Columbus, Ohio, and are now making the tofu for the product at the Worthington plant in Ohio. The product was developed for the health food market, and will be part of the larger new Natural Touch line of products. More new products will be out in April 1984. This is a big and important new trend for the company and they plan to put a lot of energy and money into promoting it. Some (but not all) of the new products

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will contain tofu. Address: Director, Product Marketing, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

2404. *SoyaScan Notes.* 1983. Chronology of soybeans, soyfoods and natural foods in the United States 1983 (Overview). Dec. 31. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Jan. 16. Larry Needleman decides to sell Bean Machines. Looking for a buyer. Jan. 24. "Legume, Company Finds Niche Selling Frozen Foods Made with Tofu, published by The Wall Street Journal.

Feb. *Soyfoods* magazine No. 8 published by Richard Leviton. Blue cover, 5,000 copies

Feb. 6-8. Sixteen soyfoods companies exhibit at the Natural Foods Expo. in Anaheim, California. A new trade association named Soyfoods Association of America (SAA) is formed; it is basically a restructured version of the original Soyfoods Association of North America, which was founded in July 1978 and which now ceases to be active. SAA elects a new board of directors; Michael Austin is chosen new Executive Director and Gary Barat of Legume becomes new President. Fourteen companies pledge $12,000. Headquarters established in New York City.

Feb. 7. The First Great Tofu Burger, a dry mix, made in Oakland, introduced at Anaheim Natural Foods Expo.

Feb. 18. Wm. Shurtleff has idea for forming a Soy Sauce Council to help encourage soy sauce companies to join Soyfoods Association, develop soy sauce terminology and standards, and eliminate mislabeling.

Feb. Jack's Beanstalk, innovative tofu company in Salt Lake City, goes out of business.

March 10. *Soyfoods Industry and Market: Directory and Databook 1983* published by Soyfoods Center, accompanied by glossy flyer and catalog of professional publications and services.

March 10. *Tempeh Primer,* by Juel Andersen and Robin Clute, published.

March 14. Connecticut Agricultural Experiment Station, in Bulletin 810 "Quality of Tofu and Other Soy Products," reports high bacterial and coliform counts. A virtual expose, revealing the tofu industry's erratic quality control, it gets wide media coverage and hurts sales of New England and New York tofu companies.

March. Hinode Tofu Co. starts major tofu ad and coupon campaign, with full-page ads in four national magazines. Most extensive national publicity ever done for tofu. Triggers lawsuit from a rice company over the Hinode brand, with which Hinode Tofu Co. is subsequently forced to part.

April 27-30. Six soyfoods companies exhibit at Whole Life Expo in San Francisco, as part of Soyfoods Association's booth. Shurtleff presents a speech and color slide show.

April. Hartz Seed Co. is purchased by Monsanto.

May. *The Au Naturel Tofu Manual,* by Chloe & Abraham Fox self-published in Canada. Vol. 1 is *Tofu Recipes for Families.* Vol. 2 is *Modern Jewish Tofu Cooking.*

May 3. Michael Austin mails out Soyfoods Association Charter Member letter. By year's end $18,000 in membership fees had been raised.

May 4. Richard Leviton decides to move to California.

May 8-11. Hinode Tofu Co. exhibits five flavors of Tofu Parfait at the prestigious and influential Food Marketing Institute convention in Chicago, a major national supermarket convention, attended by 20,000.

May 9. Dr. Hwa L. Wang of USDA NRRC speaks on "Tofu and Tempeh as Potential Protein Sources in the Western Diet" at the American Oil Chemists' Society symposium on "Potential New Protein Sources" in Chicago.

May 16. Quong Hop & Co. introduces the first Soy Deli cooler display case to Raley's supermarkets in Reno and Sacramento. In July they introduce the idea to Safeway supermarkets in California. By August there are Soy Delis in ten Safeway supermarkets in the San Francisco Bay Area.

May 18. The New York Times article on "Bacteria in Soy Products" as a follow-up on the Connecticut tofu contamination report.

May 24. Wm. Shurtleff goes to China for three weeks to study soyfoods, sponsored by Danish Turnkey Dairies; the first trip for this purpose since Dr. A.K. Smith of the USDA went there in 1949. Shurtleff writes 75-page report on *Soybeans and Soyfoods in China: 1949-83.* After China, Wm. and Akiko Shurtleff spend 3 weeks studying the soymilk industry and market in Japan.

May 31. Leviton and Wang speak on the soyfoods industry at Iowa State University conference on grains and legumes.

June. Worthington Foods introduces Tofu Garden Patties, developed for the health food market as part of a larger new line of natural food products, all sold under the Natural Touch brand. This is a new trend for the company and they commit money to promoting it. In 1984 they launch Okara Patties (which contain okara as the 4th ingredient).

June. *Quantity Tofu Recipes for Institutions & Restaurants,* by Gary Landgrebe published by Soyfoods magazine and Fresh Press.

June. *The Magic of Tofu,* by Jane O'Brien of Ireland published by Thorsons in the UK.

June. *Tofu: Not Just for the Health of It,* by Jana H. Crutchfield self-published.

June. *Handbook of Indigenous Fermented Foods,* edited by Keith H. Steinkraus, published by Marcel Dekker. Extensive original material on traditional soyfoods. It soon becomes a classic.

June. *Soyfoods* magazine No. 9 published, 7,000 copies. *Soyfoods Newsletter* published in new typeset, 4-page format with new design.

June. Torigoe Seifun, Japan's fifth-largest flour miller,

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starts production of tempeh. This is the earliest known commercial tempeh ever made in Japan.

July 1. Quong Hop & Co. purchases Pacific Tempeh Co.

July. INTSOY publishes *Proceedings of the First China/USA Soybean Symposium,* held July 1982 at the University of Illinois.

July 3-Aug. 22. Richard Leviton in England, lectures on soyfoods in London and Leicester, and does some soyfoods research.

July 25. Soyfoods Association meeting in Denver. Tom Timmins, president of Tomsun Foods Inc. (one of the companies seriously affected by negative publicity on tofu quality) is asked to be head of the Soyfoods Association's Standards Committee, and to appoint people to work with him on the development of standards, especially tofu standards. In October he sends a 4-page survey letter concerning soyfoods standards to the 18-person Soyfoods Association Standards Committee that he has appointed.

July 28-Aug. 2. Second US/China Soybean Research Symposium, held in Jilin, China

July. NNFA show in Denver. Eden Foods surprises the natural foods industry by launching designed-for-America Edensoy in plain and carob flavors. Made in Japan by Marusan-Ai and exported by Muso, it is packed in a 6-ounce retort pouch. San-J's To-Neu brand soymilk is also debuted in Tetra Brik cartons.

Eden Foods is the first Caucasian-American company to import soymilk, and their gamble soon pays off; sales skyrocket, sparked by an extensive magazine advertising campaign. Between Sept. and Dec. 1983 over 1 million packs are sold. A host of competitors rush to follow Eden's lead... and many of them go to Muso. Eden objects.

July 31. Fifth Anniversary of the founding of the Soyfoods Association of North America.

Late July. Hot, dry summer weather heats up the price of soybeans from $6/bu to over $9.50/bu in August and September, falling back to $8 in December.

Aug. 15. *Time* magazine article on stylish ice creams has a paragraph on Tofutti soy ice cream.

Aug. 15. Delegation of four soyfoods experts from People's Republic of China spends 5 hours at The Soyfoods Center. First stop of the first Chinese soyfoods team to visit the USA.

Aug. 15. Soyfoods Center makes the first photocopy of the entire Log of the Dorsett-Morse Expedition to East Asia, 1929-31. 6,170 pages. The only original is owned by the American Soybean Assoc. in St. Louis.

Aug. Farm Foods serves Ice Bean soymilk ice cream at the American Soybean Association convention in Nashville, Tennessee.

Sept. Legume in New Jersey, in their second public stock offering in 15 months, raises an additional $400,000 ($300,000 net).

Sept. Continental Soyfoods, run by Pat Aylward in Minneapolis, goes out of business.

Sept. 9. Leviton leaves Massachusetts, moves Soyfoods magazine to Encinitas, California. But he decides to leave there a week later.

Sept. 21. New Ten Speed Press edition of *The Book of Miso,* by Shurtleff and Aoyagi published. Extensively revised. Shows miso consumption in U.S. has increased 300% since 1975.

Sept. 25. Open House at new headquarters of Soyfoods Center for 30 people, including Nancy Dailey, who is writing a major story on soybeans for *National Geographic* magazine, and for Richard Leviton, newly arrived in California. Shurtleff shows color slides of soyfoods in China.

Sept. 26–Oct. 1. Symposium on "Soybean in Tropical and Subtropical Cropping Systems" held at Tsukuba, Japan. About 200 people attended. Proceedings were published in 1985.

Sept. 28. Soyfoods Center buys its first computer and begins computerization, which soon leads to development of the world's three largest computerized databases focusing on soyfoods and the soybean industry–from which this chronology is compiled.

2405. Berkel, J.; Waard, F. de. 1983. Mortality pattern and life expectancy of Seventh-Day Adventists in the Netherlands. *International J. of Epidemiology* 12(4):455-59. Dec. [21 ref]

• ***Summary:*** A ten-year study (1968-77) on 482 Seventh-Day Adventists who died in the Netherlands showed that–compared with the total Dutch population–they were only 41% as likely to die from cardiovascular diseases, 50% as likely to die of cancer, and 45% as likely to die of all causes. The Adventists also lived significantly longer. Address: Dep. of Epidemiology, Inst. for Social Medicine, State Univ., Utrecht, The Netherlands.

2406. Leviton, Richard. 1983. Report on soyfoods research trip across America, Dec. 1983. Colrain, Massachusetts. 2 p. Unpublished typescript.

• ***Summary:*** Visited or discusses: Northern Soy (Rochester, New York), Legume (New York City), Tofu Time (David Mintz, New York City), New England Soy Dairy (Greenfield, Massachusetts), SanJ (San-Jirushi, Virginia), Quong Hop & Co. (South San Francisco, California), Worthington Foods (Worthington, Ohio), Southwest Soyfoods (Richard Jennings, Santa Fe, New Mexico). Address: 100 Heath Rd., Colrain, Massachusetts 01340. Phone: 413-624-5591.

2407. **Product Name:** [Soya Pac, and Tortaleta {Textured Soy Protein Meat Analogs}].
Manufacturer's Name: Alimentos Colpac.
Manufacturer's Address: Km 13 Carratera Huatabampo, Apartado No. 502, Navojoa, Sonora, CP8500, Mexico.
Date of Introduction: 1983.

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New Product–Documentation: Soya Bluebook. 1983. p. 62.

2408. **Product Name:** [Granix Nutrisoja Textured Soy Flour for Breaded & Fried Cutlets].
Foreign Name: Granix Nutrisoja para Milanesas.
Manufacturer's Name: Alimentos Granix.
Manufacturer's Address: Av. San Martin 4625 (C.P. 1602), Florida, Provincia de Buenos Aires, Argentina.
Date of Introduction: 1983.
Ingredients: Incl. Defatted soybeans.
Wt/Vol., Packaging, Price: 250 gm plastic bag.
New Product–Documentation: Manufacturer's brochure. 1989? "Granix por excelencia." A color photo shows the package label. On the front is a color photo of the foods on a plate. Letter and Label sent by Jorge Manrique of Alimentos Granix. 1990. July 13. This product was introduced in 1983. A small one-sided red and black leaflet is titled CEAPE: Nutrisoja para Milanesa. Above this is the logo of Colegio Adventista del Plata. It describes: How to prepare these breaded and fried cutlets. Other applications. Composition. "The Nutrisoja Milanesa is a texturized product with defatted soy flour and without additives (*agregados*). It contains more than 40% protein and a low percentage of fat (1.5%). It is made by the Adventist College of the Plata, Commercialization Dept., Marshall 99, 3103 Villa Libertador San Martin, Entre Rios."

Note: La Plata is the capital of Buenos Aires province in Argentina. Rio de la Plata, called the River Plate in English, is the estuary formed by the combination of the Uruguay River and the Paraná River. It is a funnel-shaped indentation on the southeastern coastline of South America, between Argentina and Uruguay. extending 290 kilometers (180 mi) from the rivers' confluence to the Atlantic Ocean.

2409. **Product Name:** [Granix Nutrisoja for Rellenos].
Foreign Name: Granix Nutrisoja para Rellenos.
Manufacturer's Name: Alimentos Granix.
Manufacturer's Address: Av. San Martin 4625 (C.P. 1602), 1602–Florida, Prov. de Buenos Aires, Argentina. Phone: 760-7292/0307.
Date of Introduction: 1983.
Wt/Vol., Packaging, Price: 500 gm plastic bag.
How Stored: Refrigerated.
New Product–Documentation: Letter sent by Jorge Manrique of Alimentos Granix. 1990. July 13. This product was introduced in 1983. No label was sent and the product is not listed in the company's catalog.

2410. Boeing, H.; Frentzel-Beyme, R. 1983. Schuetzt die Lebensweise von Vegetariern vor einigen Erkrankungen? [Are vegetarians protected from some diseases by their way of living?]. *Aktuelle Ernaehrung* 8:187-91. [Ger]* Address: Germany.

2411. Jedrychowski, W.; Tobiasz-Adamczyk, B.; Olma, A.; Gradzikiewics, P. 1983. Porownani parametrow trwania zycia w grupie czlonkow Kosciola Adwentystow Dnia Siodmegio i w populacji ogolnej [Comparison of the parameters of longevity for members of the Seventh-day Adventist Church and the rest of the population]. *Polski Tygodnik Lekarski* (*Polish Medical Weekly*) 32:14-17. [Pol]*

2412. **Product Name:** Soymilk.
Manufacturer's Name: Miller-Soy.
Manufacturer's Address: Route 2, 208-B. Greenbrier, TN 37073.
Date of Introduction: 1983.
New Product–Documentation: Soya Bluebook. 1983. p. 62.

2413. **Product Name:** [Nutana Tofu Bolognese].
Foreign Name: Nutana Tofu Bolognese.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1983.
Ingredients: Incl. Tomatoes, tofu, margarine, vegetable bouillon.
Wt/Vol., Packaging, Price: 440 gm can.
How Stored: Shelf stable.
Nutrition: Per 100 gm.: Calories 90, protein 4.5 gm, carbohydrate 6 gm, fat 5.5 gm.
New Product–Documentation: See next page. Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. Label for cans. 1983. 9.5 by 4.25 inches. Paper. Red, yellow, green black and white. Color photo of Tofu Bolognese on red background. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Labels in Danish, Dutch, and Finnish.

2414. **Product Name:** [Nutana Tofu Kinagryde].
Foreign Name: Nutana Tofu Kinagryde.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1983.
Ingredients: Tofu, vegetable bouillon, vegetable margarine.
Wt/Vol., Packaging, Price: 435 gm can.
How Stored: Shelf stable.
Nutrition: Per 100 gm.: Calories 60, protein 2.5 gm, carbohydrate 4 gm, fat 4 gm.
New Product–Documentation: Manufacturer's catalog. 1981. Nutana Helsekost. 19 p. Contains a photo of and detailed information about every product. Label for cans. 1983. 9.5 by 4.25 inches. Paper. Red, green, yellow, black and white. Color photo of Tofu Kinagryde. Reprinted in

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Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Labels in Danish, Dutch, and Finnish.

2415. Rouse, Ian L.; Armstrong, B.K.; Beilin, L.J. 1983. The relationship of blood pressure to diet and lifestyle in two religious populations. *J. of Hypertension* 1:65-71. *
• ***Summary:*** The authors compared blood pressures in Seventh-day Adventist (SDA) lactoovovegetarians with Mormon meat eaters in an attempt to control for several of the potentially confounding aspects of lifestyle that characterize religious adherents. In particular, both the SDA and Mormon religions discourage the use of alcohol, nicotine, caffeine, and other stimulants. The SDAs who ate fish, meat, or poultry less than once a month had significantly lower blood pressures and a lower prevalence of mild hypertension (2%; > 140 systolic and/or > 90 diastolic) compared with age- and sex-matched Mormons (10%). Address: Dep. of Medicine, Royal Perth Hospital, Univ. of Western Australia, Perth, Western Australia, Australia.

2416. **Product Name:** Sanitarium Health Foods Swiss Rounds (Vegetarian).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1983.
Ingredients: Textured vegetable protein, vegetable oil, rolled oats, onion, whey protein concentrate, thickeners, flavours, yeast extract, salt, sugars, herbs and spices, water added.
Wt/Vol., Packaging, Price: 430 gm can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1983.

2417. DE-VAU-GE Gesundkostwerk GmbH. 1983. GranoVita. Health-food & natural food from Germany. Natural nutrition for young and old for every day. P.O. Box 1660, D-2120 Lueneburg, West Germany. 6 p. Manufacturer's catalog. [Eng]

• ***Summary:*** See next two pages. This full-color manufacturer's catalog contains a color photo of each of the company's products and a listing of ingredients. All are natural, vegetarian foods. The lines are Soya-Products, Sandwich-spreads, Baby food, Fruit- and Grain bars, Nut-Creams, Wholemeal Breakfast, Herbal drugs, Drinks (soymilks and coffee substitutes), and Boesen grain-mill. Contains a concise history of the company, which was founded in 1899 by a group of health reformers at Friedensau near Magdeburg. Today the Lueneburg plant employs about 120 workers. The company supplies 2,500 health food stores in West Germany and has business dealings worldwide. "By our motto 'Once a week a meatless day with granoVita soya-food' more and more customers are induced to try the wholesome and tasty soya-products."

In 1977 DE-VAU-GE acquired the Boesen Bakery Ltd. which employs 130 workers. In 1982 total sales for granoVita and Boesen were 50 million DM (German marks).

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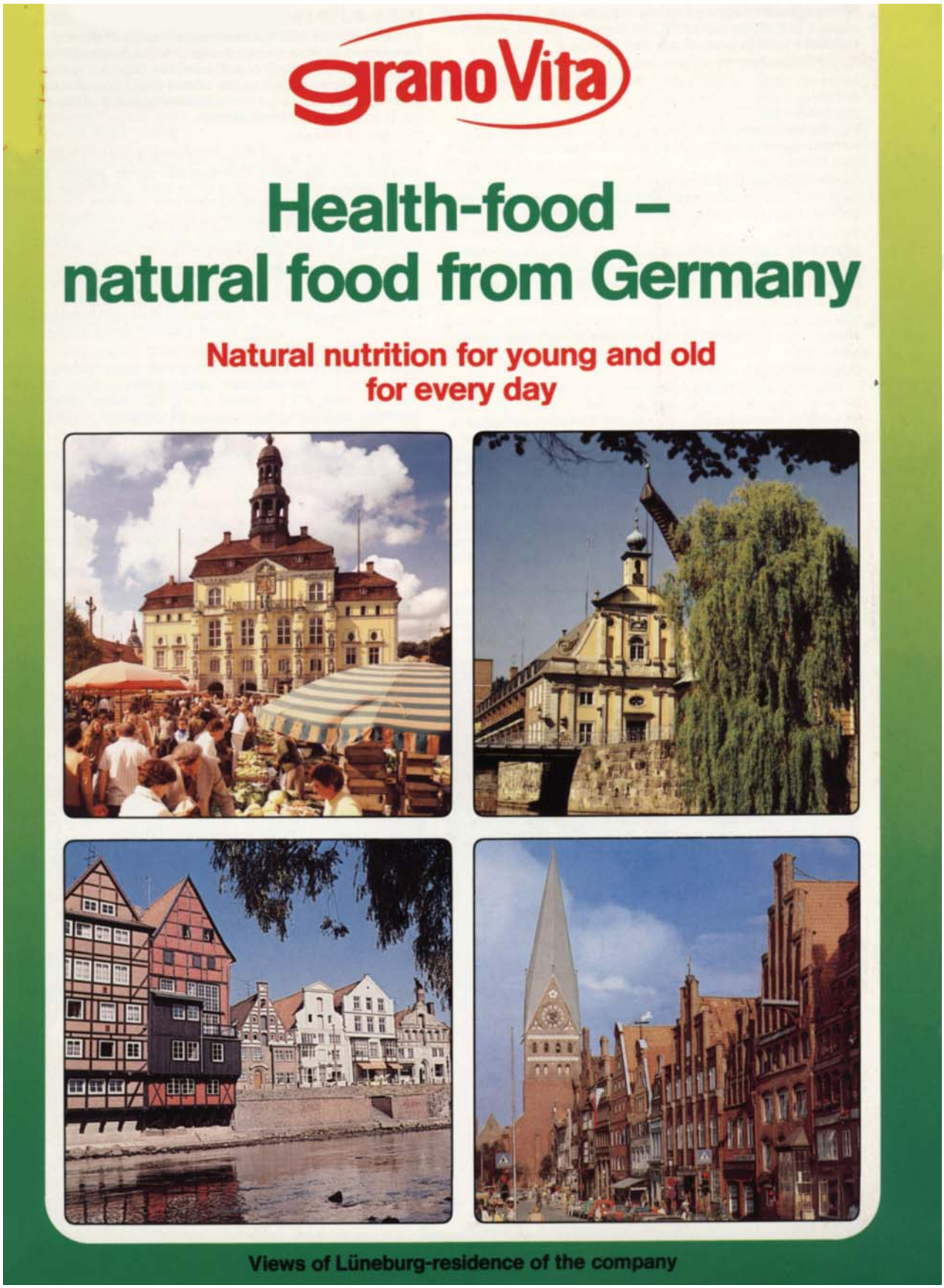

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Soya-Products

Eating meatless soya-products is up to date. It gives you a change and all the fun of discovering new tastes. Moreover meatless food is wholesome and healthful.

Soya-Sausages in 3 varieties

Article-No. 1402 Soya-sausages, standard
Article-No. 1465 Soya-sausages, highly seasoned
Article-No. 1475 Soya-Wieners
Ingredients: Vegetable oils and fats, water, soya-protein, egg-protein onions, natural spices, wheat gluten, salt, glucose, yeast, rolled-oats, bread-crumbs. 275 g per tin.

Soya-zart (tender cutlets)

Seasoned soya-cutlets. Ingredients: Soya-protein, water, corn-germ-oil, egg-protein, salt, dextrose, spices.

Soya-balls

Article-No. 1406 / 350 g per tin.
Ingredients: Soya-protein, water, corn-germ-oil, egg-protein, bread-crumbs, spices, sea-salt, wheat-protein, wheat-flakes, yeast, onions, potato-starch. Article-No. 1415 / 170 g per tin.

Pasta chuta Bolognese

Use as spaghetti-sauce. Ingredients: Tomato-pulp, water, textured soya-protein, onions, grated cheese, soya-oil, salt, natural spices, corn-starch. Article-No. 1411 / 400 g per tin.

Soya-goulash

To be served with potatoes, rice or noodles. Ingredients: Non hydrogenated vegetable-fats, soya-protein, carrots, celery, tomatoes, wheat-flour, natural spices. Article-No. 1417 / 425 g per tin.

Soya-Mignon

Can be used like meat-balls. Ingredients: Soya-protein, water, onions, rolled-oats, non hydrogenated vegetable-fats, egg-protein, spices. Article-No. 1473 / 375 g per tin.

Soya Ragout fin

To be served as tasty filling for pies. Ingredients: Water, Soya-zart, mushrooms, wheat-flour, cream, vegetable-margarine, onions, spices. Article-No. 1472 / 400 g per tin.

Soya-Vita

Perfectly seasoned patty-mixture with sea-salt. Ingredients: Soya-protein, bread-crumbs, wheat-gluten, wheat-flakes, glucose, egg-protein, yeast, potato-starch, onions, spices, sea-salt, celery, parsley. Article-No. 1409 / 200 g.

Sandwich-spreads in various tastes, in tins or to be stored in the refrigerator.

granoVita Sandwich-spreads can be used in several ways: As spreads on bread, crisp-bread or toast, in vegetarian patties, on pizza, in salads or puff-pastries, together with rice as filling for peppers. Due to the added yeast granoVita Sandwich-spreads contain a considerable quantity of the essential B-vitamins. No cholesterol.

Sandwich-spread

Produced according to a Swiss recipe. Ingredients: Water, vegetable-oils and fats, yeast, onions, potato-starch, sea-salt, natural spices. Article-No. 1312 / 80 g or as small unit for cold storage 4x62,5 g / 250 g. (Article-No. 4730).

Sandwich-spread with mushrooms

Ingredients: Like Sandwich-spread, with mushrooms added.
Article-No. 1316 / 80 g
or as small unit for cold storage Article-No. 4727 / 200 g.

Sandwich-spread with olives

Ingredients: Like Sandwich-spread with pepper-filled olives added. Article-No. 1315 / 80 g or for cold storage Article-No. 4728 / 200 g.

Sandwich-spread – like homemade

Ingredients: Water, vegetable-oils and fats, yeast, onions, wheat-wholemeal, buckwheat-groats potato-starch, spices, sea-salt, soya-flour. Reduced in calories – only 225 calories per 100 g. Article-No. 1320 / 80 g or for cold storage Article-No. 4729 / 200 g.

Soya-pikant

Ingredients: Water, vegetable-oils and fats, egg-protein, soya-protein, spices, wheat-gluten, glucose, salt, yeast, rolled-oats, soya-sauce, bread-crumbs, onions. Article-No. 1448 / 80 g.

Soya-Delikat

Tasty vegetarian slices to be used in various dishes, on bread or dressed and fried, in salads or stews. Ingredients: Soya-protein, corn-germ-oil, mushrooms, water, egg-protein, onions, salt, dextrose, spices, yeast. Article-No. 4726 / 250 g.

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Among the many color photos is an aerial view of the present factory at Lüneburg. Address: Lueneburg, West Germany.

2418. Knorr, Dietrich. ed. 1983. Sustainable food systems. Westport, Connecticut: AVI Publishing Company, Inc. xiv + 416 p. Illust. Index. 24 cm. [50+* ref]
• ***Summary:*** Contents: List of contributors. Preface. Part 1: System analysis. 1. The future of American agriculture, by D. Pimentel and M. Pimentel. 2. The potential of an alternative agriculture. 3. The new consumers: Food habits and the basis of choice. Part 2: Agricultural production. 4. Energy in U.S. agricultural production. 5. Energy and agricultural production in Europe and the Third World. 6. Role of stress tolerance in integrated pest management. 7. Design of small-scale food production systems and pest control. 8. The economic feasibility of widespread adoption of organic farming. Part 3: Food processing and distribution. 9. Appropriate food technology. 10. Solar dehydration. 11. Recycling of nutrients from food wastes. 12. Challenging the modern U.S. food system: Notes from the grassroots. Part 4: Quality and quality control. 13. Organically grown foods. 14. Quantity and quality determination of ecologically grown foods. 15. A qualitative method for assessing humus condition. 16. Nutritional considerations in planning for food production.

Chapter 2, "The potential for a sustainable agriculture," by Gil Friend, has this contents: Introduction. Contemporary agriculture. Biological agriculture. Agro-ecosystem design. Conclusions. 78 references.

Chapter 16 (p. 394-410), "Nutritional considerations in planning for food production," by Olaf Mickelsen, has this contents: Factors influencing consumers' purchases. Crops for human nutrition. Ruhner and World War I. Animal foods in human nutrition. Growth rate and milk composition. Rat milk versus human milk. Bread protein: Studies with rats. Bread protein: Studies with young men. Wheat and blood urea levels. Osteoporosis and vegetarianism. Urinary calcium loss and titratable acidity. Seventh-day Adventists and osteoporosis. Dietary fiber. Water needs of different foods. Energy to process and store foods. Plant foods for man's survival. Address: Dipl.-Ing, Dep. of Food Science and Human Nutrition, Univ. of Delaware.

2419. Loma Linda Foods. 1983. Loma Linda: 69 secrets for making delicious meatless meals in minutes. Riverside, California: Loma Linda Foods. 35 p. Index. 22 x 10 cm.
• ***Summary:*** Loma Linda makes: Canned and dry products (22 are used here in recipes). Cereals (1). Frozen (5). A color center-fold photo shows all vegetarian meatlike and dairylike products currently made by Loma Linda. The many recipes in this booklet each call for the use of a specific Loma Linda product. The index shows which products are used in which recipes. Address: 11503 Pierce St., Riverside, California 92515.

2420. Phillips, Roland L.; Snowdon, D.A.; Brin, B.N. 1983. Cancer in vegetarians. In: E.L. Wynder, G.A. Leveille, J.H. Weisburger, and E.G. Livingston, eds. 1983. Environmental Aspects of Cancer–The Role of Macro and Micro Components of Foods. Westport, Connecticut: Food and

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Nutrition Press. 298 p. See p. 53-72. Chap. 5. Proceedings of an international conference sponsored by the American Health Foundation, March 31–April 1, 1982, New York, New York. [79 ref]
• ***Summary:*** Previous reports have shown that the risk of fatal cancer among approximately 23,000 Seventh-day Adventists in California is 61% of the risk in the general population. Of these Adventists, 42% are lacto-ovo-vegetarians, 2% are vegans, and the majority use meat, poultry, and fish somewhat less frequently than most USA whites.

This report presents data on cancer risk among Adventists with differing levels of meat use. Based on 20 years of mortality follow-up of the above-mentioned sample, the mortality ratios of non-Adventists to Adventist lacto-ovo vegetarians are as follows for various cancer sites: colo-rectal cancer 1.97 (i.e. non-Adventists are almost twice as likely to die of colo-rectal cancer as Adventist lacto-ovo vegetarians), all causes of cancer 1.59, ovarian cancer 1.51, pancreas cancer 1.47, stomach cancer 1.37, prostate cancer 1.27, breast cancer 1.27, and all cancers unrelated to smoking 1.23. Thus the risk of fatal cancer among Adventist vegetarians is significantly below that of comparable non-Adventists for each of the above-mentioned sites.

Now, comparing the mortality ratios of Adventists who eat meat (i.e. meat, poultry, or fish) 4 or more days/week to Adventist lacto-ovo vegetarians, we find the following: Ovarian cancer 1.66 (i.e. 66% more Adventist meat-eaters die of ovarian cancer than Adventist lacto-ovo vegetarians), prostate cancer 1.51, all causes of cancer 1.33, breast cancer 1.28, pancreas cancer 1.16, stomach cancer 1.08, all cancers unrelated to smoking 1.07, and colo-rectal cancer 1.02.

Table 5.2 gives an overview of 22 other studies (3 cohort, 20 case control) that also contain individual data on the relationship of meat use to various cancer sites. A substantial positive association (relative risk > 1.5) was observed in 7 of the 13 studies of colo-rectal cancer, in 2 of the 4 studies of breast cancer, and in 2 of the 6 studies of stomach cancer.

"In summary, there is substantial but not entirely convincing, evidence that a vegetarian diet may protect against several of the cancers which are common in westernized populations. The evidence is quite compelling that high vegetable use may play a key role in any protective effect the vegetarian diet may offer. This protection is likely mediated by vitamins A and C and possibly by indoles, protease inhibitors, or fiber. There is suggestive evidence that a vegetarian diet which is carefully devised to also be low in total fat, saturated fat, or cholesterol may also protect against these cancers. However, the available data does not provide convincing evidence that simply deleting meat from the typical American diet would substantially reduce cancer risk."

This research was partially supported by grants from the National Cancer Institute and the National Institute of Aging. Address: 1. Prof. of Epidemiology; 2. Asst. Prof. of Epidemiology; 3. Senior Research Asst. All: Loma Linda Univ., Schools of Health and Medicine, Loma Linda, California 92350.

2421. Register, U.D.; Crooks, Hulda. 1983. Nutritionally adequate vegetarian diets. In: Miloslav Rechcigl, ed. 1983. CRC Handbook of Nutritional Supplements. Vol. I. Human Use. Boca Raton, FL: CRC Press. See p. 331-42. [41 ref]
• ***Summary:*** Contents: Introduction. What is a vegetarian diet? Protein requirement. Lacto-ovovegetarian diet. Lactovegetarian diet. Total vegetarian diet. Adequacy of plant proteins. Planning the vegetarian diet. Meat analogs.

There are three basic types of "nonflesh diets": 1. Lacto-ovovegetarians include dairy products and eggs in their diets. 2. Lactovegetarians use only dairy products in addition to plant foods. 3. Total or pure vegetarians avoid all animal products. Many total vegetarians (vegans) "substitute soymilk and soy products for dairy products"; some refuse "even to wear shoes made of leather." Address: 1. Prof. and Chairman, Dep. of Nutrition; 2. Research Asst., Health Education Dep. Both: School of Health, Loma Linda Univ., Loma Linda, California.

2422. Shultz, Terry D.; Leklem, James E. 1983. Nutrient intake and hormonal status of premenopausal vegetarian Seventh-day Adventists and premenopausal nonvegetarians. *Nutrition and Cancer* 4(4):247-59. [65 ref]
Address: 1. Dep. of Nutrition, Loma Linda Univ., Loma Linda, California 92350; 2. Dep. of Foods and Nutrition, Oregon State Univ., Corvallis, OR 97331.

2423. Snowdon, D.A. 1983. Epidemiology of aging: Seventh-day Adventists–A bellwether for future progress. In: W. Regelson and F.M. Sinex, eds. 1983. Intervention in the Aging Process. 2 vols. New York: Alan R. Liss. See p. 141-49. *

2424. Thrash, Agatha Moody; Thrash, Calvin L., Jr. 1983. Animal connection: Cancer and other diseases from animals and foods of animal origin. Seale, Alabama: Yuchi Pines Inst. vii + 163 p. 22 cm. *
• ***Summary:*** A detailed look at hygienic arguments favoring veganism. Both authors are physicians and Seventh-day Adventists. Agatha was born in 1931. Address: Seale, Alabama.

2425. Women's Auxiliary to the Alumni Association, Loma Linda University, School of Medicine. 1983. An apple a day: Vegetarian cookery by doctors' wives. Vol. II. Loma Linda, California: WAAA. 240 p. Index. 23 cm. [8 ref]
• ***Summary:*** A Seventh-day Adventist lacto-ovo vegetarian cookbook. The Cookbook Committee editor is Mrs. Georgia

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E. Hodgkin, M.S., R.D., Asst. Professor, Dep. of Nutrition and Dietetics, School of Allied Health Professions, Loma Linda Univ. Soy-related recipes include: Soy milk shake (p. 11). Spring rolls (with FriChik Soyameat, p. 15). Soy chicken salad (with canned soy chicken, p. 33, 34). Soya chick fruit salad (p. 35). Soyannaise (p. 43). Tofu cornbread (p. 49). "Tuna" burgers (with canned chicken-style Soyameat, p. 60). Savory soybean burgers (with whole soybeans, p. 61). Chicken-style spread (with canned chicken-style Soyameat, p. 62). Mild sloppy Joes (with Vegeburger, p. 64). Soy chicken spread (with Worthington's fried-style Soy chicken, p. 65). Tofu, peanut butter, and banana spread (p. 67). Whole wheat-soy waffles (with soy flour, p. 70). Crunchy granola (with soy flour, p. 74).

Many of the entrees (p. 77-143) call for canned, frozen, or dry soy-based meatlike products. McKay's seasoning (chicken-style) and G. Washington broth, Vegex, Sovex, and Savita are also widely used. The following is but a sampler: Tofu roast (p. 81). Soy bean loaf (p. 82). Soy cheese loaf (with tofu, p. 82). Chicken loaf (with chicken-style soyameat, p. 85). Soyameat broccoli casserole (chicken-style, p. 86). Onion tofu (p. 93). Easy tofu casserole (p. 94). Tofu casserole (p. 94). Lasagne (with textured vegetable protein, p. 95). Soy bean patties (p. 110). Tofu balls (p. 113). Soy beans, southern style (p. 115). Delicious baked soybeans (p. 116). Stir fry vegetables with tofu (p. 127). Tofu quiche (p. 133). Soybean soufflé (p. 138).

Tofu fruit whip (p. 171). There is a chapter titled "Foods for Fifty" (p. 185-201) including: Curried rice with soyameat (p. 195). Address: Loma Linda Univ., School of Medicine, 11136-A Anderson St., Loma Linda, California 92354.

2426. Woodroof, Jasper Guy. ed. 1983. Peanuts: Production, processing, products. 3rd ed. Westport, Connecticut: AVI Publishing Co., Inc. xiv + 414 p. Illust. Index. 24 cm. [100+* ref]

• ***Summary:*** All chapters are by J.G. Woodroof unless otherwise noted. Contents: 1. Historical background. 2. Production and marketing of peanuts in the United States, by D.H. Carley. 3. World production and trade of peanuts, by D.H. Carley. 4. The culture of peanuts. 5. Harvesting, curing, and shelling. 6. Storing peanuts. 7. The aflatoxin crisis, by T.H. Sanders. 8. Composition and nutritive value of peanuts. 9. Peanut butter. 10. Salted peanuts. 11. Peanut confections. 12. Peanut oil. Diversified food uses for peanuts, by Kay H. McWatters: Introduction, white and whole wheat peanut bread, variety breads, cookies, cakes and brownies, doughnuts and sweet yeast products, pies, peanut milk, peanut yogurt, and peanut cheese-type systems, frozen desserts, nonmilk beverages, soups and gruels, peanuts with meats, peanut snack products, breakfast cereals, summary. 14. Peanut protein properties, processes, and products, by John P. Cherry. 15. Nonfood uses for peanuts. Summary and future outlook. Appendices: 1. U.S. standards for peanuts: Farmers' stock white Spanish peanuts, Virginia-type peanuts, and runner peanuts (unshelled or shelled). 2. U.S. standards for grades of peanut butter. 3. Technical inspection procedures for peanut butter. 4. Peanut butter: definition and standard of identity. 5. Common conversions. Address: Prof. Emeritus, Dep. of Food Science, Univ. of Georgia Agric. Exp. Station, Experiment, Georgia. Phone: 404-227-3376.

2427. Woodroof, Jasper Guy. 1983. Peanut butter. In: J.G. Woodroof, ed. 1983. Peanuts: Production, Processing, Products. 3rd ed. Westport, Connecticut: AVI Publishing Co., Inc. xiv + 414 p. See p. 181-227. Chap. 9. [59* ref]

• ***Summary:*** Contents: History. Peanut butter in America and abroad. Peanut butter in the United Kingdom. Increased use of peanut butter. Importance. Manufacture of peanut butter. Shelf life of peanut butter. Peanut butter–Bulk pack. Peanut butter syrup. Peanut butter powder. Peanut butter granules. Nonoiling peanut butter. Improvement in peanut butter. Artificial peanut butter. Use of peanut butter. Bibliography.

"In Haiti and Nigeria shelled peanuts are pounded into a pulp (paste or butter) with a mortar and pestle... Making peanut butter in Haiti dates back to the Spanish occupation in 1697." And the practice "dates to before slaves were abolished in Haiti in 1793." In South Africa "this product dates to early 1790."

"In 1865 and earlier in the southern United States, shelled, roasted peanuts were chopped, ground, or beaten into a paste in a cloth bag and eaten with salt. The product was seldom sufficiently fine as to become sticky." "Possibly the first attempt to make and use peanut butter or paste, other than as a subsistence food item, in the United States was when a physician in St. Louis, Missouri, was reportedly the first to manufacture peanut butter commercially about 1900 (Beattie, 1936). [Note: Beattie 1936 makes no mention of any physician in St. Louis, Missouri in connection with peanut butter!] He recommended it for invalids because of its high nutritional value. It was said to be used in sanitariums elsewhere, especially at Battle Creek, Michigan, due to its high protein content, palatability, and low carbohydrate content. Due to the limited sale at first and lack of adequate equipment for manufacture, the price was too high for general use."

Photos show: (1) "Mortar and pestle used for making peanut butter in Nigeria in 1981, very similar to the way it was probably made two centuries before." (2) Conventional Chop-rite meat chopper suitable for grinding peanuts into peanut butter. (3) Motorized machine for grinding peanuts into peanut butter in store; customers can grind to desired fineness. Address: Prof. Emeritus, Dep. of Food Science, Univ. of Georgia Agric. Exp. Station, Experiment, Georgia. Phone: 404-227-3376.

2428. **Product Name:** [GranoVita Meatless Meat Balls]. **Foreign Name:** GranoVita Soja-mignon.

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Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1983?
Ingredients: Soya protein, water, onions, rolled oats, non-hydrogenated vegetable fats, egg protein, spices.
Wt/Vol., Packaging, Price: 375 gm can retails for DM 4,56.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products.

2429. **Product Name:** [Soya Wieners].
Foreign Name: Soja-Wienerle.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1983?
Ingredients: Vegetable oils and fats, water, soya protein, egg protein, onions, natural spices, wheat gluten, salt, glucose, yeast, rolled oats, bread crumbs.
Wt/Vol., Packaging, Price: 275 gm can retailed for DM 4,56.
How Stored: Shelf stable.
New Product–Documentation: Manufacturer's catalog. 1983. GranoVita. Health-food & natural food from Germany. 6 p. plus 3-page price list. With color photos and ingredients for all products.

2430. Daems, Chr. 1984. Re: Alpro's commercial soymilk products. Letter to William Shurtleff at Soyfoods Center, Feb. 7. 1 p. Typed, with signature on letterhead. [1 ref]
• ***Summary:*** Alpro started commercial production of soymilk in 1979 at a plant in Izegem with a capacity of 6,000 liters/hour. Soymilk production in their new plant in Ghent is expected to start in May 1984. They have 3 brands of their own: Soyamel, Alpro, and Provamel. They also sell their soymilk to several companies who use their own brand. The best known are DE-VAU-GE in Germany and Granose Foods in England. They have recently started selling to Health Valley in California under the latter's brand.

They sold a turnkey soymilk plant to a company in Madagascar, which started making soymilk in Jan. 1984. They were attempting to sell compact soymilk plants with capacities of 2,000 to 4,000 liters/hour to other countries. Address: Alpro, Zuidkaai 33, B-8700 Izegem, Belgium.

2431. Blix, Glen. 1984. Re: Update on soymilk and soy-based infant formula in America. Letter to William Shurtleff at Soyfoods Center, Feb. 8. 2 p. Typed, with signature on letterhead.
• ***Summary:*** "It is our feeling that the soy market has not grown appreciatively over the last couple of years due to a reduction in incidence of use among pediatricians. The American Academy of Pediatrics has recommended that soy use be somewhat more restricted than it has been in the past, due to their fears regarding mineral uptake, etc. I would therefore still place the total gallons of infant formula consumed in the United States at approximately 32 million gallons.

"I believe that Ross and Mead Johnson have achieved somewhat more equitable market share, with Ross possibly commanding 46 percent of the total soy formula market, or approximately l5 million gallons, with Mead Johnson some where in the range of 44 percent or 14 million gallons. We believe that Loma Linda, with the Soyalac and i-Soyalac products sells in the range of 7 percent of the market, with Wyeth being in fourth place at the 3 percent level. This would mean that Loma Linda's market share is approximately 2 million gallons, with Wyeth coming in at approximately 1 million gallons of infant formula.

"I believe the same will be true regarding the adult Soyagen formulation, with Loma Linda Foods still retaining at least 60 percent of the total market, with approximately 1 million gallons of product, Worthington's Soyamel would make up the balance of 40 percent of the adult beverage sold with approximately 0.7 million gallons.

Regarding your question concerning the percentage of sales to Seventh-Day Adventists, again, the data we have is somewhat sketchy, but I believe that less than 5 percent of the total baby formula goes into Seventh-Day Adventist households. However, the Soyagen will probably be the reverse of that, with close to 80 to 90 percent of the Soyagen sold being consumed by Seventh-Day Adventists.

"Seventh-Day Adventists would tend to use the soy based beverage primarily due to their interpretation of certain health counsels given by Ellen White, believing that the discontinuance of all dairy products would be advantageous to health. Of course, the standard allergy problems which many adults experience, as well as lactose intolerance which is particularly prevalent among the black and oriental races, are also significant factors." Address: Vice-President of Marketing, Loma Linda Foods, 11503 Pierce St., Riverside, California 92515. Phone: (714) 687-7800.

2432. Calvert, Francis E. 1984. Work with Ford and Drackett on soybeans (Interview). Conducted by William Shurtleff of Soyfoods Center, Feb. 19. 3 p. transcript.
• ***Summary:*** Francis (Frank) Calvert was first introduced to soybeans after he went to Detroit. In about 1931, Ford arrived at the Chemical Plant in Greenfield Village (also a lab and a pilot plant), with a 20 pound sack of soybeans. He threw them on the workbench and said, "More people eat these than anything else. There must be something awfully

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good about them. Why don't you fellows find out what it is." They were already doing research on agricultural wastes and chemurgy, on almost every crop you could think of.

Their first problem was getting soybeans. There were none available. Within the next year or two they planted thousands of acres themselves. Ford plowed up a big field and planted quarter acre plots with different varieties. It was an enormous quantity. Even though they didn't know what to do with them, it was Ford's style. He did nothing small. They raised hundreds of quarter acre plots, testing different varieties.

Dr. Edsel Ruddiman, after whom Edsel Ford was named, was a nutritionist and pharmacologist. He ran the food laboratory and made lots of the foods served in the Ford cafeteria to Ford employees. They were first sold as samples, but didn't sell well because of the flavor. From about 1932-33, the products included soy milk, soy cheeses, and soy ice cream and sherbets. Soynuts were also made in a counter-current fryer in rectangular buckets on a chain. The employees ate most of the products and tourists consumed some. Food was also served from the kitchen at the Wayside Inn in the village. Products were provided as a snack, but most were given as samples, and a few were sold.

Both Atkinson and Calvert, research chemists, reported to Boyer. Calvert left Ford in 1938 and went to Drackett. Boyer and Atkinson left later to do work on soy-based plastics.

ADM bought The Drackett soybean crushing plant in about 1957. Calvert went with ADM for about 5 years, until 1960-61. From 1962-74, he worked for Ralston Purina. In December 1958 Ralston purchased Procter & Gamble's plant in Louisville, Kentucky, and were already somewhat involved with isolates; they began working with foods after 1962.

Ralston went into dietary products and infant formulas in about 1963-64, supplying soy protein isolates to most of the infant formula manufacturers such as Miles and Wyeth Labs. Ralston, Loma Linda and Worthington were the biggest suppliers of infant formula from 1962-74.

Don Walker, Vice President of Ralston Purina, took a strong interest in soy protein. Ralston took the lead primarily because of the strong interest and leadership of Hal Dean, then Chairman of the Board and CEO. Dean was the key motivating force from the early 1960s. He firmly believed in and supported soy protein development.

Ford was the father of the soybean industry in the U.S. He had an impact just through his interest in soybeans. He planted soybeans and promoted and merchandised them in the same way he promoted the industrial barn at the World's Fair in Chicago. Ford set up an extraction plant and actually extracted oil and molded gearshift balls at the Industrial Barn at the Fair. People couldn't believe their eyes! Ford was the single largest soybean grower in the U.S. at that time.

Note: Frank Calvert passed away in about 1986. Address: 1513 Northlin, Kirkwood, Missouri 63122. Phone: 314-822-3187.

2433. **Product Name:** Provamel Soya Drink [Without Sugar].
Manufacturer's Name: Alpro.
Manufacturer's Address: Zuidkaai 33, B-8700 Izegem, Belgium.
Date of Introduction: 1984 February.
Wt/Vol., Packaging, Price: 250 ml, 500 ml, 1000 ml.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Food Report (Lehmann). 1984. Aug. Described in leaflets issued to health food stores in the Netherlands. Labels. 1988. No sugar or salt, with sugar and salt. Talk with Ted Nordquist of Aros Sojaprodukter, Sweden. 1988. March 27. "In late 1984 the only soy drink sold in Scandinavia was GranoVita, made for DE-VAU-GE by Alpro in Belgium. When DE-VAU-GE started their own soymilk plant (constructed by STS), Alpro introduced their own soymilk line brand-named Provamel [launched in Dec. 1982]. They marketed it in Scandinavia, competing with GranoVita."

Simon Bailey. 1988. Natural Choice. Aug. 15. A photo shows the Label. "No added sugar. 100% natural. Free of animal fats." CSP form filled out by Simon Bailey. 1988. Sept. 28. Gives date as Feb. 1984. All made with organic soybeans. Adds honey & malt flavor. The importer in England is Vandemoortele (UK) Ltd., Ashley House, 86-94 High St., Hounslow, Middlesex TW3 1NH. Phone: 01-577 2727.

Label sent by Anthony Marrese. 1990. March 22. Green and yellow on white. 1 liter Tetra Brik carton, without addition of sugar. In French, Dutch, Italian, and German. "Organic." Retails for DM 3.85. Imported and distributed by Lucas Meyer s.r.l. Consumer Div., Vigonza (Padova).

2434. **Product Name:** Granose Soya Dessert (Vanilla, or Chocolate).
Manufacturer's Name: Granose Foods Ltd. (Marketer). Made in Belgium by Alpro.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1984 February.
New Product–Documentation: Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by DE-VAU-GE, was introduced in 1981 in Vanilla, Chocolate, Strawberry, and Banana flavors. The desserts were made by Alpro in Feb. 1984.

Form filled out by Philippe Vandemoortele of Alpro. 1991. Sept. 4. The desserts were first made for Granose by Alpro in Feb. 1984 in Vanilla and Chocolate flavors.

2435. Loma Linda Foods. 1984. A lot more than meats the eye (Ad). *Natural Foods Merchandiser.* Feb. p. 113.

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• ***Summary:*** See next page. Color photos show the following prepared dishes: Chicken Supreme, Vege-Scallops, Tastee Cuts, and Ocean Platter. The front panel of each can is also shown in color.

"Loma Linda Foods. Taste great." Address: 11503 Pierce St., Riverside, California 92515.

2436. Nnakwe, N.; Kies, C.; McEndree, L. 1984. Calcium and phosphorus nutritional status of lacto-ovo-vegetarian and omnivore students consuming meals in a lacto-ovo-vegetarian food service. *Nutrition Reports International* 29(2):365-69. Feb. [13 ref]

• ***Summary:*** Seventh Day Adventist omnivore and vegetarian students, who ate primarily in a lacto-ovo-vegetarian food service, kept dietary diaries for 3 days and selected their own foods. "Vegetarian students consumed significantly higher amounts of calcium and phosphorus than did omnivore students suggesting that under the conditions described the vegetarian students were making superior food pattern selections. No significant differences in blood serum calcium and phosphorus levels between these two groups were found." Address: Dep. of Human Nutrition and Food Service Management, Univ. of Nebraska, Lincoln, NE 68583.

2437. Shurtleff, William; Aoyagi, Akiko. 1984. Soymilk industry and market: Worldwide and country-by-country analysis. 2 vols. Lafayette, California: Soyfoods Center. Vol. 1, 199 p. Vol. 2, 100 p. Feb. 28 cm. [165 ref]

• ***Summary:*** A comprehensive overview, worldwide, with extensive historical information. The first study of its type, with many statistics, graphs, and tables. Volume 1 is the market study, and Volume 2 is black-and-white copies of soymilk labels and other graphics.

Contents: 1. Introduction. 2. Directory of soymilk manufacturers and related companies worldwide. 3. Definitions and varieties of soymilk. 4. Overview of world soymilk industry and market, and future outlook. 5. United States soymilk industry and market. 6. Japan. 7. Korea. 8. China. 9. Taiwan. 10. Hong Kong. 11. Singapore and Malaysia. 12. Southeast and South Asia: (13. Vietnam. 14. Thailand. 15. Philippines. 16. Indonesia. 17. India. 18. Sri Lanka). 19. Europe (Incl. Plamil Foods in England, Tetra Pak Group in Sweden, Alfa-Laval and John Wilson in Sweden, Danish Turnkey Dairies–DTD and Soya Technology Systems (STS), Alpro / Vandemoortele in Belgium, Nestle, F. de Selliers in Belgium, Dansk Soyakagefabrik in Denmark, Lima Andiran in France, Galactina in Belp, Switzerland, and Semper A.B. in Sweden).

20. Latin America. 21. Africa. 22. History of Vitasoy in Hong Kong. 23. Two modern soymilk manufacturing processes: Marusan and Alfa-Laval. 24. Etymology of the word "soymilk" worldwide. 25. Analysis of ingredients in 49 popular Japanese soymilk products. 26. Bibliography. 27. About the Soyfoods Center. A table on p. 12 gives an overview of world soymilk production in 1983 ranked in descending order of annual per capita consumption. These statistics do not include China (PRC) or soy-based infant formulas, usually made from soy protein isolate. 1. Taiwan, 210 million liters, 11.1 liters / capita, growing at 30% per year. 2. Hong Kong, 39.1 million liters, 7.5 liters / capita, growing at 10% per year. 3. Singapore, 11.2 million liters, 4.7 liters / capita, growing at 15% per year. 4. South Korea, 67.0 million liters, 1.60 liters / capita, growing at 60% per year. 5. Malaysia, 21.4 million liters, 1.53 liters / capita. 6. Japan, 131.8 million liters, 1,10 liters / capita, growing at 101% per year. 7. Thailand, 50.0 million liters, 1.00 liters / capita. 8. USA, 9.6 million liters, 0.04 liters / capita. Total world production: 548.3 million liters.

Page 36 gives an overview of the U.S. market for soy-based infant formulas and adult soymilk. Production of soy-based infant formulas (on a ready to serve basis) in 1983 was as follows: Ross Laboratories made 14,720,000 gallons of Isomil (i). Mead Johnson made 14,080,000 gallons of Prosobee. Loma Linda made 2,240,000 gallons of Soyalac. And Wyeth Labs made 960,000 gallons of Nursoy. Thus 32,000,000 gallons of soy-based infant formula were made in the USA in 1983.

Also in 1983, consumption of soymilk by adults in the USA was as follows: 1,743,000 gallons were made by specialized soymilk manufacturers in the USA (Loma Linda Soyagen 1,000,000 gallons; Worthington Soyamel 670,000 gallons, Miller's Soy (private label) 73,000 gallons). 690,000 gallons were imported (328,000 gallons of Vitasoy by Vitasoy USA, 254,000 gallons of Yeo's by YHS, 50,000 gallons of Edensoy by Eden Foods, 25,000 gallons of President by President, 25,000 gallons of Kibun by Kibun, 8,000 gallons of To-Neu by San-J International). 250,000 gallons were made fresh by tofu companies (45,000 gallons by Mighty Soy, 41,000 gallons by Victor Foods [Scarborough, Ontario, Canada], 39,000 gallons by Quong Hop & Co., 35,000 gallons by Wy Ky, and 90,000 gallons by others).

Yield. 1 ton of raw soybeans yields approximately 4,320 gallons of soymilk. Conversion: 3.785 liters = 1 gallon.

On page 56 is a table of "Large natural food distributors in the US" with the dollar figure being estimated annual sales in millions of dollars."

1. Rainbow Distributing (Denver, Colorado) $13.
2. Arrowhead Mills (Hereford, Texas) $12.
3. Eden Foods (Clinton, Michigan) $10.
4. Rock Island Foods (Ignacio, California) $10.
5. Westbrae Natural Foods (Emeryville, California) $9.
6. Pacific Rim (Seattle, Washington) $7.
7. Cornucopia Natural Foods (Coventry, Rhode Island) $7.

Total estimated sales for the top 7 distributors: $68 million a year.

Note: This book was favorably reviewed by: (1) Andrew

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A lot more than meats the eye.

Chicken Supreme

Vege-Scallops

Tastee Cuts

Ocean Platter

If you think you're looking at four delicious meat dishes, look again.

There's not an ounce of beef or chicken or fish anywhere.

Because you're looking at four delicious, new meatless family meals from Loma Linda: Chicken Supreme, Vege-Scallops, Tastee Cuts and Ocean Platter.

Like all our fine Loma Linda Foods, each is prepared from protein-rich soybeans and other vegetable sources. There are no animal fats, no cholesterol, and no added preservatives.

Just great taste, bite after bite.

Stock up now with these profitable meal makers while our special deal is on. Check with your distributor or Loma Linda Foods.

LOMA LINDA FOODS®

Taste Great

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C. Peng, Professor, Food Processing and Technology, Dep. of Horticulture, The Ohio State University, Columbus, Ohio, in *Food Technology* Oct. 1984, p. 160. (2) Toyo Shinpo (Soyfoods News, in Japanese). 1984. Aug. 1. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2438. Shurtleff, William; Aoyagi, Akiko. 1984. Brief history of Alpro in Belgium (Document part). In: Shurtleff and Aoyagi. 1984. Soymilk Industry and Market: Worldwide and Country by Country Analysis. Vol. 1. 177 p. See p. 122-23.
• ***Summary:*** "In 1975 Alpro, the Protein Division of the Vandemoortele group started making soymilk; they decided to introduce alternative, vegetable proteins to developing countries. This Group, established in 1879, by the 1980s ranked as one of Europe's largest food processing companies in the fields of edible oils and fats, and protein foods. In 1978 the Group employed over 1,700 people and had annual sales of over $600 million. In 1979 Alpro started commercial production of soymilk at a plant in Izegem with a capacity of 6,000 liters/hour. They also sold a turnkey soymilk plant to Madagascar (it started production in January 1984) and were attempting to sell compact soymilk plants with capacities from 4,000 to 8,000 liters/hour to other countries. In May 1984 Alpro opened a new soymilk plant at Ghent, reputed to be the largest in the world. The 100% natural soymilk is made from whole soybeans, not soy protein isolates, and is sold under three brands: Soyamel, Alpro, and Provamel. Alpro will look to the U.S. and Asia for additional markets for this product, since the European market is small. They plan to focus on areas with protein shortages or lactose intolerance. In October 1983 an Alpro representative visited the USA and lined up Health Valley in Los Angeles as a master distributor. In early 1984 Alpro got distribution on the East Coast of the USA. Alpro sells quite a bit of its soymilk to other European food companies, which sell it under their individual brands. DE-VAU-GE in West Germany and Granose in England, for example, sell plain and carob soymilks (made by Alpro) in 500 ml packs. The main figures behind Alpro are Philip Vandemoortele (Managing Director) and Christian Daems (Marketing Manager)." Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2439. Shurtleff, William; Aoyagi, Akiko. 1984. K.S. Lo and the history of Vitasoy in Hong Kong and North America. (Document part I). In: Shurtleff and Aoyagi. 1984. Soymilk Industry and Market: Worldwide and Country by Country Analysis. Vol. 1. 177 p. See p. 130-153.
• ***Summary:*** Starting in the late 1950s a renaissance of interest in soymilk began in East Asia, eventually spreading from its center in Hong Kong to all countries in the area, and from there to other parts of the world. The company that inspired this development was K.S. Lo's Hong Kong Soya Bean Products Co., Ltd. (HKSBP), makers of the world-famous soymilk, Vitasoy. As of 1984, no person alive had done more to further the world's interest in soymilk (or in soyfoods) than K.S. Lo.

Early Years (1910-1944). Lo Kwee Seong was born on 2 February 1910 in Kwangtung, China. At age 10 he went to Malaya with his mother and at age 20 he went to Hong Kong. In 1935 he graduated from the University of Hong Kong with a BA degree in commerce and business. After graduation he joined the company where his father worked and was soon appointed Hong Kong manager of the firm's real estate branch.

The story of Vitasoy begins in the winter of 1937, when K.S. Lo, then 27 years old, happened to be in Shanghai on other business. There he attended a talk entitled "Soya Bean: The Cow of China," presented by the American Julean Arnold, then the commercial attaché to the American Embassy in Nanking, and actively involved in relief work using soymilk. Lo later wrote (1964), "Arnold called the soybean the 'Cow of China' and practically attributed to it the preservation of the Chinese race. He said the fact that the Chinese as a race were able to maintain their physical fitness for over 5,000 years in a land where meat was so rare was entirely due to the people's inclusion of soybeans in their diet. I was impressed by his talk and came away with soybeans stuck in my mind." Even after Lo returned to Hong Kong, Arnold's message kept returning to him.

Several years later, in 1939, following the Japanese invasion of China, the first wave of Chinese refugees arrived in Hong Kong. A refugee camp was set up in Argyle Street, Kowloon. A small group of volunteers, including Lo, went to see what could be done to help. Most of the refugees were sick or suffering from malnutrition, including beri-beri and pellagra. Seeing this, Lo again recalled Julean Arnold's message of the promise of the soybean. With the group of friends he raised some money and purchased some soybeans and brown sugar, a stone mill, a kettle, and some cheese cloth. The group set up a small soymilk shop right in the camp and taught the refugees how to make soymilk for themselves. Each refugee received one bowlful every morning. Lo later wrote: "The results were quite startling, as many of them showed significant improvement in their health after the first month. This little experiment gave me full confidence in the nutritional value of soy bean milk and I decided to make it available to the masses of people in Hong Kong who could not afford to buy cow's milk" (Lo, personal communication, March 1981).

In 1939 Lo and four of his friends got together and formed The Hong Kong Soya Bean Products Company (HKSBP), with paid-up capital of HK$15,000. (The company name was expanded to The Hong Kong Soya Bean Products Company, Ltd. in March 1940). The original plant and processing equipment, designed by the founders and located at Causeway Bay (on the site where the Plaza Hotel now stands), officially began operations on 7 March 1940. In his inaugural speech, Lo stated that the company's aim was

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to provide nutritious soymilk for the masses at the lowest possible price–an aim that has not changed over the years. In those days, when nutritional deficiency diseases such as beri-beri and pellagra were still widely prevalent in Hong Kong, this aim was doubly urgent and important. Yet the day after the plant opened, exactly nine bottles of the product, called VITAMILK, were sold. A dozen delivery boys delivered Vitamilk door-to-door each morning. The strongest supporter of the fledgling operation was a Brit, Dr. Selwyn-Clarke, then director of Medical and Health Services. The only government official aware of the nutritional value of soymilk, he gave orders that all government hospitals should use the new product instead of cow's milk for all third-class patients.

The first few years were filled with problems. Lo wrote in 1964: "We soon found that, even among us Chinese to whom the soybean was by no means new, there was a strong prejudice against soy milk. They not only did not believe its nutritional values, but they also thought it could cause diarrhea, indigestion, and stomach ache. At that stage the taste of our product, too, left much to be desired. Many customers found it hard to take, because of the strong beany flavor and the slightly bitter taste. Another problem we had to face was the keeping quality of the soy milk. We followed the dairy industry by packing it in standard half-pint milk bottles and sealing them with a paper cap and hood. They spoiled even quicker than milk unless they were kept under refrigeration all the time. As they were packed like dairy milk, we had no choice but to market them as a milk substitute. It was not until years later that we found it was a mistake to adopt such a marketing approach. For among the Chinese community, giving milk to children was considered to be a Western luxury, which only the very rich could afford. And of course to the rich, cost was no problem."

Sales continued to be slow, only 300-400 bottles a day. During the summer, sometimes as many bottles spoiled as were sold. Something had to be done. Lo began working with Dr. Y.T. Chiu, who had a written his PhD thesis at Cornell University in 1927 on methods for improving soymilk and its production, and in 1929 had published an article on the subject in China. Their goal was to get locals schools to start using Vitamilk. Speeches on soymilk and nutrition by Chiu were followed by tasting sessions conducted by Lo at the schools. The idea worked. In fact it was a major breakthrough, and today schools remain the company's single most important customer. After the first year, distribution was extended from Hong Kong Island onto the Kowloon peninsula on the mainland. There a combination soymilk cafe and distribution depot was set up. The spot proved popular with students and young people.

In the spring of 1941, Howard Hoover, who had started and run a small Seventh-day Adventist soy dairy in Canton (Guangzhou), had left that city after it fell to the Japanese. While waiting to return to the US he worked with Lo for 6 months. He taught Lo how to homogenize coconut oil into the soymilk to give it a richer flavor then helped to install the company's first Cherry Burrell homogenizer.

By mid-1941 sales of Vitamilk had risen to 1,000 bottles a day. But that was far below the break-even point, and by December 1941, when World War II broke out, the company went broke. Lo, abandoned by his partners, had sunk HK$30,000 of his own money into the venture.

Sixteen days later Hong Kong surrendered to the Japanese. Four months after the occupation Lo left for Free China (the part of China not occupied by Japanese), taking with him his family of four children. They finally settled down as refugees in a small town called Linshan on the border between Kwantung and Kwansi, west of Canton. Here again the soybean provided Lo with a livelihood and probably saved the family's life. Lo put up a makeshift building and called it The Cafe. After buying a stone mill, he started to make soymilk and home-made cakes, and thus made a living until World War II was over. Their fifth child, Irene, was born during this hard time. Lo's wife had no breast milk to feed her since she had not nursed the other children. Irene was thus raised on soymilk which, the family felt, saved her life. Continued. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2440. Shurtleff, William; Aoyagi, Akiko. 1984. K.S. Lo and the history of Vitasoy in Hong Kong and North America. (Continued–Document part II). In: Shurtleff and Aoyagi. 1984. Soymilk Industry and Market: Worldwide and Country by Country Analysis. Vol. 1. 177 p. See p. 130-153.
• ***Summary:*** Continued. Starting Over (1944-1959). The British Navy returned to Hong Kong on 31 August 1944, after the Japanese surrender. Lo returned 2 weeks later and quickly got back his plant from the Custodian of Enemy Properties. He was glad to find that the Japanese had left most of his equipment intact. He borrowed HK$50,000 from a friend and by November 1945 Vitamilk was back on the market. At this time, everything was scarce in Hong Kong and only one company had resumed production of soft drinks. Lo seized the opportunity to sell his soymilk, still in milk-type bottles with paper cap and hood, through soft drink outlets instead of delivering it to households. Now he presented it to the typical man on the street as a noncarbonated beverage rather than as a morning milk substitute. In the "small people in the street," Lo wrote in 1964, "I found my best friends and customers, who have remained the backbone of my business even to this day. Our sales increased so rapidly thereafter that our only problems were how to step up production and enlarge the areas of distribution."

In about 1948 Lo first started adding vitamins to his soymilk. He was probably the first person in the world to do this. Although it was sold somewhat like a soft drink, Vitamilk aimed at replacing the empty calories of

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conventional soft drinks with protein and essential nutrients.

In 1949, having paid off his loan in less than a year, Lo bought a piece of land in Aberdeen, Hong Kong, and started to build a new plant. However before it was finished Lo had been chosen to be the Hong Kong franchise for Greenspot, a large California-based manufacturer of orange concentrate. When the Aberdeen factory opened in 1950 it was Greenspot orangeade that was made there. Vitamilk stayed in the old factory at Causeway Bay, because Lo could not afford to move it.

For years Lo had dreamed of being able to sell his soymilk in soft-drink type bottles, sterilized to give a shelf life of 6 months without refrigeration–just like the Greenspot they were now bottling. But there were extra problems involved in bottling soymilk this way. Experts with whom Lo consulted said that it probably could not be done without the use of a preservative, but that if anyone figured out how to do it without preservatives, they would become rich. Lo decided to accept the challenge. He hired a man with a US degree in dairy science and asked him to try to sterilize soymilk in Greenspot capped glass bottles. After repeated failures, explosions, and injuries, the project was a success. The two men were overjoyed, for they realized that now, at last, soymilk could be marketed exactly like soft drinks without the handicaps of the milk bottle and short shelf life.

In about 1953 Vitamilk first came on the market in soft-drink bottles, sealed with a metal crown cap and sterilized to allow it to keep for months. Now the soymilk operation was moved into the new plant at Aberdeen and the soymilk was distributed on the same truck as Greenspot. Retailers who previously could order only a dozen bottles at a time for lack of refrigeration space, could now take up to a dozen cases. A major marketing barrier had been broken. Vitasoy had been remade, and was the first beverage of its kind in the world. With this new approach, Lo discovered a new market that has continued to remain the backbone of his business. The change of product concept and distribution channel brought immediate success, and sales began to increase dramatically. For many years thereafter Lo's biggest problem was how to produce enough soymilk to keep up with the growing demand, as sales would sometimes double or triple in one year. By 1958 a million cases (24 million bottles) a year were being sold.

This fast expansion attracted the attention of many, both in and outside of Hong Kong. In Hong Kong the success of Vitamilk aroused the envy and jealousy of companies making competing beverages. They formed a lobby to get the Urban Council to forbid Lo from using the word "milk" in his product name. In 1953, after some wrangling, a compromise was reached whereby Lo was allowed to retain the Chinese characters in his registered trademark if he changed the English name of his product from VITAMILK to VITASOY. The characters were *Wai-ta Nai; Wai-ta* means "vitality" in Chinese, and also forms a part of the Chinese word for "vitamin," *wai-ta ming. Nai* means "milk," such as cow's milk. Lo was not the first person in the world to use the term Vitasoy. It had been used as early as 1936 in the USA as the name for a "soybean milk powder" by Soya Health Products in New York, and as early as 1948 as the name for "vitamin and enriched infant and vegetarian food" made with soy flour by Soya Foods Ltd. in England.

Soon after Vitasoy caught on in Hong Kong, other companies began to jump on the bandwagon, following Lo's basic marketing concepts. In about 1948 in Manila, Soya Lac, launched as a milk substitute in 1941, was reintroduced as a healthful soft drink. In 1954 Yeo Hiap Seng, a big Chinese food manufacturer in Singapore, launched its first soymilk. Called BEANVIT (later renamed Yeo's Soybean Drink) it was sold as a soft drink in sterilized bottles, the first product of its type in Singapore and Malaysia. (In 1967 Yeo Hiap Seng's soymilk became the first in the world to be sold in Tetra Pak, the new tetrahedronal aseptic and disposable cartons, requiring no refrigeration.) In 1958 Green Spot in Thailand started making soymilk, followed in 1959 by Saniku Foods in Tokyo. The pioneers of what would eventually become East Asia's soymilk boom were starting to grow, drawing their inspiration from Vitasoy in Hong Kong.

Outside of Hong Kong, Vitasoy had begun to catch the attention of people in the United Nations, especially those in UNICEF and FAO. Representatives of these organizations, when passing through Hong Kong, often wanted to visit Lo's plant. Thus, in the late 1950s, when UNICEF decided to assist Indonesia in setting up a soymilk plant, four Indonesian technicians were sent for 3 months work and training at Lo's factory.

In 1957 HKSBP was granted the Pepsi-Cola bottling franchise for Hong Kong, which they kept until 1976. Although they did not make any profit on the franchise during all those years, they did manage to learn from the Pepsi people a good deal about marketing, which they employed to advantage in marketing their own products.

In about 1959 Lo set out to find a way to make Vitasoy popular year-round. In Hong Kong 80% of all soft drinks were sold during the 6 warm months, and only 20% from November to April. That year Lo developed a heater that would heat up to four cases (96 bottles) of Vitasoy at a time, and keep them hot (145ºF) during the chilly weather. The idea caught on and retail store owners loved it, for it helped their beverage sales during the typically slack cold months. Customers loved it too, for Vitasoy was the only soft drink available that one could enjoy piping hot to take away the winter's chill. With the help of the winter heaters and the introduction of chocolate-flavored Vitasoy (also in 1959), sales again shot upwards. And throughout the 6 cold months they now stayed at 50% of peak summer sales. Continued. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

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2441. Shurtleff, William; Aoyagi, Akiko. 1984. K.S. Lo and the history of Vitasoy in Hong Kong and North America. (Continued–Document part III). In: Shurtleff and Aoyagi. 1984. Soymilk Industry and Market: Worldwide and Country by Country Analysis. Vol. 1. 177 p. See p. 130-153.
• ***Summary:*** Continued. The 1960s, Continuing Growth. During the period from 1955 to 1960 sales of Vitasoy grew 5-fold, from 8.4 million bottles in 1955 to 42 million in 1960. This represented a remarkable compound rate of 38% a year, the highest rate in the company's history up to the present. The time had come to launch a new phase of the business: mass promotion.

In the early 1960s, with sales skyrocketing, Lo set out to take full marketing advantage of the breakthroughs he had made in packaging, distribution, and market domination. He launched a major, modern advertising campaign. The slogan (used until 1975), emphasizing health and nutrition, introduced a much wider public to Vitasoy and its new name. It proclaimed: "Vitasoy makes you taller, stronger, and more attractive."

During the 1960s, sales increased 2.4-fold, climbing to 60 million bottles a year in 1962, then to 67 million in 1965 and 100.8 million in 1970, for a very healthy compound growth rate of 9.2% a year during the decade. By 1962 Vitasoy had become Hong Kong's best-selling soft drink, ahead of such internationally known brands as Coca-Cola, Pepsi-Cola, and Seven-Up (Lo 1964). In 1964 Vitasoy retailed for less than one-third the price of cow's milk in Hong Kong. In the mid-1960s Malt Vitasoy was introduced and soon became very popular. By 1968 Vitasoy had captured an impressive 24% of the highly competitive Hong Kong soft drink market. Here, indeed, was a soybean Cinderella success story.

In 1961 Vitasoy, which had met no competition from brand-named soymilks since its origin, suddenly had its first real rival. Fung Lik Nai, meaning "milk filled with energy and power," was launched that year, only to disappear after one season. Again Vitasoy shared the market only with tiny street-side makers of traditional soymilk.

In 1962-63 HKSBP built a new plant in Kowloon, doubling the production capacity of the old plant in Hong Kong. By the first year it was operating at 90% of capacity. The plant had the most modern, mechanized equipment, including a continuous automatic sterilizer for the sealed bottles.

In 1964 Lo was invited to present a paper on his experience in promoting Vitasoy at the International Symposium on Oilseed Protein Foods organized by UNICEF in Tokyo. The paper was hailed for its description of the commercial marketing of a protein-rich soft drink. It was published in the May 1964 issue of *Soybean Digest.* Because of Vitasoy's proven success, the United States was now willing to grant outright financial aid to any American company willing to introduce protein-enriched soft drinks in any Latin American country. UNICEF was also willing to give financial and technical aid to companies interested in starting similar projects in developing countries in Asia or Africa. Right after the Tokyo conference Lo was approached by more than half a dozen multinational companies, who wanted to franchise Lo's Vitasoy process on a worldwide basis. Lo finally chose to go with Monsanto, a chemical company based in St. Louis, Missouri. Monsanto wanted to diversify into food processing, using Vitasoy as the key catalyst for its new department. Most of the other companies were already heavily into food processing and Vitasoy would be just another item for them. Monsanto and Lo set up a Hong Kong subsidiary, Lomond Ltd., of which Lo owned one-fifth of the stock and got royalties on sales.

The choice of Monsanto, however, proved to be a serious mistake, for they had no experience in developing and marketing a new food. Instead of going out and finding interested bottlers, they spent 3 years on fruitless research, hoping to develop a concentrate (based on soy protein isolates and containing more than 100 flavor ingredients, including vanilla, orange, and cinnamon) with an improved flavor that they could sell to prospective bottlers like Coca-Cola's secret formula. In August 1968 Monsanto announced that it planned to bottle and market a soymilk soft drink in Guyana, South America, with plans for eventual expansion to other Latin American and Asian markets (*Soybean Digest,* Aug. 1968; *TIME* 1968). The new isolate-based drink, called Puma, containing about 2.5% protein, was launched in 1969. It had a strong banana flavor. In the early years about 29 million bottles were sold annually, all through retail outlets. Yet from Lo's point of view, the Puma project had only limited success. In 1969, when the heavy chemical industry turned sour, Monsanto, itself in larger trouble, stopped putting new money and energy into the project, and they soon sold the entire operation to the local bottler (who was still making Puma in 1976; Aguilera and Lusas 1981). This whole debacle was Lo's biggest setback to date. He had had a world market at his fingertips and lost it. After this apparent failure he was never able to renegotiate with other multinationals. Once again, he would be forced to start all over using an entirely new approach–but that would have to wait until the late 1970s (Lo 1982).

One of Lo's greatest admirers was Dr. Harry Miller, who had pioneered soymilk production in Shanghai in 1936. He and Lo had first met in Hong Kong after World War II. Miller visited the Vitasoy plant. Lo remembers him as "quite business minded and interesting in getting people to use his soymilk manufacturing process, on which he would collect a small royalty." Miller wrote two articles about Vitasoy in the *Soybean Digest* in June 1948 and May 1965. Miller, who was one of the first to see the great potential of soymilk for China, was apparently delighted that Lo had been able to so successfully manifest this potential. In the 1965 article

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he spoke of Lo's "genius and leadership" and how some 40 large delivery trucks distributed Vitasoy to hospitals and schools. It retailed from street vendors for slightly more than 3 cents (US) per 7-ounce bottle.

"By the late 1960s the international media began to take notice of Vitasoy's meteoric rise to popularity. In 1968 *Time* magazine ran an article stating that "Vitasoy has become the new soft-drink craze of the British Crown Colony. A 6.5 oz. bottle costs 3.5 cents, compared with 4.8 cents for the same sized bottle of Coca-Cola. Vitasoy has captured 25% of the Hong Kong soft-drink market. This year an estimated 78 million bottles, second only to Coca-Cola's 100 million, will be sold from sidewalk stands, sampans and grocery stores for a total of $2,600,000." In about 1974 a major East Asian business magazine did a long story on Lo, his company, and Vitasoy.

As soon as Lo had proved the potential of soymilk, the giant Coca-Cola Company got interested. In 1966 they started a Protein Beverage Project within the company and in 1968 introduced their first soymilk, Saci, in Brazil. Coke was smart enough to join the trend rather than fight it. Eventually other huge multinational corporations, including Mitsubishi in Japan and Nestle in Europe (in the late 1970s) followed Vitasoy's lead, further sparking the soymilk renaissance. Continued. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2442. Shurtleff, William; Aoyagi, Akiko. 1984. Japan: Soymilk industry and market (Document part). In: Shurtleff and Aoyagi. 1984. Soymilk Industry and Market: Worldwide and Country by Country Analysis. Vol. 1. 177 p. See p. 63-81.

• ***Summary:*** Historical. Soymilk was not a part of the traditional diet in Japan, as it was in China. Cow's milk, which entered Japan in about 1000 A.D., likewise, never became a part of the basic diet. Reference to soymilk (then called *toju* or "bean liquid") may have appeared as early as the 1100s, but the first clear reference was not published until 1895, when Inouye did one of the world's first nutritional analyses of soymilk, and compared it to cow's milk. In 1906 Katayama wrote two articles on soymilk; in one he described preparation of a fermented soymilk cheese, similar to Swiss cheese. Yet both Inouye and Katayama wrote in English. In 1924 Sato Yoshitane wrote a book called *Daizu Kakko,* which is said to contain the earliest known reference to the word soymilk (*tônyu*), written with the present characters.

From this time on (and perhaps from an earlier date) some Japanese (an estimated 1% of the population) would order fresh soymilk from their local tofu shop, usually for health-related reasons, as in diabetic diets or for mothers who had difficulties with breast feeding, or because it was thought or found to be a health-giving beverage.

The earliest known commercial production of soymilk in Japan dates back to the influence of Dr. Harry Miller. In 1957 two Japanese Seventh-day Adventists, following his inspiration, started making soymilk in Hachioji, Tokyo, and selling it locally in 180 ml cartons. In 1958 Dr. Miller set up a small soymilk plant in the kitchen of the Adventist Tokyo Sanitarium. It was used to make soymilk, soy whipping cream, soymilk ice cream, and soy spread, which were served to the staff and patients. In 1959 a small soymilk plant was established in the Seventh-day Adventist Saniku School. From this year, Japan's oldest existing soymilk company, Saniku Foods, traces its origin.

A chronology of the starting date of Japanese soymilk companies is as follows. Only three, each followed by an asterisk, are no longer in business:

During the period from 1973 to 1976 soymilk started to become quite popular in Japan, largely because of developments in processing technology that made it possible to produce soymilk with a bland (non-beany) flavor, and because of promotion by the new soymilk companies. In 1974 Japan's first major book on soymilk was published. By 1976 the Japanese were making the best soymilk in the world–by Western standards.

A new era began in 1976 when Kyushu Milk Co., a long-established, middle sized dairy milk company, started making soymilk. Tremendous momentum was added to this new direction in April l979, when Meiji Milk Co., Japan's second largest milk company also started to sell soymilk (made by Marusan but with the Meiji brand). Meiji first began to make their own soymilk in their own plant in March 1981. That same month Morinaga Milk Co. was licensed by Mitsubishi to distribute their soymilk. Quickly thereafter each of the other major Japanese milk companies (Meito, Yuki-jirushi) followed suit, joining the wave of the future rather than fighting it. Their analysis was that fundamentally soymilk and cow's milk were complementary rather than competing products, and that making soymilk would allow a company to expand its market size by reaching people who did not ordinarily drink cow's milk. In retrospect, this analysis has proven to be correct.

What has since often been called "The Soymilk Boom" really started in Japan in about 1981-82. The main reasons for this were:

1. A growing interest among Japanese in good health and nutrition, through improved diet. A corollary of this was the concept that the elite should be especially healthy, both to improve their own performance and well being, and to set an example for others. The American health, natural foods, soyfoods, and vegetarian movements all had a significant influence on Japanese attitudes toward good health.

2. Improved soymilk quality/flavor, and a growing number of varieties and flavors.

3. Popularization of packaging (such as Tetra Brik aseptic cartons) that would give the soymilk a long shelf life, allowing nationwide distribution from one large soymilk plant.

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4. Strong interest and support by the media/mass communications followed, after 1981, by extensive advertising and promotion on TV (especially by Kibun and Marusan), in the print media, and with in-store demos by soymilk companies.

5. The aggressive marketing of soymilk by all of Japan's major milk companies.

6. The establishment of Japanese Agricultural Standards (JAS) for soymilk in May 1981.

7. Large numbers of tofu shops starting selling fresh soymilk (containing its natural "beany" flavor), starting in about mid-1982.

8. Large manufacturers and distributors of beverages and related food products started to buy soymilk in bulk from manufacturers, then to market and distribute it under their own labels. Examples: Kirin Beer, Kagome (a large ketchup maker), Suntory, etc.

From 1978 to 1983 the soymilk market in Japan, on average, more than doubled each year, making it the fast growing food market in Japan! Many new brands started appearing in 1982 and there was a big jump in production. Soymilk was the star and darling of the media and it played a major role in enhancing the image and sales of all soyfoods in Japan.

Market Size and Growth Rate: The following statistics show the increase in size of the Japanese soymilk market: Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2443. Shurtleff, William; Aoyagi, Akiko. 1984. History of soy protein concentrates, isolates, and textured soy protein products. Soyfoods Center, P.O. Box 234, Lafayette, CA 94549. 25 p. March 4. Unpublished typescript. Available online at www.soyinfocenter.com.

• ***Summary:*** A comprehensive history of the subject. Contents: Definition of types of products. Part I: History of modern soy protein products from origin to 1964. Soy protein isolate: Tofu, Nagel in New York 1903, Beltzer in 1911, Ajinomoto in 1919, Cone and Brown patent in 1928, Glidden (first plant in U.S. for production of industrial grade soy protein isolate) in 1935, first study of use of soy isolates in food (Woodruff at University of Illinois, 1938), Glidden first company in the West to produce a soy protein isolate for use in food (1939, enzyme-modified), Glidden first with large-scale production of non-enzyme modified isolates (1957), Worthington Foods introduced Soyamel in 1952 (first soymilk based on isolate). Soy protein concentrates: First developed and introduced in Germany in 1925, first commercial food-grade concentrates and first patent from Griffith Laboratories in 1959. Textured soy protein products: Developed in China 1,000 years ago, made from tofu or yuba, earliest Western meat analogs developed by John Harvey Kellogg about 1896 (without soy), first synthetic industrial protein fiber (Lanital, made from casein) introduced in Italy 1936, first industrial (non-food) soy protein fibers in 1938 from Robert Boyer of Ford Motor Co. (used for upholstery), Boyer got patent for use in food (1951), rights purchased by Worthington, Dr. Harry Miller's soya loaf in 1939, Worthington first to produce a meat analog based on spun soy protein fibers in 1960, textured soy flour (TSP or TVP) introduced as food ingredient in U.S. in 1964.

Part II: History of modern soy protein products in the U.S. from 1965 to 1981. 1964 Belden report from Harvard Business School *Protein Paradox.* Commercial Protein Foods Studies Program of the U.S. Agency for International Development (AID) encouraged U.S. firms to develop protein foods for the Third World in 1967. General Mills Bac-O's test marketed 1966. Producers. February 1971 breakthrough when USDA authorized use of TVP in school lunch programs. 1972 *Soybeans. Chemistry and Technology,* edited by Smith and Circle, contained all the research on nutrition and processing up to that time. 1973 high beef prices led to beef-soy retail blends. Appearance of TSP cookbooks, starting in 1971. First World Soy Protein Conference held in Munich, Germany, in 1973. In 1974 Miles Laboratories/Worthington Foods introduced Morningstar Farms meat analogs, the first soy protein meat analog entrees marketed to mainstream America. Textured soy concentrates and other concentrate developments. New developments with isolates. New flavorings. New textured soy flour development. 1978 Keystone Conference on soy protein and human nutrition sponsored by Ralston Purina. Problems with government regulation.

Part III: History of modern soy protein products outside the U.S. and Europe (1960-1981): Japan. China. Other Asia: Philippines, India, Sri Lanka. Latin America: Colombia, Mexico. Address: Lafayette, California. Phone: 415-283-2991.

2444. Shultz, T.D.; Leklem, J.E. 1984. Vitamin B-6 status of Seventh-day Adventist vegetarians, nonvegetarians, and hormone dependent cancer subjects (Abstract). *Federation Proceedings* (*FASEB*) 43(4):987 (Abst. #4105). March 5. Address: 1. Loma Linda Univ., Loma Linda, California 92350; 2. Oregon State Univ., Corvallis, Oregon 97331.

2445. Cook, John. 1984. The church whose members have less cancer. *Saturday Evening Post.* March. p. 40-42, 108.

• ***Summary:*** About Seventh-day Adventists.

2446. Cooper, Richard; Allen, A.; Goldberg, R.; Trevisan, M.; et al. 1984. Seventh-Day Adventist adolescents–Life-style patterns and cardiovascular risk factors. *Western J. of Medicine* 140(3):471-77. March. [52 ref]

• ***Summary:*** "The life-style of adolescents attending a Seventh-Day Adventist boarding school was evaluated as it related to cardiovascular risk factors. The diet contained 34% calories as fat, with 11% derived from saturated fat.

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Total serum cholesterol levels were low (138 mg per dl), and apolipoprotein B level was low as well (46 mg per dl)." Mean blood pressures were also low (104/65). Address: 1,2&4. Dep. of Community Health and Preventive Medicine, Northwestern Univ. Medical School, Chicago. Illinois.

2447. **Product Name:** Natural Touch Okara Patties.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1984 March.
Ingredients: Textured soy protein concentrate, wheat gluten, egg whites, okara (cooked soy pulp), soy oil, potatoes, yeast extract, skim milk, onion, sea salt, carrageenan, vegetable gum, spices, paprika, oil of celery, turmeric.
Wt/Vol., Packaging, Price: 9 oz box contains 4 patties. Retails for $1.89-$2.09.
How Stored: Frozen.

New Product–Documentation: Note that even though this product has "Okara" in the product name, okara is a relatively minor ingredient, the fourth most predominant after soy protein concentrate, egg whites, and wheat gluten.

Spot in Soyfoods. 1984. Summer. p. 45. "Prepared Patty Pair." Product with Label purchased from Berkeley Natural Grocery Co., California. 1984. 8 by 4 by 1.25 inches. 4 color box. Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. "Golden Goodness. Nothing Artificial, Protein Rich/Natural Fiber."

Ad (full page, color photo) in Natural Foods Merchandiser. 1985. May. "Natural Wonders. Discover Natural Touch for something new in natural foods taste!" Shows color labels/packages for each of four entrées, including Okara Patties and Tofu Garden Patties.

2448. Worthington Foods, Inc. 1984. Worthington: Yesterday and today. Worthington, Ohio. 12 p. April 3.
• ***Summary:*** Includes a concise history of the company. In March 1970 Worthington was acquired by Miles Laboratories. On 15 Oct. 1982 Worthington was repurchased from Miles Laboratories by a group of three Seventh-day

Adventist investors. During the 12 years under Miles, sales increased five-fold. Sales volume in 1983 was an all-time high. The company employs 250 people.

The section titled "Yesterday and today" (p. 4-9) contains an excellent history of Worthington Foods, accompanied by 18 photos (both black-and-white and color). "Worthington Foods got its start in vegetarian foods in 1939 with two peanut-based products, Proast and Numete. These were among the first items produced by the company then known as Special Foods, Inc. Operations began in Worthington, Ohio, inside a small two-story home." [see photo]

"Dr. George T. Harding, Sr. borrowed $5,000, secured with a mortgage on his home, to launch Special Foods, Inc. and was soon joined by four other Seventh-day Adventist investors. Bill Robinson was appointed manager and the only salaried employee."

"The company survived and grew. By the end of two years, annual sales had reached $20,000."

Note 1. This is the earliest document seen (Aug. 2002) containing statistics on the meat alternatives industry or market–by individual companies.

Note 2. A later (undated) revised edition of this booklet was published in about 1987. The cover title was "Worthington: Building for a healthier tomorrow." Address: Ohio.

2449. Zollinger, Terrell W.; Phillips, R.L.; Kuzma, J.W. 1984. Breast cancer survival rates among Seventh-day Adventists and non-Seventh-day Adventists. *American J. of Epidemiology* 119(4):503-09. April. [18 ref]
Address: 1. Indiana Univ., School of Public and Environmental Affairs, Bloomington, IN 47405; 2-3. Loma Linda Univ., School of Health, Loma Linda, California.

2450. Nordquist, Ted. 1984. Re: New developments at Aros in Sweden. Letter to William Shurtleff at Soyfoods Center, May 21. 1 p. Handwritten.
• ***Summary:*** Worthington Foods wants to make one of Aros' products "on license." Ted asks about the royalty and terms that are customary in such circumstances.

"We are really too busy to 'communicate' as we should. I am quitting the university this summer and will be more courteous and business-like in the future!" Address: President, Aros Sojaprodukter, Bergsvagen 1, S-190 63 Orsundsbro, Sweden. Phone: 0171-604 56.

2451. Worthington Foods. 1984. Zero cholesterol: The

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number one reason to buy Morningstar Farms (Portfolio). Worthington, Ohio. 9 inserts. May 25. 30 cm.
• ***Summary:*** See next two pages. The inserts (each 8½ x 11 inches, glossy) are: (1) "Milestone study conclusively links cholesterol with #1 Killer * (Findings published in January 20, 1984 *Journal of the American Medical Association*)." (2) "Morningstar Farms: The leader in delicious, cholesterol-free food." (3) "The word's out: Zero cholesterol is in. An here's how Morningstar Farms is telling your customers." Describes marketing program in detail. (4) "No cholesterol. No kidding." (5) Cover and cover story from *Time* magazine titled "Cholesterol: And now the bad news" (March 26, 1984). (6) Ad slicks of the cover of Morningstar Farms packages. (7) Ad slicks of the Morningstar Farms logo. (8) "Zero in on these cost-cutting prices" (case discounts). (9) Natural Touch launch news release. Address: Worthington, Ohio 43085.

2452. Kahn, Harold A.; Phillips, R.L.; Snowdon, D.A.; Choi, W. 1984. Association between reported diet and all-cause mortality: Twenty-one-year follow-up on 27,530 adult Seventh-day Adventists. *American J. of Epidemiology* 119(5):775-87. May. [27 ref]
• ***Summary:*** Vegetarians generally have lower mortality rates from severe chronic degenerative diseases than do nonvegetarians. Address: Loma Linda Univ., Loma Linda, California 92350.

2453. Stich, Hans F.; Hornby, A.P.; Dunn, B.P. 1984. The effect of dietary factors on Nitrosoproline levels in human urine. *International J. of Cancer* 33(5):625-28. May. [17 ref]
• ***Summary:*** The ingestion of nitrite-preserved meats led to high urinary levels of nitrosoproline (NPRO), a non-volatile nitrosamine. Numerous epidemiological studies point to the involvement of N-nitroso compounds in the etiology of human cancers. 14 lacto-vegetarians (members of the International Society for Krishna Consciousness–Hare Krishna) and 22 vegetarians (members of the Seventh-Day Adventist Church) participated in the experiment as controls. Address: Environmental Carcinogenesis Unit, British Columbia Cancer Research Centre, 601 West 20th Ave., Vancouver, BC V5Z 1L3, Canada.

2454. Worthington Foods, Inc. 1984. Natural wonders. Discover Natural Touch for something new in natural foods. Taste! (Ad). *Whole Foods.* May? Also in Natural Foods Merchandiser. 1985. May.
• ***Summary:*** This full-page color ad shows packages of Dinner Entrée, Natural Touch Tofu Garden Patties, Okara Patties, and Harvest Bake Lentil Rice Loaf. "Introducing Natural Touch entrées. An all new family of all-natural foods with wonderfully great taste." Address: Worthington, Ohio 43085.

2455. Worthington Foods, Inc. 1984. Worthington Foods has announced the launching of Natural Touch, an all new, all natural product line with "The taste nobody can touch" (News release). Worthington, Ohio. 2 p. May.
• ***Summary:*** Announces launch of Tofu Garden Patties and Okara Patties at Natural Foods Expo in Anaheim, California, in March. Address: Worthington, Ohio.

2456. Poston, Frank. 1984. Worthington Foods and their new Natural Touch line (Interview). *SoyaScan Notes.* June 7. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The upsurge in Morningstar Farms sales, the line they direct to the cholesterol-concerned market, started to increase in late 1983 due primarily to increased promotion. The upsurge was helped substantially by the cover story in *Time* magazine (March 26, 1984) titled "Cholesterol: And now the bad news." The inside story, in the Medicine section, was "Hold the eggs and butter."

Miles Laboratories hadn't done much with promotion and advertising for 2-3 years in a row. In 1984 the first quarter's sales were up 18% above last year.

Worthington has 3 product lines: (1) Morningstar Farms is promoted to the mass consumer with an emphasis on no-cholesterol. (2) The Worthington branded lines is promoted to Seventh-day Adventists. (3) The Natural Touch line is promoted to the natural / health market, plus some to Seventh-day Adventists.

Worthington is now working to take advantage of the *Time* magazine article by sending out news releases, PR releases, etc. He'll put Soyfoods Center on their list.

Only the Morningstar line has benefitted from the upswing in interest / concern with cholesterol. The other lines are not promoted for cholesterol.

He does not know how much tofu they now make.

The Natural Touch line will include a whole line of products, including snacks as well as products manufactured elsewhere. They now have only entrees. New additions will appear this year. The buyback from Miles Laboratories went smoothly and with much good will. Miles was bought out by Bayer (pronounced BAI-ur), a huge pharmaceutical company and they really weren't interested in food anyway. Miles cut way back in promotion during the last few years. They we never satisfied with the volumes they got.

Worthington now has mostly non-Adventist employees, but the majority of the investors are Adventists. Warren Hartman retired but is on the board. Address: Director, Product Marketing, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

2457. Murray, Frank; Tarr, Jon. 1984. More than one slingshot: How the health food industry is changing America. Richmond, Virginia: Marlborough House Publishing Co. 240 p. + 16 p. of photos. June. Illust. No index. 18 cm. [20 ref]
• ***Summary:*** A history of the National Nutritional Foods

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ZERO CHOLESTEROL

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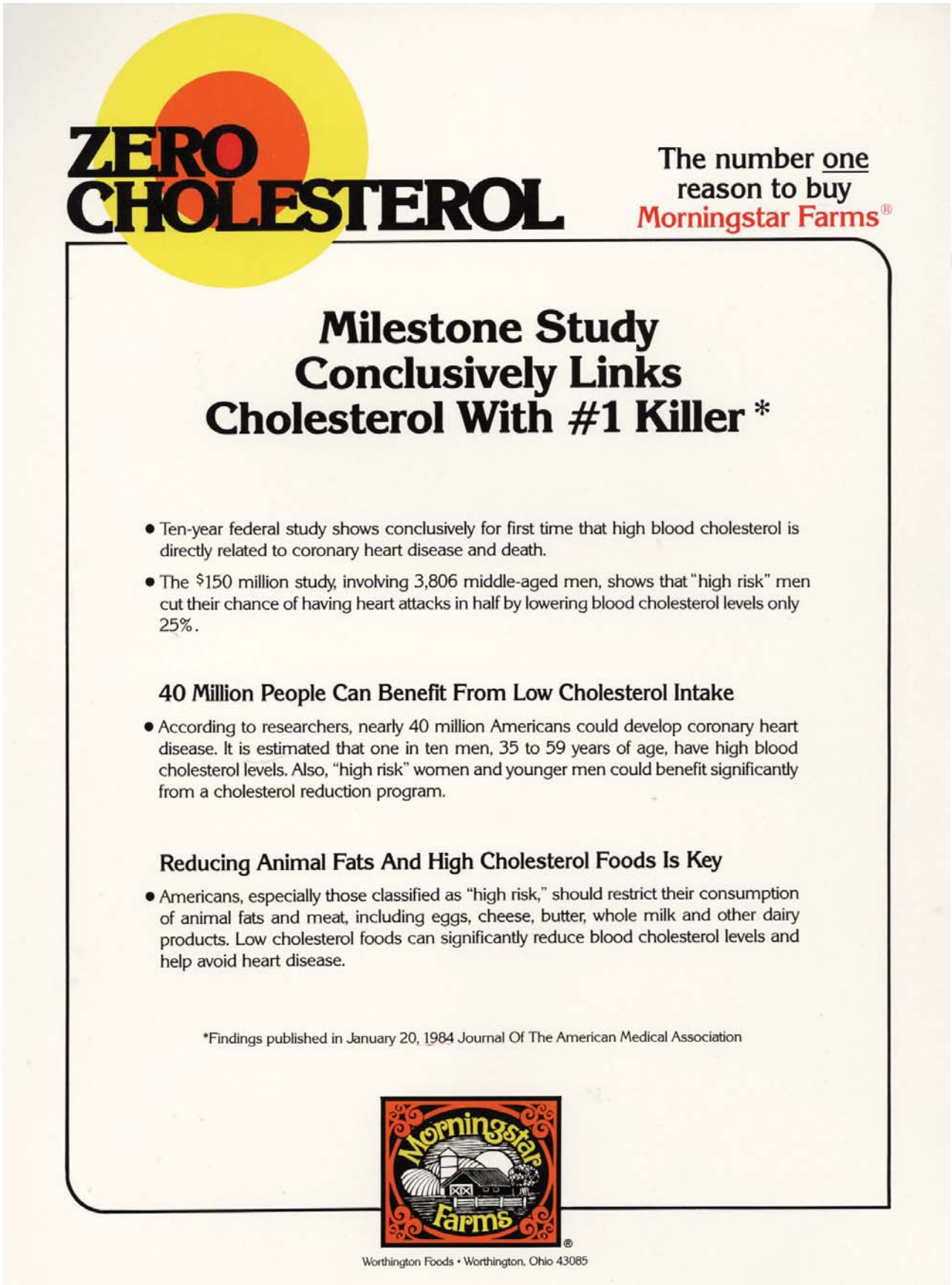

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Association (NNFA) and their decades of legal battles with the U.S. Food and Drug Administration (FDA). This is one of the only supportive (non-critical) histories of the health foods movement in America.

Contents: Introduction. 1. How the health food industry began. 2. The vitamin and mineral hearings (prompted by onerous FDA regulations of 18 June 1966). 3. The battle rages on. 4. The struggle over vitamins A and D. 5. NNFA marches on Washington (May 1975). 6. The vitamin bill is finally passed (22 April 1976; Proxmire Bill, signed into law by President Gerald Ford. NNFA victory over FDA). 7. Hanky-Panky in Washington. 8. How the FDA attempted to curtail the sale of health books. 9. NNFA vs. Frederick Stare and Elizabeth Whelan (and the American Council on Science and Health, ACSH, whose current funders and institutional members are listed on pages 187-92). 10. The golden years of PELLL Committee (Public Relations, Education, Legal, Legislative and Lobbying; formed by NNFA in 1955). 11. NNFA supports the Delaney Clause. 12. NNFA's radio and TV programs. 13. NNFA has many friends. 14. NNFA's first woman president. 15. What lies ahead. Epilogue.

Frank Murray got involved with the health foods movement in 1963, working for Jack Schwartz at Syndicate Publications. The book was written for the NNFA and not released commercially. Several thousand copies were printed in paperback, selling for $4.95. A copy was sent to each member of Congress.

The health food industry was born out of the discovery of vitamins and the devitalization of the American food supply (especially white flour since the late 1890s, and white sugar) by large corporations. A few early companies started in the 1920s but most began in the 1930s. It grew on the issues of chemicals and pesticides in foods.

"The National Nutritional Foods Association (NNFA), which has had several names since its inception, has been the spokesman for the health food industry since 1938" (p. 6).

Companies: Akin's Special Foods (Tulsa, Oklahoma, p. 30-31), Eichenauer's (Phoenix, Arizona, p. 34-36. Opened in 1938. Early lines included Paul Bragg products, Dr. Walker's Vegetable Juice Hydraulic Press and books, Gayelord Hauser products and books, Martin Pretorius products and Waring Blender), Vita Food Co. (Washington, DC, p. 34-36. Opened in 1928. A list of products sold in an early catalog includes Lust's Peanut Butter, Carque's Almond Butter, Black Mission Figs, Kadota Figs, Manukka raisins, Carque California Health Bars {5¢ each}, Live Food Juicer {$5.95}), Vic Boff's (Brooklyn, New York, p. 36. For 48 years he has been associated with the pioneers of Physical Culture), House of Better Living (now owned by John Quinn and called Quinn's, p. 38), General Nutrition (Pittsburg, Pennsylvania; David Shakarian), Kahan & Lessin Co. (Compton, California), The Landstrom Co. (South San Francisco, CA), Balanced Foods, Inc. (North Bergen, New Jersey), Wm. T. Thompson Co. (Carson, CA), El Molino Mills (City of Industry, CA), Ener-G-Foods, Inc. (Seattle, Washington), Naturade Products (Paramount, CA), Seelect, Inc. (Chatsworth, CA; Max Lessin), Fearn Soya Foods (Melrose Park, Illinois), Hoffman Products / York Barbell Co. (York, Pennsylvania), Worthington Foods (Worthington, Ohio), RichLife, Inc. (Anaheim, CA), Hain Pure Foods (Los Angeles, CA).

Periodicals: *Health Foods Retailing* (New York City; started in April 1936 by Lelord Kordel), *Better Nutrition* (1940 by Jack T. Schwartz). *Health Foods Business* (formerly *Dietetic Foods Industry,* 1950), *Whole Foods* (Jan. 1978), *Natural Foods Merchandiser* (1979 in Hope, Pennsylvania), *Prevention* (1949 by J.I. Rodale), *Let's Live* (1933), *Bestways* (1973).

NNFA Presidents (1938-1981, p. 56-58).

People: Dr. Linus Pauling, Dr. Roger Williams, Dr. Albert Szent-Gyorgyi, Paul C. Bragg, Gayelord Hauser, Adelle Davis, Anthony Berhalter (founded the American Health Food Assoc. and the National Health Foods Assoc., predecessors of the NNFA in 1937), Ben Kanan, Otto Carque, Lelord Kordel, George Spitzer, Milton A. Bass (lead attorney), Max Huberman, Dave Ajay, Stanley N. Phillipps, Martin Pretorius, William T. Thompson, Jack Schwartz; Wayne Walker, Eugene Schiff, and Herb Bristol started the NNFA and kept it going during hard times; Milt Okin. Address: New York.

2458. Murray, Frank; Tarr, Jon. 1984. Balanced Foods, Inc., North Bergen, New Jersey (Document part). In: F. Murray and J. Tarr. 1984. More Than One Slingshot: How the Health Food Industry Is Changing America. Richmond, Virginia: Marlborough House Publishing Co. 240 p. + 16 p. of photos. See p. 43.

• ***Summary:*** "This wholesaler opened for business in 1939 in New York City, at 15th Street and Fifth Ave. In its New Jersey location [2501 71st Street, North Bergen, NJ 07047], it has a 100,000 square foot operation" [mostly warehouse]. Note: North Bergen is very close to New York City. Directly west of Central Park, it is just across the Hudson River from Manhattan, and about 3 miles north of the Lincoln Tunnel under the Hudson River.

"During its formative years, the company was run by Samuel H. Reiser, the current president, and Will Reiser, his brother, and Dr. Maurice Shefferman, both deceased. John H. Reiser and Rhona C. Reiser are vice presidents of the firm. Its subsidiaries include Akin's in Oklahoma and Jacksonville, Florida; Midwest Natural Foods Distributors, Ann Arbor, Michigan; and Northwest Dietetic Supply, Kent, Washington.

"'In the early days the health food industry was primitive,' Sam Reiser said. 'The operators of health food stores were visionaries–idealistic and few of them were merchants. Leading products at that time were the Battle Creek meat substitutes, yeast tables, vegetable salt, vegetable tablets, carrot tablets and health cereals.

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"'The health food industry at that time comprised less than 50 stores from Boston [Massachusetts] to Washington [DC], with only about 150 stores in the entire country, he continued. 'There were probably no more than six jobbers [wholesalers] to serve the entire industry. Growth of the health food field was very slow, for it was primarily a business catering to diabetics.'"

Note: An Internet search (March 2006) shows that Sam Reiser died in 1989. His wife was named Helen. One of his sons, Paul Reiser (born 30 March 1957 in New York City) became quite famous as an actor. In 1973 he graduated from Stuyvesant High School in New York City, and in 1977 he earned his BFA (Bachelor of Fine Arts) at SUNY (State University of New York) Binghamton, with a major in piano and composition. In 1996 Paul Reiser established the Samuel Reiser Scholarship Endowment, in honor of his father, for students majoring in piano or composition. When he finished college, his family expected him to take over his father's health food business. But he turned to stand-up comedy and acting instead. He married Paula Ravets on 21 Aug. 1988 and they had a son, Ezra Samuel Reiser, born Sept. 1995. Address: New York.

2459. Murray, Frank; Tarr, Jon. 1984. Origin of the American Health Food Association, the National Health Foods Association, and the National Nutritional Foods Association (NNFA) (Document part). In: F. Murray and J. Tarr. 1984. More Than One Slingshot: How the Health Food Industry Is Changing America. Richmond, Virginia: Marlborough House Publishing Co. 240 p. + 16 p. of photos. See p. 20-25.
• ***Summary:*** "In 1937, Anthony Berhalter organized a consumer group known as the American Health Food Association." A man of foresight, he operated a bakery in Chicago, and bought high-protein whole-wheat flour from Elam Mills, also of Chicago. Berhalter also had a health food store (one of the first in Chicago), and a mail order business, with 24- to 36-page catalogs. He bought "quantities of fine, sundried, unsulphured fruits from California" [probably from Otto Carque].

"In the spring of 1937, Berhalter set up a convention of some 10 to 15 booths" in the old Auditorium Hotel in Chicago. "Exhibitors included Live Food Products, Alberty Products, American Dietaids (then known as Tam Products, Inc.), Battle Creek Scientific Foods, Chippewa Spring Water Co., Dietetic Food of New York (Diamel), Elam Mills, Health Food Jobbers (now Health Foods, Inc.), H.W. Walker Co., Loeb Dietetic Foods, Modern Diet Products, Inc., Natural Health Products of New York, Nutty Brown Mills of Texas, Parkelp of California, and Vegetable Juices Inc. of Chicago." About "150 health food people" attended the convention, coming from across the United States.

Berhalter hoped to bring together all factions of the health food industry in this one organization. "Dr. Walter Hodson was one of the able speakers at those first meetings of the American Health Food Association... And those attending the first convention, among them Ed Neumann, George Spitzer, Henry Rosenberger, Sr. (of Cambridge, Massachusetts), Herb Bristol, H. Wayne Walker and others, felt that Tony Berhalter should be offered a fee to form an organization made up of retailers, manufacturers and jobbers, but excluding consumers."

"Mr. Englehardt of Physical Culture Publishing Company, who was sent to the meeting by Bernarr Macfadden to help in starting a solid organization, secured a large room at the Big Hotel down the street on Michigan Avenue, where dissenters could thrash out a plan for the new organization."

Eight men were elected to the organization committee. "After working all night with attorney Henry Junge, the committee presented a Constitution and By-Laws the next day to those who wanted the new association. It was approved [in 1937] and the new organization, National Health Foods Association [NHFA], which is now NNFA, was born. Herb Bristol and Wayne Walker immediately made plans for a second convention to be held in the summer of 1938 at the Sherman House in Chicago."

The first president was Dr. John Maxwell. George Fleming was the paid secretary, who served until 1945. The next [2nd] convention at Sherman House [sic, La Salle Hotel, in late August 1939] was a resounding success with speakers such as Paul Bragg, Edward McCollum [not to be confused with Elmer V. McCollum, the famous biochemist from Johns Hopkins University], and others. Approximately 150 people attended the banquet, "however Bragg and McCollum had 800 to 900 people at their lectures.

"Chicago became the headquarters for the new association, with Herb Bristol, Wayne Walker and George Fleming doing most of the work. Fleming received about $50.00 a week as secretary. The next two conventions were held in Chicago. "In 1941, the fledgling association held its fourth convention at the McAlpin Hotel in New York." Since this convention was not a financial success, the next 5 conventions were held in Chicago. In 1947 the convention at French Lick Springs, Indiana, marked a low point in the association's history. So the next convention was held in California (Ben Kahan helped to organize it), followed by another in Chicago.

After the 1966 convention at the International Hotel in Los Angeles, Stanley N. Phillips (of Cincinnati, Ohio) who, for years, had done much of the work organizing conventions, "resigned and helped to start a new retailer organization, American Dietary Retailers Association" (ADRA). But after two years, in 1968, Phillipps of the ADRA and Walter Camp of the NHFA began to communicate about merging the two organizations is order to better "fight a common enemy–the bureaucrats in Washington [DC, at the FDA] rather than squabbling among ourselves.

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"In 1969 the two associations held a joint convention and it was agreed that, if the remaining differences were resolved at the 1970 convention in New Orleans [Louisiana], the merged group would be united under the name of National Nutritional Foods Association" [NNFA].

The transition was made and Phillipps continued as convention manager through 1974, when he resigned and turned over the convention work to Arnold Pike, who managed the Las Vegas convention that Phillipps had set up for the MGM Grand Hotel. Address: New York.

2460. *Vegetarian Times.* 1984. Long-term study has good news for vegetarians. June. p. 6.
• ***Summary:*** One of the longest and largest studies of vegetarians has recently been finished and the results show the "tremendous benefits of a long-term meatless diet." Researchers at Loma Linda University have been tracking 25,000 Seventh-Day Adventists (SDA) for 20 years to determine the effects on health of a lifestyle devoid of meat, smoking, and alcohol.

The results are remarkable. The risk of fatal coronary heart disease among SDA males who ate meat was three times higher than vegetarian SDAs of comparable age. A striking relationship was also found (for the first time) between fatal diabetes and meat eating. Moreover, men who ate large amounts of meat, eggs, milk and cheese had a three-fold increase in fatal prostate cancer. Roland L. Phillips, professor of epidemiology at Loma Linda, comments on the study. In about two years, the Loma Linda team will start reporting on another long-term, large study of 35,000 SDAs. More detailed dietary information has been collected in this study, and more than just fatal diseases are being tracked.

2461. Wilson, John C. 1984. The manufacture of soymilk which is not contaminated with undesirable "beany flavor," resulting from enzyme induced oxidation of fats. Paper presented at the Singapore Inst. of Food Science & Technology Symposium. 19 p. Held June 14-15 at the Hyatt Hotel, Singapore. [8 ref]
• ***Summary:*** Introduction: "This paper anticipates a series of questions and tries to inform the reason for things pertaining to our topic according to the perspective from which we see things in 1984." Who are the real giants? Shall we not give tribute?" 1. What is the interest in the world regions for a soymilk without the traditional 'beany flavour'? What need creates an interest, creates a demand of such proportions? China, South East Asia, North East Asia, North America, hippies, vegetarians, tofu, *The Book of Tofu,* by Shurtleff and Aoyagi.

2. What is the history behind the long delayed but sudden phenomenal development of this product? Dr. Harry W. Miller in Shanghai (1936), K.S. Lo (of Vitasoy) in Hong Kong [1941], in-bottle sterilizing by K.S. Lo, development of UHT processing and aseptic packaging by Yeo Hiap Seng in Kuala Lumpur, Malaysia (1967), the advent of the brick shaped aseptic carton. The traditional soymilk process: "Filtering off the fibrous material,... one is left with the basic soymilk extract or soybase to which some sugar is added" (p. 8). Improvements in soymilk flavor: Cornell hot-grind process. University of Illinois hot water blanch method "is the basis of most modern soymilk processing." Developments in Japan since the mid-1970s, which have grown "out of the Illinois process but overcoming the 'chalkiness' by a filtration step using a decanter or some form of continuous filtration." The quality is excellent but the yield of protein is unfortunately only about half compared to the almost 100% achieved by the original Illinois method."

3. What are the developments in the market areas? Soyfoods industry and market statistics published annually by Shurtleff. Trends in: Japan, South East Asia, Indian Subcontinent, Mid East [Middle East], Europe (Flavor is not as good as in Japan. "There is also a political impediment. It would be suicidal to set up a soymilk industry as a 'substitute cow's milk...' considering today's ailing European dairy industry and the militant stand of the European dairy farmer. But as surely as margarine has come and been accepted, a prime quality soymilk will come to Europe. It is a matter of time"). Africa (financing troubles, the good work of IITA in Ibadan, Nigeria). South America ("A market spoilt! Take Brazil–the world's 2nd largest producer and exporter [of soybeans]. People have had inferior quality product almost forced down their mouth"). North America.

4. What is the state of the art in the manufacturing technique for a "bean free" tasting soymilk? (Contains a flow chart with 13 steps, of which No. 10 states: "Blend ingredients: Blend into the soybase the ingredients necessary to a particular formulation, e.g., sugar, vegetable fat, emulsifier–stabilizer, flavouring–aromas," p. 16)

This paper deals with the phenomenal growth of the soymilk industry in northeast Asia, and the likeliness that its influence will spread worldwide in the near future.

Note: This is the earliest English-language document seen (Aug. 2013) that uses the word "soybase" to refer to a concentrated form of soymilk. However, no definition of the degree of concentration or total solids content is given. Address: Soya Process Product Manager, Alfa-Laval, Box 1008, S-221 03, Lund, Sweden.

2462. Worthington Foods, Inc. 1984. Introducing all new, all natural, Natural Touch: The taste nobody can touch (Ad). *Natural Foods Merchandiser.* June. p. 18-19.
• ***Summary:*** This large-format, two-page color ad shows packages and prepared dishes for Natural Touch Tofu Garden Patties, Okara Patties, Harvest Bake Lentil Rice Loaf, and Kaffree Tea. Okara is described as "the protein-rich, high-fiber pulp from cooked soybeans."

This 2-page ad also ran in the July issue (p. 23-24). Address: Worthington, Ohio 43085.

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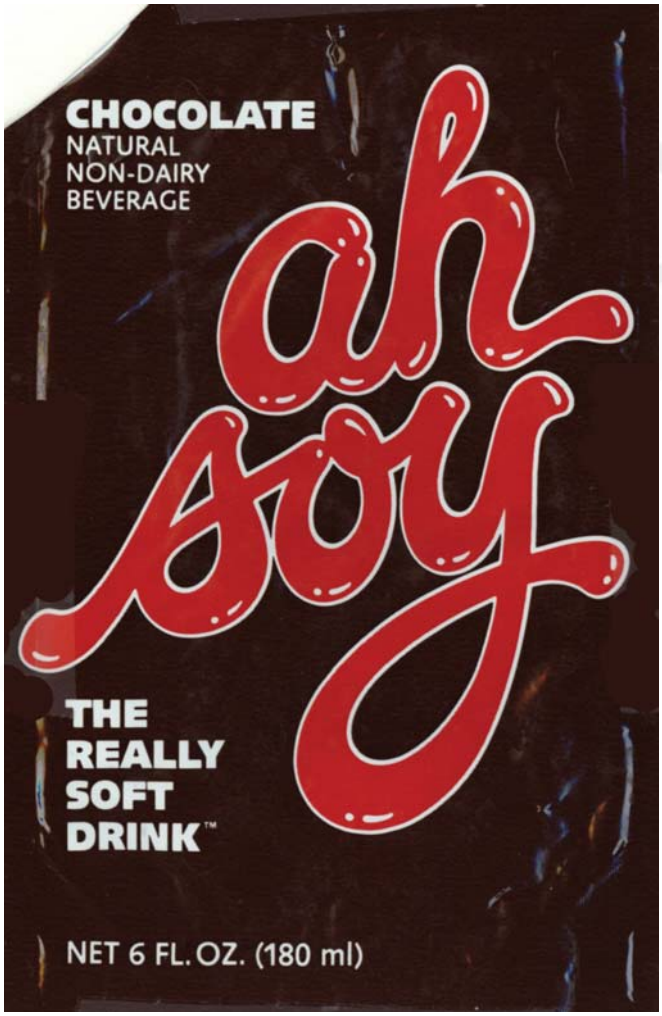
2463. **Product Name:** Ah Soy: Natural Non-Dairy Beverage (Soymilk) [Chocolate, Vanilla, or Original].
Manufacturer's Name: Great Eastern Sun (Importer). Made in Japan by San-iku Foods.
Manufacturer's Address: Asheville, NC 28806. Phone: 704-252-3090.
Date of Introduction: 1984 July.
Ingredients: Original: Water, organically grown soybeans*, barley malt, pearl barley malt, cold pressed safflower oil, sea salt. * = Organically grown and processed in accordance with Section 26569.11 of the California Health and Safety Code.

Vanilla: Vanilla extract. Chocolate: Natural cocoa, natural vanilla extract.
Wt/Vol., Packaging, Price: 6 fluid oz (180 ml) in stand-up foil retort pouch.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Original: Per 6 oz.: Calories 100, protein 4.5 gm, carbohydrate 9.4 gm, fat 5 gm. Vanilla: Calories 142, protein 4.3 gm, carbohydrate 21.2 gm, fat 4.4 gm. Chocolate: Calories 149, protein 3.9 gm, carbohydrate 25.5 gm, fat 3.5 gm.



New Product–Documentation: Labels. 1984. 4 by 6.25 inches. Plastic packs. Original: Red and white on blue. Vanilla: Red and white on tan. Chocolate: Red and white on dark brown. The words "ah soy" are written in script and look rounded, as if they were made from brightly colored round tubing. Text on front panel: "Made with organically grown soybeans." "The really soft drink." On back panel: "It drinks like a shake and you can use it to bake. Ah Soy is the most versatile, delicious and nutritious natural non-dairy soft drink you can buy. Can something so smooth, so rich, so refreshing, really be good for you? Ah Soy is. Ah Soy is full of protein, free of cholesterol, low in calories and has no cane, fruit or milk sugars. And of course, there are no chemical additives and no preservatives. Use Ah Soy on breakfast cereal, as the secret to spectacular sauces, to make extra fluffy pancakes, and as a healthy, all natural thirst quencher."

Note: This is the earliest commercial soymilk product seen with an English-language label (June 1999) that has a flavor named "Original." In March 1982 a Japanese company named Nagoya Seiraku introduced a soymilk in Japan named *Sujaata no Gen Tônyû*, which means "Sujaata Original Soymilk."

Shurtleff & Aoyagi. 1984. Soymilk Industry and Market, Update (Based on interview with Bob Ballard, 21 March 1985). This product has been a "fantastic success." During the period from 1 Nov. 1984 to 25 Jan. 1985 (just under 1 fiscal quarter), 525,000 unit packs of 4 flavors were sold.

Shurtleff & Aoyagi. 1985. Soymilk Industry and Market, Update. By March 1985 sales of Ah Soy are growing rapidly, now accounting for 15-20% of Great Eastern Sun's total sales. The favorite flavor is vanilla, followed by original [plain], carob, and chocolate, in that order. By 1987 Ah Soy was being made in the USA in quarts. Shurtleff & Aoyagi. 1986. Soymilk Industry and Market, Update. By March 1987 Ah Soy is selling about 270,000 units (10,906 gallons) per month. Sales by flavor are vanilla (35% of the total), original/plain (30%), carob (17.5%), chocolate (17.5%). Sales have been flat for the past year.

Letter from Bruce Sturgeon, Vice President, Great Eastern Sun, Enka, North Carolina, to East West Journal. 1989. Jan. p. 6. Convincingly refutes EWJ's award to Ah Soy for the "Most Questionable Beverage Label Claim."

2464. Masarei, J.R.L.; Rouse, I.L.; Lynch, W.J.; Robertson, K.; Vandongen, R.; Beilin, L.J. 1984. Vegetarian diets, lipids and cardiovascular risk. *Australian and New Zealand J. of Medicine* 14(4):400-04. Aug. [33 ref]
Address: Univ. of Western Australia, WA.

2465. Rouse, I.L.; Beilin, L.J.; Armstrong, B.K.; Vandongen, R. 1984. Vegetarian diet, blood pressure and cardiovascular risk. *Australian and New Zealand J. of Medicine* 14(4):439-

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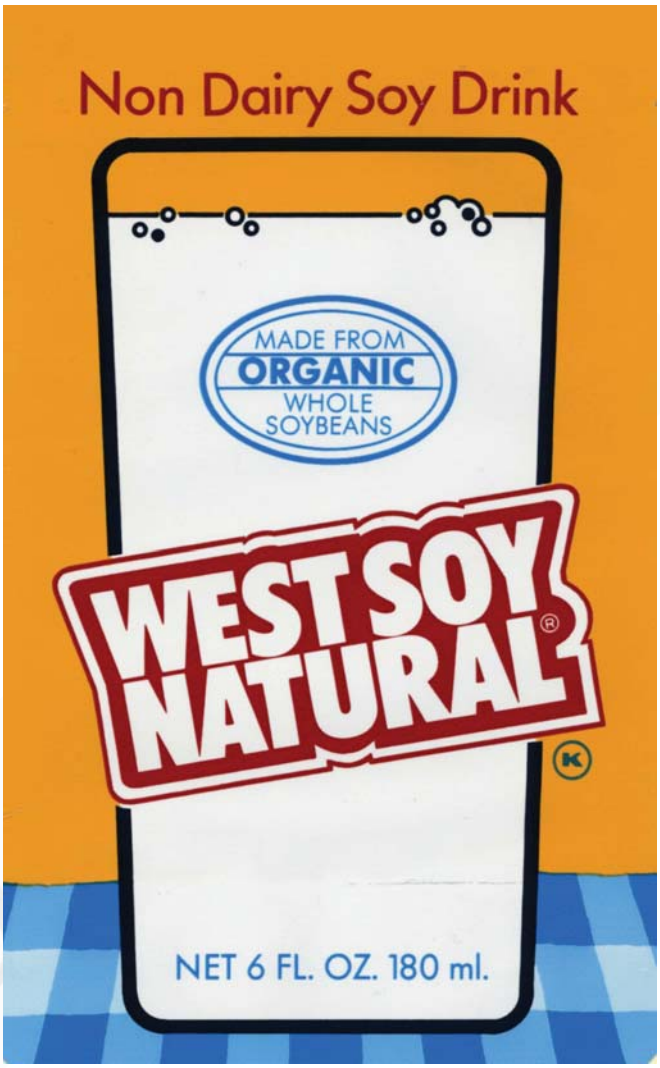
43. Aug. [28 ref]
Address: Dep. of Medicine, Univ. of Western Australia, WA.

2466. Snowdon, David A.; Phillips, Roland L. 1984. Coffee consumption and risk of fatal cancers. *American J. of Public Health* 74(8):820-23. Aug. [33 ref]
Address: Dep. of Biostatistics and Epidemiology, School of Health, and Dep. of Physiology and Pharmacology, School of Medicine, Loma Linda Univ., Loma Linda, California 92350.

2467. Snowdon, David A.; Phillips, R.L.; Choi, W. 1984. Diet, obesity, and risk of fatal prostate cancer. *American J. of Epidemiology* 120(2):244-50. Aug. [22 ref]
• ***Summary:*** Overweight man were found to have a relative risk (RR) of 2.5 for development of prostate cancer, compared with men of normal weight. In addition, this study found that men who consumed large amounts of milk, cheese, eggs, and meat had an RR of 3.6 for the development of prostate cancer. Address: Dep. of Biostatistics and Epidemiology, School of Health, and Dep. of Physiology and Pharmacology, School of Medicine, Loma Linda Univ., Loma Linda, California 92350.

2468. *Soyfoods.* 1984. Press releases. Summer. p. 14.
• ***Summary:*** Summarizes new releases from Farm Foods (Ice Bean), Legume, Laughing Moon Foods, Market Sales, Worthington Foods, Frieda's Finest / Produce Specialties, The Soyplant, NutraBlends, Soy Systems (Ridgefield, Washington; Hananya Kronenberg).

2469. **Product Name:** WestSoy Natural (Soymilk).
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan by San-iku Foods.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1984 August.
Ingredients: Water, organic soybeans, malted barley, expeller pressed corn oil (less than 1%), sea salt.
Wt/Vol., Packaging, Price: 6 fluid oz (180 ml). Stand-up foil retort pouch.
How Stored: Shelf stable.
Nutrition: Per packet: Calories 140, protein 5 gm, carbohydrates 25 gm, fat 2 gm, sodium 124 mg.
New Product–Documentation: Label. 1984, dated. 4 by 6.25 inches, color. Retort pouch. Blue, brown, white and black on orange background. Milk bottle illustration. "Non dairy drink. Organic. Shake well. Serve chilled. Low sodium. Half the fat, all the protein of milk. No cholesterol. No refined sugar. No preservatives." Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Shurtleff & Aoyagi. 1984. Soymilk Industry and Market, Update. This plain soymilk, similar to Ah Soy (launched 1 month earlier and also made by San-iku Foods in Japan), is Westbrae's first



soymilk product.

Talk with Marty Roth of Westbrae Natural. 1985. Jan. 3. Their Westsoy natural was a sort of me-too effort, so that Westbrae could have its plain counterpart to Edensoy, Ah-Soy, and Vitasoy. Westbrae didn't put a lot of effort into the product. Westsoy, introduced a little before the Malteds, was not eventually as successful as the Malteds but it quickly became one of the company's better products. Its features: 1. Organic. 2. The lowest price plain soymilk. It was made in the same plant (Saniku Foods in Japan) as Ah-Soy and had a similar flavor.

2470. American Soybean Assoc. ed. 1984. First European Soyfoods Workshop, Proceedings. Brussels, Belgium: ASA. 129 p. Held Sept. 27-28 at Amsterdam, Netherlands (Krasnapolski Hotel). No index. 30 cm. [38 ref]
• ***Summary:*** Contains 9 papers, mainly on soyfoods in Europe. A directory including company name, person's name, and address for the conference's 105 participants. Organizations represented include Caderas de Kerleau,

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Aarhus Oliefabrik (Aarhus C, Denmark), Aixagri, Alfa-Laval, Alfa-Laval Food (John Wilson), Alpro N.V. (Ph. Vandemoortele, Ch. Daems), Alpura Koreco Ltd., Aros Sojaprodukter (Ted Nordquist), BRT, Cargill (R. Sevink, Amsterdam, Netherlands), Cauldron Foods Ltd. (Mr. Marshall, Mr. Fagan), Centraalbureau Voor Schimmelstruct, Centro Studi Proteini Vegetali, CETIOM ONIDOL (Emmanuel Prudom, Toulouse, France), Chemex, Comite Eetbaar Plantaardig Eiwit (Hague, Netherlands), Consumers' Association, Condimenta, Cooperative Occitane, Danish Turnkey Dairies Ltd., Delisana Natuurvoeding, Deutsche Gesellschaft für Ernaehrung [2 different addresses], DE-VAU-GE Gesundkostwerk (Dr. W. Lubosch), Dragon & Phoenix Ltd. (Donald Lysen), E & R Chemicals, Edelsoja GMBH (K.O. Tielker), E.M. Chajuss Ltd. [Daniel Chajuss], Fa L.L. Frank (Missendorp de Bie), Fed. Nat. Syndicats De Dietetique, F.I.M. Houterman, Food Industries, Food Manufacture, F.M. Lin, Galactina Ltd. (P. Speck), Gebruder Bauermeister, Gemint, Giulini Chemie, Goorden Import Cy, Henselwerk GMBH (Rolf Berger), Heuschen (Mr. Heuschen, Deurne, Netherlands), Itona Products Ltd. (Mr. and Mrs. Hampson), Ivel, Keuringsdienst Voor Waren, Libelle, Lucas Meyer (Axel Schulte), Masterfoods, Melkunie Holland, Niticel B.V., ONIDOL (Guy Coudert), Paksoy TIC, Paul's Tofu (Paul Jones), PFW Nederland BV, Plumrose FDD, Premier Foods, Purina Protein Europe (A.G. van der Horn & Willy Naesens, Zaventem, Belgium), Royal Neth. Dairy Federation, Ruitenberg N.V., Sanico N.V., S.G.A. Flavours, SIO [Societe Industrielle des Oléagineux, Marie Gérard, Nanterre, France], Sopad Nestlé (Mr. Rolland, France), Sojadoc (A. Lacombe, P. Roger, Mr. Henras & Mr. Attié; St. Paul, 81140 Penne du Tarn, France), Sojaquelle (Wolfgang Furth-Kuby), Solnuts B.V. (J. Liebregts), Soy (De Preneuf, Cerny, France), Staley Intern[ational], Stern Chemie (Volkmar Wyviol, Hamburg), UNCAA, Union Deutsche Lebensmittelwerke [Hamburg], Univ. of Strathclyde [Glasgow, Scotland], Vamo Mills (B. Cleenewerck, Ghent, Belgium), Verstegen Specerijen, V.D.SP.V.B.A., Wenger International (I. Ben Gera, Antwerp, Belgium).

Registered on Sept. 27. Naarden Intl., Protevit, Wessanen, Mr. Karas & Mr. Drosihn [Soyastern–From Germany, not Turkey].

A note in the Nov. 1984 issue of *Soya Foods* (ASA, Europe) (p. 2) stated that the workshop was attended by 105 people from 14 countries, and was considered to have been very successful.

Note 1. This is the earliest published document seen (April 2001) concerning Sojadoc of France.

Note 2. E.M. Chajuss is the name of Daniel Chajuss' father. He and his son founded Hayes Ashdod Ltd. "E.M. Chajuss Ltd." is a limited or incorporated company that was jointly owned by Daniel and his father. Daniel Chajuss attended this Soyfoods Workshop as a "delegate" of E.M. Chajuss Ltd. company.

Note 3. This is the earliest document seen (July 2006) that mentions Wessanen of the Netherlands. Address: Brussels, Belgium.

2471. Snowdon, David A.; Phillips, R.L.; Fraser, G.E. 1984. Meat consumption and fatal ischemic heart disease. *Preventive Medicine* 13(5):490-500. Sept. [25 ref]
• ***Summary:*** "In 1960 the meat-consumption habits of 25,153 California Seventh-Day Adventists were assessed by questionnaire. Between 1960 and 1980 ischemic heart disease deaths were identified. Meat consumption was positively associated with fatal ischemic heart disease in both men and women. This association was apparently not due to confounding by eggs, dairy products, obesity, marital status, or cigarette smoking... For 45- to 64-year old men, there was approximately a threefold difference in risk between men who ate meat daily and those who did not eat meat. This is the first study to show a dose-response relationship between meat consumption and ischemic heart disease risk." Address: School of Health and School of Medicine, Loma Linda Univ., Loma Linda, California 92350.

2472. Snowdon, David A.; Sumbureru, D. 1984. Bereavement and risk of death from major causes [among Seventh-day Adventists] (Abstract). *American J. of Epidemiology* 120(3):480. Sept.
Address: Loma Linda Univ., Loma Linda, California 92350.

2473. Yoshimura, Sam. 1984. Re: Update on work with soyfoods. Letter to William Shurtleff at Soyfoods Center, Oct. 21–in reply to inquiry. 1 p.
• ***Summary:*** Shurtleff writes: "I just read a little blurb about you, written by your wife, that was in the *Madison Survey.* It indicated that you were now in Canada and again making soyfoods. Could I ask a few questions for use in the Adventist chapter of our history book?

1. What is your present address and postal code. Ans: See above.

2. When did you leave Worthington Foods? Ans: Sept. 30, 1981 (Retired).

3. Could you please tell me a little about your new business? When did you start selling products? Are you working alone or with another company? What products do you make? Can you send me some descriptive or promotional literature on your products?

Ans: "Name of company: MGM Brans. I am a technical consultant of the above company. We started selling products in January 1982.

"Our main product is meat analogs–franks, sausages, sandwich slices, chicken nuggets & burgers. Currently we are developing tofu-based meat alternates [alternatives] & other products."

Note: Sam does not send any labels or descriptive literature. Address: Home: 19 Masedale Cres., Willowdale,

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ONT M2J 3A3 Canada; Plant: MGM Brans, 59-F Howden Rd., Scarborough, ONT M1R 3C7. Phone: 416-473-9254 or 416-752-6600.

2474. Calkins, Beverly M.; Whittaker, D.J.; Rider, A.A.; Turjman, N. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer. Population: demographic and anthropometric characteristics. *American J. of Clinical Nutrition* 40(4):887-95. Supplement. Oct. [16 ref]
Address: 1. Dep. of Epidemiology, School of Hygiene and Public Health, The Johns Hopkins Univ., 615 N. Wolfe St., Baltimore, Maryland 21205; Dep. of Epidemiology and Biostatistics, Loma Linda Univ., School of Health, Loma Linda, California 92354.

2475. Calkins, Beverly M.; Whittaker, D.J.; Nair, P.P.; Rider, A.A.; Turjman, N. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Nutrient intake. *American J. of Clinical Nutrition* 40(4):896-905. Supplement. Oct. [17 ref]
Address: 1. Dep. of Epidemiology, School of Hygiene and Public Health, The Johns Hopkins Univ., 615 N. Wolfe St., Baltimore, Maryland 21205; Dep. of Epidemiology and Biostatistics (DJW), Loma Linda Univ., School of Health, Loma Linda, California 92354.

2476. Cook, John. 1984. A church whose members have less cancer. *Signs of the Times.* Oct. p. 17-19.

2477. Goodman, Gordon T.; Davidovitz, H.; Tepper, S.A.; Kritchevsky, D. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Comparison of serum hexosaminidase levels. *American J. of Clinical Nutrition* 40(4):949-51. Supplement. Oct. [11 ref]
Address: Wistar Inst. of Anatomy and Biology, Philadelphia, Pennsylvania 19104.

2478. Kritchevsky, David; Tepper, S.A.; Goodman, G. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Relationship of diet to serum lipids. *American J. of Clinical Nutrition* 40(4):921-26. Supplement. Oct. [20 ref]
• ***Summary:*** Vegetarians consume, on average, more dietary fiber than nonvegetarians. Address: The Wistar Inst., 36th Street at Spruce, Philadelphia, Pennsylvania 19104.

2479. Kurup, P.A.; Jayakumari, N.; Indira, M.; et al. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Composition, intake, and excretion of fiber constituents. *American J. of Clinical Nutrition* 40(4):942-46. Oct. [20 ref]
• ***Summary:*** Diets and stools were analyzed for neutral detergent fiber (NDF), hemicellulose, lignin, cellulose, cutin & silica, and pectin. The dietary profile revealed a trend (not statistically significant) toward generally higher daily intake values among the vegetarian subgroups. In sharp contrast, in the stools, 24-hour excretion values for NDF decreased steadily in the order, SDA-pure vegetarians, SDA-lacto-ovo vegetarians, SDA-nonvegetarians, and general population nonvegetarians (NDF values in stools in g/day: SDA-pure vegetarians, 13.8; SDA-lacto-ovo vegetarians, 10.5; SDA-nonvegetarians, 8.19 and general population nonvegetarians, 5.05). This decrease paralleled a similar drop in dry stool weight (bulk) of stools. The observations generally indicate that introduction of meat into the daily diet significantly enhances the ability of intestinal microorganisms to degrade fiber components. Address: Dep. of Biochemistry, Univ. of Kerala, Trivandrum 695 034, India; The Wistar Inst., Philadelphia, Pennsylvania 19104; The Johns Hopkins Univ., Baltimore, Maryland 21205.

2480. Kurup, P. Achuta; Jayakumari, N.; Indira, M.; et al. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Composition, intake, and excretion of fiber constituents. *American J. of Clinical Nutrition* 40(4):942-46. Supplement. Oct. [20 ref]
• ***Summary:*** This study was designed to ask the question whether populations leading different dietary lifestyles and who are at varying risks for colon cancer show marked differences in their dietary and fecal profiles of various fiber components. Four study groups were selected from the greater Los Angeles Basin area of California: Seventh-day Adventist (SDA) pure vegetarians [vegans], SDA lacto-ovo-vegetarians, SDA nonvegetarians, and a group of nonvegetarians from the general population (non-SDA). Three-day composite diets and stools were analyzed for neutral detergent fiber (NDF) and other fiber components. A trend (not statistically significant) was found toward generally higher daily intake values of NDF among the vegetarian subgroups (in gm/day): SDA pure vegetarians 63.0±7.9; SDA lacto-ovo-vegetarians 55.8±3.5; SDA nonvegetarians 57.2±3.5; general population vegetarians 52.5±4.9. Lignin, cellulose, and pectin were the major contributors to this difference.

In sharp contrast, in the stools, 24-hour excretion values of NDF decreased steadily in the same order (in gm/day): SDA pure vegetarians 13.8±1.7; SDA lacto-ovo-vegetarians 10.5±0.8; SDA nonvegetarians 8.19±0.7; general population vegetarians 5.05±0.6. Thus, those who consumed the most fiber excreted the most. There was a parallel drop in the dry weight (bulk) of stools.

"The observations generally indicate that introduction of meat into the daily diet significantly enhances the ability of intestinal microorganisms to degrade fiber components, as reflected by the lower excretion of NDF and its constituents." Address: Dep. of Biochemistry, Univ. of Kerala, Trivandrum 695034 India. Also: Wistar Inst. of Anatomy and Biology,

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Philadelphia, Pennsylvania 19104.

2481. Nair, Padmanabhan P.; Turjman, N.; Kessie, G.; Calkins, B.; Goodman, G.T.; Davidovitz, H.; Nimmagadda, G. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Dietary cholesterol, β-sitosterol, and stigmasterol. *American J. of Clinical Nutrition* 40(4):927-30. Supplement. Oct. [14 ref]
Address: Dep. of Biochemistry (PPN, NT, GK) and Epidemiology (BC), The Johns Hopkins Univ., School of Hygiene and Public Health, Baltimore, Maryland 21205; and The Wistar Inst. (HD, GN), Philadelphia, Pennsylvania 19104.

2482. Nair, Padmanabhan P.; Turjman, N.; Goodman, G.T.; Guidry, C.; Calkins, B.M. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Metabolism of neutral sterols. *American J. of Clinical Nutrition* 40(4):931-36. Supplement. Oct. [12 ref]
• ***Summary:*** Cholesterol and its metabolites, together with bile acids, are implicated as risk factors in the genesis and progression of colon cancer. Address: Dep. of Biochemistry (PPN, NT) and Epidemiology (BMC), The Johns Hopkins Univ., School of Hygiene and Public Health, Baltimore, Maryland 21205; and The Wistar Inst. (GTG), Philadelphia, Pennsylvania 19104.

2483. Rider, Agatha A.; Calkins, B.M.; Arthur, R.S.; Nair, P.P. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Concordance of nutrient information obtained by different methods. *American J. of Clinical Nutrition* 40(4):906-13. Supplement. Oct. [20 ref]
Address: 1,3-4: Dep. of Biochemistry; 2. Dep. of Epidemiology. All: The Johns Hopkins Univ., School of Hygiene and Public Health, Baltimore, Maryland 21205; Also: Dep. of Epidemiology and Biostatistics, Loma Linda Univ. School of Health, Loma Linda, California 92354.

2484. Rider, Agatha A.; Arthur, R.S.; Calkins, B.M. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Laboratory analysis of 3-day composite of food samples. *American J. of Clinical Nutrition* 40(4):914-16. Supplement. Oct. [5 ref]
Address: 1-2. Dep. of Biochemistry; 3. Dep. of Epidemiology. All: The Johns Hopkins Univ., School of Hygiene and Public Health, Baltimore, Maryland 21205; and Dep. of Epidemiology and Biostatistics, Loma Linda Univ., School of Health, Loma Linda, California 92354.

2485. Rider, Agatha A.; Arthur, R.S.; Calkins, B.M.; Nair, P.P. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Selected biochemical parameters in blood and urine. *American J. of Clinical Nutrition* 40(4):917-20. Supplement. Oct. [11 ref]
Address: 1-2. Dep. of Biochemistry; 3. Dep. of Epidemiology. All: The Johns Hopkins Univ., School of Hygiene and Public Health, Baltimore, Maryland 21205; and Dep. of Epidemiology and Biostatistics, Loma Linda Univ., School of Health, Loma Linda, California 92354.

2486. Tepper, Shirley A.; Goodman, G.T.; Kritchevsky, D. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Binding of bile salts to dietary residues. *American J. of Clinical Nutrition* 40(4):947-48. Supplement. Oct. [14 ref]
Address: Wistar Inst. of Anatomy and Biology, Philadelphia, Pennsylvania 19104.

2487. Tjurman, Nabila; Goodman, G.T.; Jaeger, B.; Nair, P.P. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Metabolism of bile acids. *American J. of Clinical Nutrition* 40(4):937-41. Supplement. Oct. [21 ref]
Address: 1. Dep. of Biochemistry, School of Hygiene and Public Health, The Johns Hopkins Univ., Baltimore, Maryland 21205; Dep. of Epidemiology and Biostatistics, Loma Linda Univ., School of Health, Loma Linda, California 92350.

2488. Turjman, N.; Goodman, G.T.; Jaeger, B.; Nair, P.P. 1984. Diet, nutrition intake, and metabolism in populations at high and low risk for colon cancer: Metabolism of bile acids. *American J. of Clinical Nutrition* 40(4):937-41. Oct. [21 ref]
• ***Summary:*** High levels of fecal bile acids have been associated with populations at high risk for developing colon cancer. In this study, 168 subjects were drawn from populations that show low and high mortality from colon cancer [pure vegetarians, lacto-ovo vegetarians, and non-vegetarian Seventh-Day Adventists (SDA) and demographically comparable group from the general population]. Total bile acids (mg/g lyophilized stools) were statistically different among dietary groups: SDA pure vegetarians 2.16 ± 0.32, SDA lacto-ovo vegetarians 3.66 ± 0.41, SDA nonvegetarians 4.39 ± 0.44, general population nonvegetarians 6.04 ± 0.75; but were similar when stool weights, body weights, and fat intake were taken into account. The most striking difference was evident in the ratio of secondary to primary bile acids: when compared to SDA pure vegetarians, both SDA lacto-ovo vegetarians and SDA nonvegetarians had twice the ratio while values for general population nonvegetarians were five to six times. There is increasing evidence that environmental factors associated with diet, nutrition, and lifestyle determine the predisposition to chronic diseases such as cancer of the colon. Address: 1. Dep. of Biochemistry, The Johns Hopkins Univ., Baltimore, Maryland 21205; Dep. of Epidemiology and Biostatistics,

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Loma Linda Univ., School of Health, Loma Linda, California 92354.

2489. **Product Name:** Westbrae Natural Malted's [Carob Malted, Vanilla Malted, Cocoa-Mint Malted, Almond Malted, or Caffeine-free Java Malted].
Manufacturer's Name: Westbrae Natural Foods (Importer). Made in Japan by San-iku Foods.
Manufacturer's Address: 4240 Hollis St., Emeryville, CA 94608. Phone: (415) 658-7521.
Date of Introduction: 1984 October.
Ingredients: Cocoa-Mint: Soybeans, malted barley, expeller-pressed corn oil (less than 5%), cocoa, sea salt, peppermint.
Wt/Vol., Packaging, Price: 6 fluid oz.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Cocoa-Mint: Per 6 oz.: Calories 250, protein 6 gm, carbohydrate 50 gm, fat 3 gm. Carob: Calories 230, carbohydrate 44 gm. Vanilla: Calories 250, carbohydrate 46, fat 5 gm.
New Product–Documentation: This is soymilk with a thick and rich milk shake-like consistency. Ad in East West Journal. 1984. Sept. Inside front cover. "Westbrae Natural Malted's. [Note spelling, with apostrophe]. Vanilla, Carob, Cocoa-Mint. Thick and rich non-dairy soy delights. 'Did you make this out of ice-cream?' Ryan Garvy, age 7. All the fun, half the fat of milk shakes. No refined sugar, no preservatives, no cholesterol."

Labels. 1984. 4 by 6.25 inches. Plastic retort pouches. Brown, yellow, white. Cocoa-Mint on mint green background. Carob on cherry background. Vanilla on orange background. All have soda fountain picture with glass of malted with straw. "Shake well. Serve chilled. No refined sugar or cholesterol. No preservatives." Reprinted in Soyfoods Marketing. Lafayette, CA: Soyfoods Center. Shurtleff & Aoyagi. 1984. Soymilk Industry and Market, Update. Thick soymilk from whole soybeans (no soy protein isolates) plus malt and 2.65% oil are used to give this

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product its thickness. Sales of Westsoy and Malteds for 1984 were roughly $700,000 or 1.67 million units at $0.42 each FOB.

Ad (8½ by 11 inches) in Natural Foods Merchandiser. 1985. May. p. 26. "Afternoon Delight." "15% off. On special now." "For a great afternoon treat for the kids (or even the young at heart) try New Morning Honey Grahams and Westbrae Natural Malteds!"

Natural Foods Merchandiser. 1985. May. p. 48-49. Gold medal in 6th annual merchandising contest. Poster. 1986. June. "The Cadillac of Soydrinks." Talk with Martin Roth. 1989. Aug. 17. "Gordon Bennett gave me the assignment to develop a soymilk product for Westbrae. He recognized that Westbrae had already missed the boat on soy drinks, with Edensoy, Vitasoy, Ah Soy, and Health Valley already on the market. I said 'Great. How can you make a soy drink that isn't a soy drink.' Then the Malteds idea flashed into my mind, and I said 'Maybe we can do a thicker, richer, creamy one and make it a dessert.' I designed the graphic idea and developed the name and formula."

As of about Feb. 1995 this product was made by Cathay Industrial, owned by John Yamauchi, in Los Angeles. Prior to that, it was made by House Foods & Yamauchi in Los Angeles.

2490. **Product Name:** Natural Touch Dinner Entree (Resembles a Chopped Steak).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1984 October.
Ingredients: Vegetable protein (wheat gluten, soy protein concentrate), soybean and/or corn oil, egg white solids, calcium caseinate (milk protein), soy isolate, natural flavor, yeast extract, carob, onion, sea salt, garlic, spice.
Wt/Vol., Packaging, Price: 9 oz.
How Stored: Frozen.
New Product–Documentation: Food Report (Lehmann). 1984. Oct.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2491. Briggs, Kenneth A. 1984. 7th-Day Adventists face change and dissent. *New York Times.* Nov. 6. p. 1, 8. [1 ref]

2492. Mayer, Caroline E. 1984. FDA studies advertising for Kellogg's All-Bran: Linked to cancer prevention. *Washington Post.* Nov. 6. p. E1.
• ***Summary:*** The Kellogg Company's new advertising campaign links its All-Bran breakfast cereal to cancer prevention. Kellogg officials say that they are trying to work with the National Cancer Institute to publicize the cancer awareness prevention project. This effort is based on an NCI report which says that "a high fiber diet may reduce your risk of some kinds of cancer." This is the first time that Kellogg has mentioned cancer in its advertising.

However FDA's Bruce Brown says that there are many different types of cancer, and that Kellogg's advertising implies that a high-fiber diet is a good way to prevent all of them. Address: Staff writer.

2493. *Vegetarian Times.* 1984. People who have popularized vegetarianism. Nov. p. 28-29, 58-60.
• ***Summary:*** Introduces each person with a brief biography (those followed by an * also contain a photo of the person): Paavo Airola*, Mollie Katzen*, Jay* & Freya Dinshah, Alex Hershaft, Andreas Cahling*, Nellie Shriver, Peter Singer, Herman & Cornellia Aihara, Michio Kushi*, Gary Null*, Dick Gregory, the Seventh-day Adventists, Michael Jacobson, Nikki & David Goldbeck*, The Farm (Summertown, Tennessee; Margaret Dotzler*, Louise Hagler*, and Cynthia Bates*), Jim Mason*, Francis Moore Lappé*, Paul Obis, Laurel Robertson, Carol Flinders & Bronwyn Godfrey, Bill Shurtleff & Akiko Aoyagi*.

2494. Bisalski, Ed. 1984. Soy ice cream and soymilk at Madison College (Interview). Conducted by William Shurtleff of Soyfoods Center, Dec. 30. 1 p. transcript.
• ***Summary:*** He never made ice cream himself. Harold M. "Pop" Mathews (he was a staff worker, not a teacher, in charge of the cannery where they canned fruits and vegetables) made the first ice cream. He is quite sure of that. In the cannery they first made soymilk, introduced by Dr. P.A. Webber. But a Japanese boy (a student) named Sam Yoshimura and Dr. Perry A. Webber, then Philip S. Chen, a teacher and native of China, brought soymilk to Madison–he thinks, but is not sure. Pop Mathews' daughter still lives at Madison; Dorothy Mathews.

They never marketed the ice cream–never sold it off campus. Ed ate it often. They made 5-10 gallons at a time, from soymilk. Flavors: No chocolate was used since its a stimulant; most was vanilla. It was served scooped in the dining hall and one could also get it from the soy dairy; just bring own dish and eat it on the spot. It was very popular on campus. He first went to Madison in June 1931; they were not making it then. He took over management of the food factory in Sept. 1933. But a Madison article said Jan 1932 ice cream was made.

Milk was first made in cannery, then about 1934-35, brought over to the food factory; they homogenized it and sold it commercially. Address: 3123 E. Miller Rd., Bancroft, Michigan 48414. Phone: 517-634-5203.

2495. Yoshimura, Sam. 1984. Soy ice cream and soymilk at Madison College (Interview). *SoyaScan Notes.* Dec. 30. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Sam arrived at Madison College, Tennessee,

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in 1937. In about 1940 Mr. Shiro Kunihara, a student from Japan like Sam, made soymilk at Madison and Sam thinks he also made a soy ice cream, working with Harold M. "Pop" Mathews. Both the soymilk and the ice cream were served in the school dining hall when Sam was there. The ice cream was also served in the cafeteria. Mr. Kunihara is retired from Loma Linda University. Address: 8200 Colonial Meadows, Westerville, Ohio 43081. Phone: 614-882-0625.

2496. *SoyaScan Notes.* 1984. Chronology of soybeans, soyfoods and natural foods in the United States 1984 (Continued–Part II) (Overview). Dec. 31. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Continued. July 26. At the NNFA (National Nutritional Foods Association) show in Atlanta, Great Eastern Sun rolls out Ah Soy, its new line of soymilk imported from Saniku Foods in Japan, in vanilla, chocolate, and plain flavors, in foil retort pouches. After the show, the Soyfoods Association board meets. Steve Snyder replaces Michael Austin as director of SAA. The next day, SAA directors Snyder, Burke, and Barat travel to St. Louis to meet with the staff of the American Soybean Association to discuss possible areas of mutual interest. ASA appears friendly and open minded, and offers to discuss specific future joint projects. A potential line of communication is opened.

July 30. *People* magazine (circulation 2.8 million) article on Tofutti titled (ineptly) "A Happy Zealot Turns Curd (Yuck!) into a Creamy Treat."

July. "The Soyfoods Industry: Growing Like a Beanstalk" by B. Bialick published in *Whole Life Times.*

Aug. 9. *Soyfoods* magazine No. 10 (color cover) published by Doug Fiske. 7,000 copies printed at a cost of $11,200. Magazine's focus has been changed from production to marketing of soyfoods. This is the last issue of this pioneering magazine.

Aug. 12-17. World Soybean Research Conference III held at Iowa State University. Heavy emphasis on soybean production and agronomy; relatively little new material on soyfoods. Soyfoods movement is not represented.

Aug. 20. Ralston Purina introduces Checkerboard Farms TenderLean, America's first branded ground beef product consisting of 75% ground lean beef and 25% textured soy protein isolate. Some meat journals are harshly critical and many meat departments refuse to carry it. Ralston withdraws the product.

Aug. 24. Westbrae Natural launches WestSoy Natural, a plain soymilk similar to Ah Soy but lower in price and made with organic ingredients. Imported in a foil pouch from Saniku Foods in Japan, it is the company's first soymilk.

Aug. 31. San-J International Inc. announces that it will construct a soy sauce plant (44,000 square foot, $5 million) in Virginia on a 27-acre site just north of Colonial Heights.

Sept. Chico-san, Inc. introduces unpasteurized miso in a revolutionary "Pressure Release Package," a plastic bag with a one-way valve that allows the escape of the carbon dioxide produced naturally during fermentation.

Sept. 9-14. Gloria Vanderbilt announces that she, in conjunction with Dolly Madison and Frusen Gladje, will launch a tofu ice cream.

Sept. 27-28. First European Soyfoods Workshop held in Amsterdam, The Netherlands, at the Grand Hotel Krasnapolski, organized by the American Soybean Association's Belgium office. ASA reports attendance as 105 people from 14 countries, but participants report a maximum of 50 participants. Talks on tofu, soymilk, tempeh, distribution, and microbiological standards, all later published in the Proceedings. There is a large Expo with soymilk equipment from Alfa-Laval and Soya Technology Systems prominently featured. A very successful event, and another ASA first!

Oct. *The Tofu Gourmet* by Linda Barber and Junko Lampert published by Kodansha in Menlo Park, CA. 129 p. Many color photos.

Oct. 15. "Here Tofutti, There Tofutti," a full-page, very positive article with 2 color photos published in *Newsweek* magazine (circulation 3 million).

Oct. 23. The joint managing directors of the International Food Information Service, owners of Food Science and Technology Abstracts (FSTA, the world's largest, oldest, and most widely used food-related computerized database) visit William Shurtleff at The Soyfoods Center to discuss putting the 6,500 bibliographic records in The Soyfoods Center Library into FSTA, thus making this information available worldwide. Both parties are very interested in the project but technical problems remain to be solved.

Oct. Westbrae Natural Foods launches Malted's, billed as "thick and rich non-dairy soy delights." Marketed like a milkshake and imported from Japan in a foil pouch, they come in three flavors: vanilla, carob, and cocoa-mint.

Oct. Three member team from PLENTY Canada spends one month in Sri Lanka, funded by the Canadian International Development Agency, studying the country's soyfoods program. They learn, teach, and introduce tofu ice cream.

Nov. 13. A.E. Staley Manufacturing Company, America's oldest existing soybean crusher, announces that its soybean crushing operations are for sale.

Nov. 20. Tofu Time's first Tofutti Shop opens in uptown Manhattan, New York. A fast-food retail outlet with a slick, red-and-white plastic, almost gaudy, decor.

Nov. 16. Chico-san Inc. is purchased by H.J. Heinz Co., largely for its rice cake business.

Nov. 21. After years of searching, William Shurtleff, with help from Nancy Florida in Java, discovers an 1815 reference to tempeh in the *Serat Centini*, from the Court in Solo, Java. This pushes the earliest reference to tempeh back

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60 years and has it originating in Indonesian rather than in Dutch culture.

Nov. 30. America's first Tofu Standards are issued by the Soyfoods Association's Tofu Standards Committee, in part to help stem the rising tide of products bearing the name "tofu" that contain little or no tofu.

Nov. Galactina, a Swiss manufacturer of soymilks since 1969 (they make Vita Drink / Enteroform, a soymilk sold to in vanilla, chocolate, and strawberry flavors to the dietetic and pharmaceutical markets for tube feeding), starts test marketing tofu in Swiss supermarkets. Attractive recipe booklet attached to each packet, which is pasteurized for a 6-week shelf life.

Dec. Excellent, 19-page cover story on "Soymilk and Soyfoods," published in the prestigious *Journal of the American Oil Chemists' Society.* 1984 is the Society's 75th anniversary.

Dec. Ralston Purina, in its 1984 annual report, notes: "The Company has entered into preliminary agreement with Cargill, Inc., to sell six of the Company's seven soybean [crushing] plants." It also reported strong, steady growth in sales of soy protein products, from about $98 million in 1980 to $152 million in 1984, for an 11.5% compound annual growth rate (but only 4.5% after adjusting for inflation).

Dec. Gloria Vanderbilt's Glace, a soy-based nondairy ice cream, starts being test marketed in Los Angeles, in nine flavors.

Dec. A poll of readers by *Vegetarian Times* magazine finds that 53.1% of readers used tofu one or more times during the past 7 days; 29.4% used it 3 or more times.

Dec. 31. Brightsong Light Foods in Petaluma, California, receives the first funds of a $500,000 equity investment from a Hong Kong investor, who had seen an article praising Brightsong in Venture magazine. Brightsong greatly expands its product development and promotion.

* American Soybean Assoc. phases out its Human Nutrition Dept., headed for years by Judy Trujillo.

* Chicago Board of Trade starts trading options contracts on soybean futures. Continued.

2497. Hodgkin, John E.; Abbey, D.E.; Euler, G.L.; Magie, A.R. 1984. COPD prevalence in nonsmokers in high and low photochemical air pollution areas. *Chest* 86(6):830-38. Dec. [27 ref]

• ***Summary:*** COPS is chronic obstructive pulmonary disease. Address: Univ. of California at Davis.

2498. Modeste, Naomi N.; Abbey, D.E.; Hopp, J.W. 1984-1985. Hypertension in a Caribbean population. *International Quarterly of Community Health Education* 5(3):203-11. [20 ref]*

• ***Summary:*** This cross-sectional study presents an assessment of factors associated with elevated blood pressure in Seventh-Day Adventists in the Caribbean. 433 subjects were randomly selected from the English-speaking Caribbean population. A positive correlation was found between body mass index (weight divided by height) and hypertension in both sexes. Age was also significantly associated with hypertension. "Other factors, such as parental history of blood pressure, vegetarian diet, sugar and fat intake, or Type A/B personality showed no relationship to hypertension. The vast majority of participants were Type B." Address: 1. DrPH, Caribbean Union Conference of SDA [Seventh-day Adventists], Trinidad, West Indies; 2-3. School of Health, LOma Linda Univ., Loma Linda, California.

2499. Howden, G.F. 1984. The cariostatic effect of betel nut chewing. *Papua New Guinea Medical Journal* 27:123-31. *

2500. **Product Name:** [Pure Harvest Soy Drink].
Manufacturer's Name: San-iku Foods.
Manufacturer's Address: Sodegaura-machi, Chiba-ken 299-02, Japan.
Date of Introduction: 1984.
Ingredients: Whole soybeans, barley malt, pearl barley malt, wheat germ, safflower oil, sea salt.
Wt/Vol., Packaging, Price: Retort pouch.
How Stored: Shelf stable.
New Product–Documentation: Shurtleff & Aoyagi. 1984. Soymilk Industry & Market. p. 47. "San-iku Foods has been exporting Pure Harvest Soy Drink to Australia for several years."

Letter from San-iku Foods. 1990. June. This product was introduced in 1984.

2501. **Product Name:** Sanitarium Health Foods B-B-Q Links (Vegetarian Hot Dogs).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, Sydney 2076, NSW, Australia.
Date of Introduction: 1984.
Ingredients: Textured vegetable protein, vegetable oil, coconut oil, whey protein concentrate, egg albumin, torula yeast, modified starch, sauce, salt, dried autolysed yeast, onion powder, garlic powder, water added.
Wt/Vol., Packaging, Price: 430 gm.
New Product–Documentation: See next page. Letter with Label from Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1984. Label is 10 by 4 inches. Red, yellow, black, and green on white. A color photo shows 3 links on a bed of scrambled eggs on a white plate with a half tomato and some small squash.

2502. **Product Name:** Chicken (Meatless; Resembles White Meat) [Slices, or Diced].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.

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Date of Introduction: 1984.
How Stored: Frozen.
New Product–Documentation: Manufacturer's catalog. 1984, undated. Frozen Products.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2503. **Product Name:** Vegetarian Pie [Chicken Style, or Beef Style].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1984.
New Product–Documentation: Manufacturer's catalog. 1984, undated. Frozen Products.

2504. **Product Name:** Salami (Meatless).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1984.
New Product–Documentation: Manufacturer's catalog. 1984, undated. Frozen Products. Label reads: "Vegetable protein slices. Artificial salami flavor. Completely meatless. Rich in protein. No preservatives."

2505. **Product Name:** Bolono (Meatless Bologna Slices).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1984.
Ingredients: Textured vegetable protein (soy protein concentrate and isolate, wheat gluten), egg whites, water, soybean and/or corn oil, potassium caseinate, etc.
How Stored: Frozen.
New Product–Documentation: Manufacturer's catalog. 1984, undated. Frozen Products. Label reads: "Vegetable Protein Slices. Artificial Bologna Flavor."

2506. **Product Name:** Chili (Meatless).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1984.
Ingredients: Water, wheat gluten, red beans, tomato paste, soybean and/or corn oil, flavorings (hydrolyzed vegetable protein, garlic powder, extractives of spices), modified corn starch, salt, sugar, monosodium glutamate, caramel color, yeast extract, dextrose, niacinamide, etc.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Worthington Yesterday and Today. 1984. p. 11.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2507. Cooper, Robert G. comp. 1984. A comprehensive bibliography of Dr. John Harvey Kellogg 1852-1943. Keene, Texas: Southwestern Adventist College. iii + 264 p. 28 cm. [10641 ref]
• ***Summary:*** An excellent, carefully compiled (over 18 years), lengthy typewritten bibliography of books, periodical articles, reprints and charts by Dr. Kellogg. Contents: Preface. Explanatory notes & symbols (including location symbols for books and pamphlets). Books and pamphlets (538 references). Periodical articles & reprints (10,090 references). Miscellaneous (13 references, incl. charts). Appendix (incl. sources searched, dissertations, indexes, and periodicals).

The entries are arranged alphabetically by the title of each publication, and chronologically under each title. In the Preface the author states: "Since key words appear near the beginning of most articles, a subject index did not seem necessary."

Yet we believe this bibliography would have been much more useful if it had a subject index. For example, there are only 7 entries under "Soy" (i.e. where the title of the article starts with "Soy"), starting in 1918. Yet the SoyaScan database contains 74 records by Dr. Kellogg about soy, starting in 1896. In Cooper's bibliography there is not a single entry under fiber or dietary fiber–a field in which Dr. Kellogg was an acknowledged major pioneer. There are also no entries under wheat gluten or gluten–where Dr. Kellogg also did pioneering work. Address: Director, Findley Memorial Library, Southwestern Adventist College, Keene, Texas.

2508. Francis, Dorothy E.M. 1984. Alternatives to cow's milk: Comparisons. In: David L.J. Freed, ed. 1984. Health Hazards of Milk. London, Philadelphia, Toronto, etc.:

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Baillière Tindall. xvii + 281 p. See p. 145-150. [8 ref]
• ***Summary:*** In the section on "Milk Substitutes," table 8.1 is titled "Milk substitutes suitable for different age groups." The following soya products are listed with their manufacturers and osmolality in mmol/kg (millimole/kilogram): Infants from birth: Formula S Food (Cow & Gate), Prosobee liquid and powder (Mead Johnson), Wysoy (Wyeth, contains beef fat). Infants from three months, in addition: Granolac Infant (Granose). School age children and adults requiring enteral feeds: Fortison Soya (Cow & Gate). Social replacements of milk: Granogen (Granose), Plamil (Plant Milk Ltd.), Soy Bean Milk (Itona), Soya Milk Liquid (Granose).

A discussion of "Soya formulas" is given on p. 148-49. Social replacements of milk "do not contribute significantly to the nutritional intake, particularly for calcium and riboflavin." Address: SRD, Group Chief Dietitian, The Hospital for Sick Children, Great Ormond St., London, WC1N 3JH, England.

2509. General Conference of Seventh-day Adventists. 1984. Seventh-day Adventist Yearbook. Washington, DC. 980 p. Address: Washington, DC.

2510. **Product Name:** [Textured Vegetable Protein].
Manufacturer's Name: Productos Icolpan.
Manufacturer's Address: Medellin, Colombia.
Date of Introduction: 1984?
New Product–Documentation: Letter from Robert Folkenberg. 1983. Feb. 15. "This company, organized in 1972, has ordered the necessary equipment to produce TVP but they are not yet in production."

2511. Nordquist, Ted. 1985. The ASA soyfoods conference in Amsterdam. New developments with soyfoods in Europe (Interview). *SoyaScan Notes.* Jan. 7. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** During the 3-day conference 30-50 people were actively involved, not 120. Alfa-Laval and STS had exhibits in the expo hall. Why did the American Soybean Assoc. (ASA) organize this conference? To sell more soybeans. They were very forthright about this. Big drop in sales of soybean meal in Europe due to strong dollar and more use of European oilseeds? The conference was very professional. Amsterdam is definitely the European center of soyfoods. Nutana buys 4 million liters a year of aseptic soymilk from Alpro and sells it through their 7th day Adventist distribution network generally under the brand GranoVita. Nutana claims that when they started soymilk they were responsible for half of Alpro's production. They started distributing it 3 years ago. Alpro was making 3-4,000 liters/hour of milk. A new factory just opened with a capacity of 40,000 liters/hour. Milk from the new plant tastes better. Reliable sources have told Ted that last year 10 million liters of soymilk were sold in Europe, and that 80% of that was made by Alpro.

At least half of the attendees were from big businesses in either the dairy or soy technology areas. There were also about 12-13 soyfoods manufacturers. The smallest soymilk plant from Alfa-Laval or STS is 2,000 liters/hour. A full-scale plant is 20,000 to 40,000 liters/hour. Address: President, Aros Sojaprodukter, Bergsvagen 1, S-190 63 Orsundsbro, Sweden. Phone: 0171-604 56.

2512. Holmes, Charlotte Van Gundy. 1985. T.A. Van Gundy's work with ice cream. Conducted by William Shurtleff of Soyfoods Center, Jan. 31. 1 p. transcript.
• ***Summary:*** "After the Van Gundy family moved to Ontario, California, they made ice cream and all other types of foods from soybeans at home; these were not commercial products.

"In about 1933 mama and my brother went to a household show in Los Angeles and they served soybean ice cream in vanilla, avocado, carrot, and maybe carob flavors.

"But those products were not available commercially. Shortly after that Father passed away; he wore his heart out. He worked 18 hours a day and just wore himself out.

At the end a Jew came in through Mr. Landis and supposedly put in $60,000 to carry on the project. Instead, he put it in his own pocket, absconded with the money and left us flat broke.

"T.A. Van Gundy did not learn the ice cream from anyone. He invented it himself. For two years we had no dairy prods in the house. He planned to put his ice cream on the market but everyone said he was crazy to think of such a thing. Soybeans were cattle feed.

"My brother started the bea-nut butter. Now there are lots of them." Address: California.

2513. Rakosky, Joseph, Jr. 1985. Work with The Glidden Co. and Central Soya (Interview). Conducted by William Shurtleff of Soyfoods Center, Feb. 23. 1 p. transcript.
• ***Summary:*** Discusses Dr. Dale Johnson, Dave Erickson of Swift, Gunther Products, Dr. Harry Miller, Dr. Lou Sair and Griffith Laboratories, Endre Sipos.

Follow-up letter of 3 May 1985. He recalls that Glidden sold a product [whipping agent] named Premium Albusoy that was made by Gunther Products, since Glidden no longer made such products. Note: Ed Meyer says the product was named New Albusoy. Address: 5836 Crain St., Morton Grove, Illinois 60053. Phone: 312-966-7660.

2514. *Australian Dairy Foods.* 1985. Soy report: Six new soy drinks expected. Soy products will enter market. Feb. p. 48.
• ***Summary:*** The first Australian soy drink last year was "Golden Life," a "sport food" launched by Martin Pharmaceuticals in Tetra Brik cartons. Also concerns: Anders Linder of STS-Soya Technology Systems, Rajasoya, Vital, Soyvita, Granose. Address: Australia.

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2515. Boyer, Robert A. 1985. Reminiscences: Automotive design–Oral history project. Dearborn, Michigan: Henry Ford Museum and Greenfield Village. 130 p. Accession #1673.

• ***Summary:*** This is the transcript of an interviews conducted by Dave Crippen of the Henry Ford Museum on 7 Feb. 1985 at Mr. Boyer's home in Dunedin, Florida. It covers all aspects of Boyer's work with soybeans at the Ford Motor Co., including: Growing up in Royal Oak, Michigan; his father worked in the accounting department of the Ford Motor Co. at Highland Park, Michigan (p. 1). Boyer's first meeting with Frank Campsall (p. 2). Growing up at the Wayside Inn (the oldest hotel in America, in South Sudbury, Massachusetts, p. 1-6). Attending high school in Framingham, Massachusetts (p. 6). First meeting with Henry Ford when the two ice skated together on the mill pond behind the Wayside Inn (p. 7). Moving to Dearborn in Sept. 1927 to attend Ford's Trade School (p. 7-11). Early work at the chemical plant (quarter-size model of Iron Mountain plant) in Greenfield Village (p. 12-13). Ford's trip to Germany [Peace Ship to Europe, in 1915 during World War I?] crystallized a lot of his thinking. The Great Depression and the origins of his chemurgic thinking. In 1934 the first National Chemurgic Conference was held at Dearborn Inn; Boyer was in charge of the program. Mr. Irenee DuPont attended and Mr. Ford spent a lot of time with him. Before that, the DuPonts and the big banks did not trust Ford. (p. 14). Opening of Greenfield Village in late 1929 on the 50th anniversary of Edison's first successful light bulb (p. 15). Chemical experiments on truckloads of farm crops using a retort; Frank Calvert (p. 16-19).

Experiments starting in about 1933 using hexane as a solvent to extract the oil from soybeans; the Ford Extractor (p. 20-23). Boyer's group wanted to get pure protein from soybeans. So "in the lab we developed our own process for extracting the oil... We used hexane solvent, like dry cleaning. We'd flake the beans and run them through a pipe that was full of hexane on an angle with a screw in it." Hexane solvent is "distilled out of petroleum. It has a very narrow boiling point–66º centigrade. The Ford extractor... got quite a lot of attention. We built it across the street from the chemical plant. It was about 150 feet away. Mounted it all by itself because everybody was afraid of fire." A roof was built over it but no walls. It was probably built in about 1933.

In 1933 at the World's Fair [sic, the Ford Exposition of Progress] in New York City, Boyer's group had a glass model (on a table) of this extractor that used hexane solvent.

Note: Ford boycotted Chicago's A Century of Progress Exposition which opened in 1933, in part to call attention to the company's 30th anniversary; he held his own "industrial fair," first in Detroit and then in New York, in late 1933. *Business Week* described it as "the greatest industrial show ever held." Some 2.3 million people attended the two-week show in New York.

A working model of the Ford extractor, using hexane solvent, was at the Chicago World's Fair, starting in mid-1934, in the Ford Industrial Barn. "They would never let you do that today. Too dangerous."

Research on purified soy protein and soy plastics with formaldehyde; Bakelite (p. 24-25). Use of soy oil for foundry core binders for casting the Ford V-8 engine block; thus, the soy experiments are now commercialized. Building a 50 ton/day extractor (p. 26-27). Spinning soy protein fiber like rayon, based on spinning milk protein in Italy. Using the fibers to make wrinkle resistant synthetic wool, a suit of clothes for Henry Ford and others, overcoats, neckties, felt hats. "We also found that these fibers blended in very well with rabbit fur for making men's felt hats. So the Hat Corporation of America took all the fiber we could make. It wasn't very much and they would blend it in with rabbit fur. And they actually had them [the men's felt hats] on the market." Rabbit fur is very expensive (p. 29-36). Ford's suit of clothes contained 65% wool and 35% soy fiber. Boyer leaves Ford Motor Co. in 1943. Problem with fiber was tensile strength, especially wet strength. Ford's interest in this fiber work, and his fitness at age 75 (p. 37-38). Ford "was not a true vegetarian but he was pretty close" (p. 38). Edsel Ruddiman's work with foods (p. 39-47). Boyer and Ruddiman attend American Soybean Assoc. soybean conference in Washington, DC [in Sept. 1932] where they saw "leather-like products that the Chinese make" [yuba]. Boyer tried unsuccessfully to use the idea to make "synthetic leather." USDA's experimental farm in Holgate, Ohio, where many soybeans sent back by W.J. Morse were tested (p. 40-42). Work with soybean milk (p. 43-46). The executive dining room in the Engineering Laboratory. Henry Ford invited Boyer to lunch there about 6 times (p. 45). Development of soy ice cream; lipoxidase enzyme inactivation (p. 45-46).

Visits to Battle Creek, Michigan and Dr. John Harvey Kellogg (p. 47). Boyer's work was with industrial products; the plastic car and structural plastics with hemp, flax, and phenol formaldehyde (soya protein Bakelite resin) (p. 47-64, 70). Making trunk lids using a hydraulic press (p. 50). Ford's famous axe demonstration on a trunk lid (p. 50-52). Lowell Overly and Joe Stewart (p. 53-56, 61, 78-79). Boyer drives the plastic car home (p. 63). Ford's aim with the plastic car: to provide industrial markets for farmers (p. 65). World War II stops plastic car development (p. 65-66). Contract to build an airplane wing of plastic (p. 66-70). The plastic lid and car contain little or no soy (p. 70). Fiberglass and the Chevrolet Corvette (p. 71). Plexiglas and the B-24 bomber made at Willow Run (p. 72). Edsel Ford's death of stomach cancer in the spring of 1943 and its effect on his father, Henry (p. 73-74). Ending work with soy fiber (p. 74).

Boyer leaves Ford in 1943 and goes to work for Drackett

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Co. in Cincinnati, Ohio. Wife needs to leave Detroit. After 1943 Boyer's career really takes off. Dr. Gangloff (p. 75-77). Use of soy fiber by Drackett in felt hats. "We sold them a lot of fiber and we decided to build a bigger plant." Building a protein plant and a fiber plant in Cincinnati big enough to supply the hat company's demands and larger "than we needed just to supply our fiber operation." They also had a big operation in Cincinnati for high-impact (not structural) plastic (p. 78-80). Drackett's marketing people knew how to market Windex and Drano "but they had no feeling for the soybean operation. So when Mr. Drackett died, they sold the whole soybean plant to Archer-Daniels-Midland (ADM, p. 81-83). Before Mr. Drackett died, Boyer's division had developed commercial soy products, and Drackett was making money on the plastic (phenol formaldehyde plus hemp) and the fiber (p. 81). Use of soy protein as a paper coating (p. 83). ADM finally closes the old Drackett protein plant and sells it to Central Soya, which used the million bushel elevator capacity for storage (p. 83-84).

Shortly after Mr. Drackett died, Boyer left Drackett to work on his edible soy fiber, where he owned patents. "If we can make a fiber from soy protein that resembles the outside of a sheep, why not make a fiber that will resemble the inside (p. 84-86). Idea of building an edible soy protein plant is in Cincinnati, with Mr. Drackett's approval (p. 87). Boyer tries to find companies to license rights to his landmark patent: Virginia Carolina Chemical (Taftville, Connecticut, p. 88); Swift & Co. (p. 89-92); Unilever, which was interested in peanut protein in Africa and at Port Sunlight near Liverpool (p. 92-94, 112-13); General Foods and Nabisco (Fairmont, New Jersey research lab) (p. 94, 99). Unilever and Swift pay licensing fees of $20,000 a year plus consulting fees. General Mills and Ralston Purina (p. 94-95). Why Swift dropped its interest (p. 95-96). General Mills and Bacos (p. 96). Patent expires in 1971 after 17 years (p. 96). Worthington Foods (p. 97). Ralston Purina was getting into protein. In about 1956-58 they "had bought Procter & Gamble's protein plant in Louisville [Kentucky], which was making industrial protein for paper coating" (p. 98). Worthington Foods was too small to make their own soy protein fibers, so Ralston Purina made it for them (p. 78-80). Ralston Purina's great success with edible soy protein and their small conflict: pet food vs. human food (p. 100-01). From 1961 to 1971 Boyer was receiving licensing fees / patent royalties from Ralston Purina, Worthington, and General Mills (p. 102). General Mills and Bacos (p. 103-04). Ralston Purina's patent lawsuit against Far-Mar-Co. Ralston won $8 million. Boyer testified as an expert witness (p. 104-05).

Boyer remarries and retires in 1971 (p. 102, 105, 107). Subsequent work with Miles and Worthington; the Morningstar Farms line (p. 105-08). Companies now spinning soy protein fiber (two in the Netherlands, one in Japan, one in Australia). Ford Foundation was not interested in his work with soy protein for Third World nations (p. 110). Central Soya bought the ADM plant that was located in Chicago (p. 113-14). Kellogg's Corn Soya breakfast cereal (p. 114-15). Worthington's Soyloin Steaks; all early Kellogg and Worthington vegetarian products based on wheat gluten (p. 119). When Worthington bought Battle Creek they got their lady research director; she worked at Worthington until she was quite elderly. Boyer visited her in her lab at Battle Creek several times (p. 119-20. Note: Josephine F. Williams was in charge of the lab and product development at Battle Creek, where she worked closely with Dr. John H. Kellogg. She kept similar positions at Worthington Foods, according to Ron McDermott). Henry Ford as a soybean pioneer and visionary. The soybean is now America's No. 2 cash crop and also our second largest earner of foreign exchange. "That really started from Ford. When we first started in 1931, hardly anybody ever heard of the soybean, and Henry Ford's penchant for publicity publicized the soybean... He certainly made it popular and made people become aware of it. Today it's darned important." He should be remembered as the "Father of the Soybean." "I always thought it would be nice if they would rebuild the [Soybean] laboratory [in Greenfield Village] or restore it like it was when we were doing the soybean work and give it the real credit that it deserves..." (p. 120). After Henry Ford died in 1947 his family wanted no part of any of his pet projects. They completely eradicated the old Ford company (p. 121). Henry Ford was deeply interested in the welfare of American farmers. His tractors and Model T were of great use to them (p. 121). Origins of Ford's interest in chemurgy; William Hale and Dow Chemical Co. in Midland, Michigan; the first three chemurgic conferences in Dearborn, Michigan, in May 1935, 1936, and 1937 (p. 122-27). Ford and Ruddiman establish a complete canning line for good-tasting green soybeans on the outskirts of the Ford estate. The equipment was quite expensive. When World War II threatened, Ford gave it to Michigan State University to teach canning to students. (p. 129-30). Boyer's personal impressions of Henry Ford (p. 128-30). Address: 632 Edgewater Dr. #731, Dunedin, Florida 33528.

2516. **Product Name:** Granose Soya-Franks: Vegetarian Soya-Sausages.
Manufacturer's Name: Granose Foods Ltd. (Distributor). Made in West Germany by DE-VAU-GE.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1985 February.
Ingredients: Water, vegetable oils, onions, egg protein, wheat protein, soya protein, spices, seasonings, salt, gelling agent (guar gum, carob gum), wheat flour, glucose, apples, smoke flavour, oat-flakes, breadcrumbs, herbs, milk protein, soya sauce.
Wt/Vol., Packaging, Price: 200 gm cellophane wrapped pack. Retails for £1.06.

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How Stored: Refrigerated or frozen.
Nutrition: Per 100 gm.: Calories 272.
New Product–Documentation: Food Report (Lehmann). 1985. Feb. The company says that these are just the first of some 20 new products planned for introduction this year.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by DE-VAU-GE, was introduced in Feb. 1985.

Label sent by Granose. 1990. July 11. 2 by 5.5 inches. Red, brown, green, yellow, and black on white.

2517. **Product Name:** Granose Chicken Style Curry.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1985 February.
Wt/Vol., Packaging, Price: 425 gm can for £0.89.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Food Report (Lehmann). 1985. Feb.

Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Granose, was introduced in Feb. 1985.

2518. Phillips, Roland L.; Snowdon, David A. 1985. Dietary relationships with fatal colorectal cancer among Seventh-Day Adventists. *J. of the National Cancer Institute* 74(2):307-17. Feb. [36 ref]
• ***Summary:*** "Associations between fatal colon or colorectal cancer and frequency of use of meat, cheese, milk, eggs, green salad, and coffee, as well as percent desirable weight, are described with the use of 21 years of follow-up for 25,493 white California Seventh-Day Adventists... Egg use was positively associated with risk of fatal colon cancer in both males, particularly for colon cancer during... Overweight (percent of desirable weight ò 125) was associated with an increased risk of fatal rectal cancer in both sexes combined (RR = relative risk = 2.8) and colon cancer in males only (RR = 3.3)... These three factors may explain a substantial portion of the colorectal cancer mortality differential between Adventists and U.S. whites (62% for males; 30% for females)." Address: Dep. of Biostatistics and Epidemiology, Loma Linda Univ. Schools of Medicine and Health, Loma Linda, California 92350.

2519. *Vibrant Life*. 1985. Serial/periodical. Hagerstown, Maryland. Review and Herald Publishing Association. Published by the Seventh-day Adventist Church. Vol. 1, No. 1 Jan/Feb. 1985. Frequency: Bimonthly (every 2 months).
• ***Summary:*** Preceded by *Life and Health*, and before that by *Pacific Health and Temperance Advocate*. A magazine about health and Christian life. Address: USA.

2520. Kahn, E.J., Jr. 1985. Profiles (soybeans). The staffs of life. V. The future of the planet. *New Yorker* 61:50-56, 60-66, 68-85. March 11.
• ***Summary:*** This wide-ranging overview of the soybean, from earliest times to the present, is well written though a little patchy and scattered. Among the topics it discusses: Soybeans as a relief food. Ted Hymowitz, Benjamin Franklin, and tofu. The Shah of Iran switching to soybean oil. The attempt by the Hunt Brothers of Texas to corner the soybean market. The Nixon soybean shock. Soybeans in Brazil and Manchuria. The origin of the soybean in China and Japan. Soymilk and Dr. Harry Miller. The dissemination of the soybean to Europe and America. How the soybean became popular in America; William Morse and the USDA. Henry Ford's work with soybeans and William Atkinson. Dwayne Andreas and ADM. "There is no question in my mind but that the soybean is the fundamental future of the planet," Dwayne Andreas says.

Also discusses amaranth, the winged bean, IBPGR, loss of genetic diversity, and water shortages. The article closes with a quotation from Monkombu Sambasivan Swaminathan, the director general of the International Rice Research Institute in the Philippines: "We live in this world as guests of green plants."

2521. Ballard, Bob. 1985. Ah-Soy! and Great Eastern Sun (Interview). *SoyaScan Notes*. March 21. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Ah-Soy was launched at the NNFA show in Atlanta, Georgia, in the summer of 1984. Initial flavors were vanilla, chocolate, and original (plain). It was made by Saniku Foods in Japan and imported via Mitoku. Carob flavor was introduced in the fall of 1984. Vanilla is now the best seller because it is the most unique. The product is a "fantastic success." The four flavors account for 15-20% of Great Eastern Sun's total sales from 1,100 products. GES only sells to distributors [i.e. it is a master distributor].

Sales reports for the period 1 Nov. 1984 to 25 Feb. 1985 show the following number of units sold (there are 30 units/per case): Vanilla 210,000 units. Original/plain 110,000. Carob 105,000. Chocolate 100,000.

Other GES soyfoods that sell well: Mellow white miso (made by American Miso Co.), 35 lb tub, #9 best seller by dollar volume. Onozaki rice miso, 11 lb tub, #20 best. Mellow white miso, 15 lb tub, #20 best. Instant miso soup from Japan (ranking unknown). This month's sales are annualized. The company is now doing $4 million/year in sales. They used to import freeze-dried tofu; the FDA forced them to change the name to "dried tofu." Shurtleff notes that he prefers the term "dried-frozen tofu."

Another best seller (about #3-5) is their White Cloud Rice Syrup It is made from rice with sprouted barley for malt. Address: Great Eastern Sun, 92 Macintosh Rd., Asheville, North Carolina 28806. Phone: 808-438-4730 or 704 252-3090.

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2522. Lipkin, Martin; Uehara, K.; Winawer, S.; Sanchez, A.; et al. 1985. Seventh-day Adventist vegetarians have a quiescent proliferative activity in colonic mucosa. *Cancer Letters* (*Shannon, Ireland*) 26(2):139-44. March. [28 ref] Address: 1-3. Memorial Sloan-Kettering Cancer Center, New York, NY 10021; 4. Loma Linda Univ., Loma Linda, California 92350.

2523. Spuehler, J.; Howie, B.; Shultz, T.D. 1985. Dietary nutrients and plasma and urinary hormone levels in premenopausal Seventh-day Adventist (SDA) vegetarians (Abstract). *Federation Proceedings* (*FASEB*) 44(3):768 (Abst. #2084). March.
• ***Summary:*** "Specific nutrients may modify hormonal balance and contribute to breast cancer etiology. This study investigated relationships between nine dietary nutrients and plasma urine hormone levels. Ten SDA vegetarian and 10 SDA non-vegetarian women were studied." Urinary unconjugated estrone, estradiol-17Beta (E2) and estriol, as well as plasma E2, dehydroepiandroestrone-sulfate (DHEA-S), prolactin and progesterone were determined by RIA The non-vegetarians consumed significantly more protein, total and saturated fats, oleic and linoleic acids, and cholesterol than the non-vegetarians. The vegetarians consumed more crude fiber. Hormonal status between the two groups did not differ significantly. The data presented "suggest a possible relationship between hormonal balance and dietary milieu." Address: Depts. of Biochemistry and Nutrition, School of Medicine, Loma Linda Univ., Loma Linda, California 92350.

2524. Stich, Hans F.; Hornby, A.P.; Dunn, B.P. 1985. Beta-carotene levels in exfoliated mucosa cells of population groups at low and elevated risk for oral cancer. *International J. of Cancer* 37(3):389-93. March. [35 ref]
• ***Summary:*** 55 lacto-vegetarians (members of the International Society for Krishna Consciousness–Hare Krishna, all abstainers from alcohol and tobacco) and 28 vegetarians (members of the Seventh-Day Adventist Church, all abstainers from alcohol, tobacco, and meat) participated in the experiment and were compared with 61 representatives of a "Western" lifestyle pattern (heavy consumers of alcoholic beverages; 64% consumed the equivalent of at least 1 bottle of wine or 7 bottles of beer per week, and all were non-smokers). Discusses the possible involvement of the low levels of beta-carotene were found in the oral mucosa of heavy alcohol drinkers in increased sensitivity towards the carcinogenic and genotoxic activity of cigarette smoking plus alcohol consumption. Address: Environmental Carcinogenesis Unit, British Columbia Cancer Research Centre, 601 West 20th Ave., Vancouver, BC V5Z 1L3, Canada.

2525. **Product Name:** The Gardenburger.
Manufacturer's Name: Wholesome & Hearty Foods.
Manufacturer's Address: 1416 S.E. 8th St., Portland, OR 97214. Phone: 503-796-0109.
Date of Introduction: 1985 March.
Ingredients: 1993/06: Mushrooms, onions, rolled oats, brown rice, lowfat mozzarella cheese (part skim milk, salt and vegetable rennet), cottage cheese (nonfat milk, enzymes and culture), egg white blend (egg whites, olive oil, tapioca starch, vegetable gum, natural flavoring), cheddar cheese (whole milk, cultures, salt, enzymes & vegetable color), bulgur wheat, natural seasonings & spices (no salt added).
Wt/Vol., Packaging, Price: 10 oz box.
How Stored: Frozen.
Nutrition: Per patty (2.5 oz = 71 gm): Calories 126, protein 6.67 gm, carbohydrate 19 gm, fat 2.6 gm (percent of calories from fat 18.5%, unsaturated 1 gm, saturated 1.6 gm), cholesterol 6 mg, sodium 191 mg, potassium 193 mg, fiber 2.3 gm.
New Product–Documentation: East West. 1987. June. p. 65. East West. 1988. Oct. p. L-3. Lundberg Rice Showcase. No added salt, and no soy. "Served in restaurants, airlines, hospitals, sports arenas, schools, and business cafeterias throughout the United States."

Time magazine. 1991. March 4. p. 65. To the roars of the roars of the herbivores: Entrepreneurs." Discusses the Gardenburger. Developed by Paul Wenner, the president of Portland's Wholesome & Hearty Foods Inc., this meatless competitor of the hamburger contains mushrooms, onions, oats, brown rice, low-fat cheese, egg whites, bulgur wheat, walnuts, and seasonings pressed into a patty and baked. It contains only half the calories and one-fifth the fat of an ordinary hamburger. "Wenner expects to sell 8 million patties this year."

Talk with Richard Gross. 1991. Sept. 3. This product is made in Portland. The flavor and texture are so-so, but the maker claims to have sold 10 million of them. It it sold baked and frozen. On his literature he writes "Soy free." But the product contains saturated fat and cholesterol. It is meatless but it is not vegetarian since it contains cheese.

Dispatch (Columbus, Ohio). 1992. Sept. 1. "Worthington Foods sued over Veggie Burger name." Paul Wenner, age 45, is a vegetarian who in 1984 "ran the Garden House restaurant in Gresham, Oregon, when his line of veggie burgers was born. He said he began making Gardenburgers commercially in March 1985 with a production run of 800 patties."

Product with Label purchased at Lucky Foods supermarket in Lafayette, California. 1993. June 9. 7.5 by 6 by 1.5 inches. Paperboard box. Red, yellow, green, and brown on tan. Full color photo of a grilled patty resting on a lettuce leaf topped by 2 onion rings and 2 tomato slices. "Four gourmet meatless patties. No soy! No preservatives. No MSG." Price: $3.39. Company address is now 2422 S.E.

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Hawthorne, Portland, Oregon 97214. Phone: (503) 238-0109.

Product with Label (new design) purchased at Safeway supermarket in Lafayette, California. 1994. May 18. Price: $2.99. Frozen. Note that the price for 10 oz of Gardenburger (4 patties) is the same as the price for 12.8 oz of Green Giant Harvest Burgers (4 burgers). The product name is now "The Original Gardenburger." New label design shows a black outline sketch of a boy scout-like person in a yellow square. "It's meatless, low fat, soy-free and tastes terrific." Gardenchef Paul Wenner. Soyfoods Center Taste Test. 1994. May & June. We like the flavor, texture, and appearance of this product the best of all frozen meatless burgers sold today in supermarkets.

Note: This is the earliest commercial product seen (Sept. 2000) made by Wholesome and Hearty Foods.

2526. *Grocer* (*The*) (*England*). 1985. Soya milk spearheads move into yogurt, ice cream. April 6. p. 23.
• ***Summary:*** Michael Cole, managing director of Soya Health Foods of Trafford Park, Manchester, reports that he is selling about £3 million worth of his new Sunrise soya milk each year, and producing 46,000 gallons a week in half-liter aseptic Tetra Pak cartons. Major grocery chains have shown great interest in the product. Most competing soya milks are imported to England. Cole imports only his soya beans–from Canada. His company's biggest competitor is Granose, which is selling through Safeway and other outlets.

Cole presently has to feed his okara, a by-product of soymilk production, to pigs. "But in the next few weeks we will be installing a vegetarian sausage and burger plant which will take care of that."

Cole is a former health food shop owner who has all been involved in the marketing and manufacturing side of the trade, not only in England but also in India and America.

A large photo shows Cole standing next to stacked cartons of his Sunrise Soya Milk. The caption reads: "'Soya yogurt possible–Michael Cole."

Note: This was the article that led to the founding of Genice in Wales. Ray Pierce, who was with Classic Ices in Wales at the time read the article, learned that Michael Cole of Soya Health Foods Ltd. was planning to make a soy ice cream, then contacted Cole and offered to work with him in developing the product. It became Classic Ice's first non-dairy ice cream. Seeing its potential, Ray and Irene Barclay left Classic Ices and started Genice. Address: Manchester, England.

2527. Kass, Monica. 1985. High-tech soymilk pouch creates market success: Stand-up retortable pouches for soymilk boom in natural-food stores, break into supermarkets. *Packaging*. April. p. 36-37.
• ***Summary:*** On the cover of the magazine and the first page of the article is a large color photo of Westbrae Natural Cocoa-Mint Malted. On the second page is a color photo of ten brands of soymilk in stand-up gussetted retort pouches, the type of soymilk packaging now most popular in America. "Marusan Ai and San-iku Foods are two Japanese companies currently processing and retort packaging soymilk for export to the USA. Marusan forms the retort pouch from multilaminate rollstock supplied by Toyo Seikan Kaisha Co. (Toyo Seikan is licensed by Doy-n-pak [Doypack] to produce the material.) And San-iku Foods retorts soymilk in preformed pouches, also made from the Doy-n-pak patented lamination.

"Sources say the fact that Doy-n-pak's design patent on the stand-up, gusseted pouch runs out this fall has prompted some scrambling among American materials suppliers who see the potential of the stand-up pouch and want to establish market position with the pouch.

"American companies importing soymilk in the preformed retort pouch include Westbrae Natural Foods and Great Eastern Sun. Eden Foods Inc. was the first company out with soymilk in the rollstock formed pouch. Structural differences between the two pouch varieties are minimal. The rollstock-formed square-cornered pouch must be opened with a scissors and is somewhat narrower in shape than the round-cornered preformed pouch which has an easy-open feature.

"Lamination for both pouch types consists of an outer layer of PET laminated to nylon, aluminum and an inner layer of polyolefin film that meets FDA food contact material requirements.

"Processing methods Marusan and San-iku use to adapt soymilk to American tastes differ, but both companies retort pouches up to 250ºF giving them an unlimited shelf life.

"Graphics reflect positioning: The real difference between the various retorted soymilks is in positioning. Eden Foods is strictly interested in promoting the product for its nutritional benefits. Great Eastern Sun's soymilk appeals to health-conscious consumers with an eye on trends. And Westbrae has two soymilk varieties. One is a plain soymilk, targeted for the health-conscious crowd. The other is a line of dessert-type malted drinks–'fun' products the company is targeting at younger consumers."

Note: This is the earliest document seen (Sept. 2011) with the term "high-tech" (or "high tech") in the title in connection with soyfoods–in this case soymilk, historically a low-tech product.

2528. **Product Name:** [Sahm Yook Soymilk (Plain)].
Foreign Name: Sahm Yook Dou Ru.
Manufacturer's Name: Sahm Yook Korean Foods.
Manufacturer's Address: 320 Panjeong-ri, Jiksan-myun, Chunwon-gun, Choongchungnam-do 333-810, South Korea.
Date of Introduction: 1985 April.
Ingredients: Soy milk, high fructose corn syrup, corn oil, rapeseed oil, salt.
Wt/Vol., Packaging, Price: 200 ml foil retort pouch

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(Doypack). Retails for 230 Won (6/90).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Talk with Eric C. Fehlberg. 1990. March 8. The Seventh-day Adventist food company in South Korea, Sahm Yook Foods, now makes soymilk (only plain, no flavors) packaged in Tetra Brik cartons and foil Doypack (Doynpack). The company was established in about 1978, and it began to make soymilk in May 1985. After launching soymilk, the company began to grow dramatically, as that product grew. Last year they built a very large, new soymilk plant (based on Adventist technology) and they are now about the 2nd or 3rd largest soymilk maker in Korea.

Label (Foil retort pouch). Sent by Eric Fehlberg. 1990. May 24. 4 by 6.75 inches Red, yellow, dark green, and light green on silver. Front panel says "Soy Milk" and an illustration shows 3 yellow soybeans in a green pod. The back panel shows the package being immersed in boiling water or heated in a microwave oven. So this package is probably sold during the cold months.

Form filled out and label sent by C.Y. Yoon, General Manager, Sahmyook Korean Foods. 1990. June 23. Note that on the envelope the company name is printed Sahmyook Korean Foods, but the brand name is typed 4 times on the form as Sahm Yook. The address on the envelope is 320 Panjung Jiksan Chunwon Choongnam, Korea. The soy milk in a foil retort pouch was introduced in April 1985. The same product with the same ingredients was launched in a Tetra Brik carton in July 1987. All four of the company's soymilk products contain no sugar (sucrose), chemical flavorings, or preservatives.

A brief company history. In 1981 they purchased a 31,313 square meter plant to make foods using wheat gluten. In 1984 they installed a soymilk processing plant, then began to sell soymilk starting in April 1985. Concerning prices, there are 720 Won to 1 U.S. dollar. Thus the Tetra Brik soymilk (200 ml) retails for the equivalent of US$0.31.

Leaflet for Sahm Yook soymilk products (7.5 by 10 inches, color photo). 1990. Shows 5 packages of soymilk and a glass of soymilk surrounded by fresh green vegetables and mikan oranges.

2529. **Product Name:** Loma Linda Golden Chik-Nuggets (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1985 May.
Ingredients: Soy protein concentrate, soy protein isolate, corn oil, water, wheat gluten, egg whites, potato flakes, artificial flavors, whole wheat flour, salt, natural (vegetable) flavors, dried yeast, dextrose, onion powder, spices, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). Breader: Bleached wheat flour, salt, yeast, sugar, oleoresin paprika, leavening (sodium acid pyrophosphate, monocalcium phosphate, sodium bicarbonate), hydrogenated soy oil, mono and diglycerides, nonfat milk, whey. Batter: Water, corn flour, modified food starch, leavening (sodium acid pyrophosphate and sodium bicarbonate) and spice.
Wt/Vol., Packaging, Price: 12 oz paperboard box.
How Stored: Frozen.
Nutrition: Per approximately 5 pieces (3.0 oz–85 gm): Calories 230, protein 15 gm, carbohydrate 17 gm, fat 11 gm, cholesterol 0 mg, sodium 630 mg, potassium 200 mg.
New Product–Documentation: Food Report (Lehmann). 1986. Feb. The vegetarian product is chicken flavored.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1985.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2530. Snowdon, David A.; Phillips, Roland L. 1985. Does a vegetarian diet reduce the occurrence of diabetes? *American J. of Public Health* 75(5):507-12. May. [24 ref]
• ***Summary:*** A study of 25,698 Seventh-day Adventists found that they had about half the risk of dying from diabetes (as the main cause of death) compared with all U.S. whites. Within the male Adventist population, vegetarians had a substantially lower risk than non-vegetarians of dying from diabetes. "Within both the male and female Adventist populations, the prevalence of self-reported diabetes also was lower in vegetarians than in non-vegetarians. The associations observed between diabetes and meat consumption were apparently not due to confounding by over- or under-weight, other selected dietary factors, or physical activity." Address: 1. Asst. Prof., Div. of Epidemiology, School of Public Health, Univ. of Minnesota, Stadium Gate 27, 611 Beacon St., S.E., Minneapolis, MN 55455; 2. Prof., School of Health and School of Medicine, Loma Linda Univ., Loma Linda, California.

2531. STS–Soya Technology Systems. 1985. Containers for soymilk (Leaflet). 11 Dhoby Ghaut #11-06, Cathay Building, Singapore 0922. 2 panels each side. Each panel: 30 x 21 cm. Also published in Chinese. [Eng; Chi]
• ***Summary:*** Color photos show carton containers (Tetra Brik, Combibloc, Pure Pak), plastic bottles (incl. Remy/Serac Aseptic UHT), glass bottles, cans, and plastic bags (Prepac/UHT, Doypack/Toyo Seikan standing pouch/retort sterilized). Brands include Granose, Marigold, GranoVita, Soy Moo, Magnolia, No Cow, Vegemil, Vitamilk, Amofood, Milho Verde, PureHarvest, Yeo's.

Note 1. Milho Verde is made by Pennone–Produtos Alimenticios Ltda., Av. Adolfo Pinheiro 1247, Sao Paulo, Brazil. Their factory is at another address.

Prepac is at 62 Rue Pasteur, 94800 Villejuif (a commune in the southern suburbs of Paris), France. Address:

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Singapore.

2532. *Whole Foods.* 1985. FDA may approve food health claims: Preliminary guidelines given in response to Kellogg's All-Bran campaign. May. p. 18-19.
• ***Summary:*** A promotion for Kellogg's All-Bran cereal, began last fall, states that a high-fiber, low-fat diet can be helpful in reducing the risk of certain types of cancer.

Note: This is the earliest document seen (Sept. 2001) that mentions a proposed FDA health claim.

2533. Worthington Foods, Inc. 1985. Natural wonders: Taste the difference in new Natural Touch (Ad). *Bestways.* May. Also in Natural Foods Merchandiser. 1985. May.
• ***Summary:*** This full-page color ad shows packages of (left to right): Okara Patties, Dinner Entrée, Natural Touch Tofu Garden Patties, and Harvest Bake Lentil Rice Loaf. In the foreground is a large slice of one of these on a fork. At the bottom is a 20¢ coupon. Address: Worthington, Ohio 43085.

2534. *Import Alert* (*U.S. Food and Drug Administration*). 1985. Edensoy and other soy drinks that may serve as infant formulas. No. 40-01. June 26. 3 p. PAC Code 17R043. ADFS-DFRG (HFO-415). Field Compliance Branch.
• ***Summary:*** Also concerns Soy Moo (Belgium, Health Valley); Sun Soy (Belgium); Ah Soy (Japan, San-iku Foods, Great Eastern Sun); Westsoy (Japan, San-iku, Westbrae), Vitasoy (Hong Kong), Malteds (Westbrae), Marusan. Address: Washington, DC.

2535. **Product Name:** [Sahm Yook Soyalac (Plain Soymilk)].
Foreign Name: Sahm Yook Soyalac.
Manufacturer's Name: Sahm Yook Korean Foods.
Manufacturer's Address: 320 Panjeong-ri, Jiksan-myun, Chunwon-gun, Choongchungnam-do 333-810, South Korea.
Date of Introduction: 1985 June.
Ingredients: Soy milk, vegetable oil, glucose, high fructose corn syrup, salt.
Wt/Vol., Packaging, Price: 200 ml foil retort pouch (Doypack). Retails for 300 Won (6/90).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Form filled out and label sent by C.Y. Yoon, General Manager, Sahmyook Korean Foods. 1990. June 23. The product was introduced in June 1985. Ingredients are listed in English.

Label (Foil retort pouch). Sent by C.Y. Yoon. 1990. June 23. 4 by 6.75 inches Red, yellow, dark green, and light green on silver. Front panel says "Soyalac" and an illustration shows 3 yellow soybeans in a green pod. The back panel shows the package being immersed in boiling water or heated in a microwave oven. So this package is probably sold during the cold months.

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2536. **Product Name:** Tofu Topper (Spread or Potato Topping) [Herbs & Spice Pate, Pepper & Onion Pate, or Spicy Mexican Pate].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1985 June.
Wt/Vol., Packaging, Price: 10 oz metal can. Retails for $2.39.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Ad (full page, color) in Natural Foods Merchandiser. 1985. June. "Nothing tops Tofu Topper, on potatoes, sandwiches, canapes, vegetables... be creative."

2537. Worthington Foods, Inc. 1985. Nothing tops Tofu Topper, on potatoes, sandwiches, canapes, vegetables... and on your shelf (Ad). *Natural Foods Merchandiser.* June. p. 47.
• ***Summary:*** This full page color ad shows three cans of tofu topper on a wooden cutting board surrounded by vegetables and crackers. On top of one can is a baked potato, on top of the 2nd some chops and dip, and atop the third a veggie burger with Tofu Topper inside.

Note: Worthington Foods has created the Natural Touch brand for introducing its products into natural- and health food stores; for supermarkets it generally uses the Morningstar Farms brand. Address: Worthington, Ohio 43085.

2538. Howie, Beverly J.; Shultz, Terry D. 1985. Dietary and hormonal interrelationships among vegetarian Seventh-Day Adventists and nonvegetarian men. *American J. of Clinical Nutrition* 42(1):127-34. July. [61 ref]
Address: 1. Dep. of Biochemistry, School of Medicine; 2. Dep. of Nutrition, School of Public Health. Both: Loma Linda Univ., Loma Linda, California 92350.

2539. Snowdon, David A. 1985. Diet and ovarian cancer. *J. of the American Medical Association* 254(3):356-57. July. [6 ref]
• ***Summary:*** This letter to the editor reports "the results of some preliminary analyses relating diet to the risk of fatal ovarian cancer. These findings are from a population of 16,190 white California Seventh-Day Adventists women who completed a dietary questionnaire in 1960... The strongest and most consistent relationships between diet and risk were observed for egg and fried food consumption. Women who ate eggs (i.e., fried or nonfried) three or more days each week had a three times greater risk of fatal ovarian cancer than did women who ate eggs less than one day per week. Women who ate fried foods five or more days per week had 2.9 times greater risk of fatal ovarian cancer than did women who ate fried foods less than three days per week." Address: Univ. of Minnesota, Minneapolis.

2540. **Product Name:** GranoVita Soya Drink [Unsweetened White, Sweetened White, Coconut, Strawberry, or Carob].
Foreign Name: GranoVita Soja Drink (Ungesuesst, -, Kokos, mit Erdbeer-Geschmack, Caroba).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1985 August.
Ingredients: Water, soybeans, cane sugar, sea salt, natural flavorings.
Wt/Vol., Packaging, Price: 500 ml and 1 liter Tetra Brik Aseptic carton.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 100 ml: Calories 50, protein 3.6 gm, fat 2.3 gm, usable carbohydrates 3.6 gm, linoleic acid 51%, sodium 58 mg.
New Product–Documentation: STS. 1985. Containers for Soymilk. Shows color photo of 500 ml Tetra Brik carton. Red and green on white. "Made purely from plants. Free of cholesterol. Rich in protein (Rein pflanzlich. Cholesterinfrei. Eiweissreich)." This product is marketed mainly in West Germany. Note the absence of a chocolate flavor in the German health market. Label. 1987. 500 ml Tetra Brik carton. In German, Dutch, and French. The unsweetened is orange and red on white. "Pure and from plants. Rich in protein. Cholesterol free." Neuform certification symbol. In Nov. 1989 the coconut retails for DM 1.69.

Manufacturer's brochure. 1989? "GranoVita Soja-Drinks und -Desserts... ein erfrischender Genuss [a refreshing enjoyment]." 6 pages, with many color photos. Describes the products (with a photo of each) and how they are made. All 5 are in 500 ml Tetra Brik cartons and 2 white are in liter cartons. A table compares the composition of cow's milk containing 3.5% fat with sweetened white. Note, per 100 gm: Cholesterol: 11 mg vs. 0 mg. Protein 3.3 gm vs. 3.6 gm. Calories 64 vs. 55. Fat 3.5 gm vs. 2.8 gm. Saturated fatty acids: 64% vs. 16%. Polyunsaturated fatty acids: 4% vs. 60%.

Form filled out and Labels sent by DE-VAU-GE. 1990. June 11. Labels for 500 ml Tetra Brik cartons in unsweetened, strawberry, plain (sweetened), and coconut, and for 1 liter cartons in unsweetened and plain (sweetened). All were apparently launched in 1985.

2541. **Product Name:** [GranoVita Soja Dessert {Pudding Gelled with Carrageenan} (Vanilla, Strawberry, or Chocolate)].
Foreign Name: GranoVita Soja Dessert (Vanille, Erdbeer, Schoko).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.

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Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1985 August.
Ingredients: Vanilla: Water, soybeans, cane sugar, modified starch, fructose, vegetable gums, sea salt, natural aromas.
Wt/Vol., Packaging, Price: 500 gm Tetra Brik Aseptic carton. Retails for DM 2.45 (1/90).
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Vanilla, Per 100 gm: Protein 3.1 gm, fat 2.9 gm, usable carbohydrates 10.0 gm, calories 79.
New Product–Documentation: Lindner. 1987. Interview. Color photo of 500 ml Tetra Brik carton. Three Labels (cartons). 1988. Each is one unique color plus red and green on white. The unique color for vanilla is yellow, for strawberry is pink, and for chocolate is brown. Front panel illustration of a dish of pudding. "Pure vegetable protein (Rein pflanzlicher Eiweissträger), cholesterol free." Ingredients and nutritional analysis are listed in German, Italian, French, and Dutch.

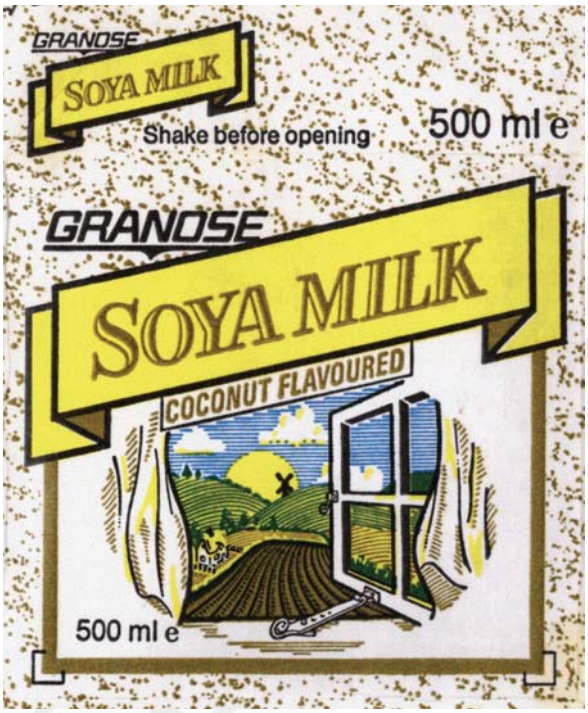
Manufacturer's brochure. 1989? "GranoVita Soja-Drinks und -Desserts... ein erfrischender Genuss [a refreshing enjoyment]." 6 pages, with many color photos. Describes the products (with a photo of each of the 3) and how they are made.

Form filled out and 3 Labels sent by DE-VAU-GE. 1990. June 11. They started making this product in 1985.

2542. **Product Name:** Granose Soya Milk [Sugar Free, Plain/Dairylike, Organic; Coconut, Chocolate, Strawberry, Banana, Carob].
Manufacturer's Name: Granose Foods Ltd. (Marketer). Made in West Germany by DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1985 August.
Ingredients: Coconut: Water, dehulled soya beans, raw cane-sugar, coconut powder, sea-salt.
Wt/Vol., Packaging, Price: 500 ml Tetra Brik Aseptic carton.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 100 ml: 70 calories. Fat fractions: polyunsaturates 39%, saturates 15%.
New Product–Documentation: STS. 1985. Containers for Soymilk. Shows color photo of 500 ml Tetra Brik carton. Orange and green on white. "100% Vegetable. Rich in protein. High in polyunsaturates." Use by 7/84.

Spot in Food Trade Review. 1986. June. Granose Foods Ltd. (UK) launched new strawberry soya milk in 500 ml Tetra Paks. Ad in The Vegan. 1986. Summer. p. 17. "Why does Granose Soya Milk flow so smoothly? Well, its the natural choice." Shown in 500 ml and 1,000 ml. Sugar free or sweetened with raw cane sugar.

Photo and Spot in The Vegetarian (UK). 1986. Sept/



Oct. "Granose strawberry flavoured soya milk. Absolutely delectable–pure strawberry essence, no artificial flavour or colour so its not bright pink!"

Label. 1987. Gold, yellow, brown, blue, and green. Illustration of sunrise seen through a farmhouse window.

Soyfoods (ESFA). Granose Foods Ltd. has launched a strawberry soya milk, made from soya beans, pure strawberry essence, raw cane sugar, sea salt, and natural vegetable flavoring. Presented in 500 ml "Tetra Paks," it has a 6-month shelf life unopened.

Ad in The Vegan. 1988. Summer. p. 16. "Granose Soya Milk [Banana flavoured with no added sugar]."

2543. Leneman, Leah. 1985. Tomorrow's world [soyfoods]. *Vegetarian* (*The*) (*England*). July/Aug. p. 21-24.
• ***Summary:*** There are now 8-9 brands of soya milk sold in Britain. "It is a shame that most people's introduction to tofu is in the form of Morinaga silken tofu which... is now found in most health food stores. Silken tofu is pleasant and nutritious, but is much softer than regular tofu and is therefore much less versatile. Following recipes meant for firm tofu with it can be frustrating.

"*Granose* is the first big-name health food manufacturer to feature a line of tofu-based products (imported from Denmark). Two of the three tinned convenience meals seem to me less than ideal. The tofu adds nothing special to either the Tofu and Tomato Sauce nor to the Tofu in a Savoury Bean Sauce; they might just as well have used tvp. However, the Chinese-Style Tofu is really excellent, with a nice balance of tastes and textures, including the cubes of tofu–just about the nicest tinned convenience meal around.

"The first national distributor of tofu (to the best of my

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knowledge) was *The Regular Tofu Company...* Like all other national distributors, their tofu is vacuum-packed, which considerably lengthens its shelf-life... *Paul's Tofu* (The Old Brewery, Wheathampstead House, Wheathampstead, St. Albans, Herts.) produces another vacuum-packed firm tofu, which is available in London and South-East England...

"*Bean Machine* (Station Road, Crymych, Dyfed) produces not only tofu but also a range of 'soysage' foods made from okara... They also make 'Soyannaize,' a dairy-free dressing. *Duchesse* All-Natural Tofu Dressing and Dip (made by St. Giles Foods Ltd, St. Giles House, Sandhurst Road, Sidcup, Kent DA15 7HL) is another mayonnaise-type product..."

She is writing The International Tofu Cookery Book for Routledge & Kegan Paul. Address: 19 Leamington Terrace, Edinburgh EH10 4JP, Scotland.

2544. Mitz, Bea. 1985. The joy of soy. *Total Health* (*California*). Sept. p. 55-56.
• ***Summary:*** An overview that contains photos of products made by Legume (Tofu Stuffed Shells Provencale), Loma Linda (Ocean Fillets, Griddle Steaks), Worthington Foods (Tofu Topper), Eden Foods (Edensoy), plus Tofutti and Tofulite (made by Barricini).

2545. Gardiner, Doris Kloss. 1985. Jethro Kloss, his work with soyfoods (Interview). *SoyaScan Notes.* Oct. 21. Conducted by William Shurtleff of Soyfoods Center. Followed by letter of 17 Jan. 1986.
• ***Summary:*** Jethro Kloss definitely made commercial soy ice cream in chocolate and vanilla flavors. He made it himself and sold it in Washington, DC. "My aunt, Promise Kloss Moffett, recalls how he would put it in the ice chips and sawdust to keep it cold. They had a concession stand somewhere down on Pennsylvania Avenue near the White House. My uncle Eden recalls selling lunches there commercially to the public. They included soy ice cream, soy coffee, and sandwiches. He does not recall exactly when or for how long they sold these food products."

Jethro had so many interests that he didn't stick with one idea long enough to make it a real success. He was so creative and had so many ideas, but he was rather like a Gypsy.

"When I was about 9-12 years old I recall vividly that Jethro had a soybean bread baked commercially. It was his recipe. He used to send me to the bakery in Takoma Park, Maryland, to pick it up. The particular bread recipe is found on page 645 of *Back to Eden* and was made using soy bean milk instead of water. It is delicious!

"During the years 1939-1941, Jethro and his wife lived in the Butternut Apartments near Walter Reid Hospital, on the border between Washington, DC, and Takoma Park, Maryland. My grandmother (Jethro's wife) would sometimes go across the street to do 'special duty' nursing at Walter Reed. She died in 1944." Address: Back to Eden Books, P.O. Box 1439, Loma Linda, California 92354. Phone: (714) 796-9615.

2546. **Product Name:** Provamel Soya Drink [Carob, or Honey & Malt].
Manufacturer's Name: Alpro.
Manufacturer's Address: Zuidkaai 33, B-8700 Izegem, Belgium.
Date of Introduction: 1985 October.
Wt/Vol., Packaging, Price: 250 ml, 500 ml, 1000 ml.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: CSP form filled out by Simon Bailey. 1988. Sept. 28. All made with organic soybeans. Adds honey & malt flavor. The importer in England is Vandemoortele (UK) Ltd., Ashley House, 86-94 High St., Hounslow, Middlesex TW3 1NH. Phone: 01-577 2727.

Form filled out by Philippe Vandemoortele of Alpro. 1991. Sept. 4. The carob and the honey & malt flavors were launched in Oct. 1985.

2547. Jacobs, Barbara; Jacobs, Leonard. 1985. Flour power! Cooking with seitan, the delicious natural food from grain. *East West Journal.* Oct. p. 38-44. [1 ref]
• ***Summary:*** This excellent, pioneering, in-depth article on wheat gluten and seitan was excerpted from the Jacobs' forthcoming book *Cooking with Seitan*, which was not published until May 1987. The article discusses the history of seitan in East Asia and America, the seitan industry and market in America and major manufacturers, the nutritional value and cost compared with other protein sources, and how to make seitan at home. It also gives four recipes.

In the USA about 2,500 lb of seitan are made commercially each week, or about 125,000 lb/year. The largest manufacturer, Upcountry Seitan (in Lenox, Massachusetts, started 3½ years ago by Win Donovan, and now owned and operated by Sandy Chianfoni) makes 600 lb/week of seitan. Ron Harris of Grain Dance Company in San Francisco has been making seitan for the past 8 years (i.e. since about 1977) and is currently selling 250 lb/week. Michael Vitti of Rising Tide Natural Market in Long Island, New York, has been making seitan commercially for 6 years (i.e. since about 1979). Yaron Yemini of Creative Kitchens in Miami, Florida, has been making seitan for 3 years (i.e. since about 1982). He now makes about 120 lb/week.

Barbara Jacobs first tasted seitan about 16 years ago (i.e. in about 1969). "Seitan was introduced to the U.S. natural foods industry about sixteen years ago when a Japanese variety, shrink-wrapped and quite dry and salty, was first imported. There had been several other varieties available from vegetarian groups, primarily the Seventh Day Adventists and the Mormons. Chinese restaurants [in America] have also been preparing wheat gluten for many

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years. The Chinese call it *mien ching*, or *yu mien ching.* Chinese restaurants often refer to it as 'Buddha Food,' claiming that it was developed by Buddhist monks as a meat substitute. There is also a dried wheat gluten available in Oriental food markets called *fu* by the Japanese and *k'ao fu* or *kofu* by the Chinese." Address: Massachusetts.

2548. Melby, Christopher L.; Hyner, G.C.; Zoog, B. 1985. Blood pressure in vegetarians and non-vegetarians: A cross-sectional analysis. *Nutrition Research* 5(10):1077-82. Oct. [7 ref]
• ***Summary:*** In a study of 250 Seventh Day Adventists, the blood pressure of 125 vegetarians (114/71) was significantly lower than the blood pressure of 53 non-vegetarians (122/74). However when "blood pressure were adjusted for the covariates of age, sex, and body mass index, there was no significant difference in blood pressure between the two groups. Further analyses revealed that the lower blood pressure in the vegetarians appeared to be best explained by their lower body mass index." Address: Dep. of Physical Education, Health, and Recreation Studies, Purdue Univ., West Lafayette, Indiana 47907.

2549. Kloss, Eden P. 1985. Re: Jethro and Eden Kloss selling soy products in Washington, D.C., in about 1930. Letter to William Shurtleff at Soyfoods Center, Nov. 15. 1 p. Typed, without signature.
• ***Summary:*** "I remember helping my father, Jethro Kloss, prepare quick lunches which we sold to passersby on Pennsylvania Avenue, near the White House. We had a space allotted to us where we parked our small trailer equipped to serve the people, and when the workers poured out of the government buildings at noon, many would stop and buy our lunches.

"Some things had to be prepared before, of course, like the ice cream, which was quite a process, for we made the soy cream directly from the raw soybeans. They were soaked (over night), then parboiled, cooked about two and a half hours, ground in a mill, put into sugar bags, and the cream squeezed out with water. This rich soy milk was then used to make the ice cream. I don't recall the exact recipe (any more), but I remember he used egg whites in those days (later he used agar-agar) with honey for sweetening, and made the ice cream in strawberry, chocolate and vanilla flavors. We froze it with a hand-powered freezer and put the ice cream in metal containers and packed them in ice with salt to take in the trailer.

"We made sandwiches with various nut meats, lettuce and sliced tomatoes. We also served soybean coffee kept hot with a gas hot plate we had in the trailer. Our soy cream for the coffee was kept sweet on ice." Address: c/o Promise Joy Kloss Moffett, Route 1–Box 194, Hagerstown, Maryland 21740. Phone: (301) 739-1546.

2550. *Dispatch* (*Columbus, Ohio*). 1985. Food Company picks president [Worthington Foods]. Nov. 25. p. 8D.
• ***Summary:*** "Dale E. Twomley will become the president of Worthington Foods Jan. 1 [1986], succeeding Allan R. Buller, who retires at the end of the year. Twomley, 46, a vice president of the natural food company since 1983, has been responsible for corporate planning and strategy, marketing, sales and distribution. He holds a doctorate in administration from the University of Maryland and served for five years as the dean of the school of business at Andrews University, Berrien Springs, Michigan. He became a director of the company in April

"Buller, 68, became president three years ago when the company was purchased by local investors from a division of Miles Laboratories. He joined the company in 1945 as assistant manager. He will continue to be secretary-treasurer and a director of the company."

2551. Fønnebø, Vinjar. 1985. The Tromsø Heart Study: Coronary risk factors in Seventh-day Adventists. *American J. of Epidemiology* 122(5):789-93. Nov. [20 ref]
Address: Inst. of Community Medicine, Univ. of Tromso, Box 417, N-9001 Tromso, Norway.

2552. **Product Name:** [PHAG Soya Dessert (Chocolate, Vanilla, Strawberry)].
Foreign Name: PHAG Soja Dessert (Choco, Vanille, Fraise).
Manufacturer's Name: PHAG Sàrl (Produits Hygièniques Alimentaires Gland) (Marketer-Distributor). Made in Belgium by Alpro.
Manufacturer's Address: La Ligniere, CH-1196 Gland, Switzerland. Phone: 022/64 11 18.
Date of Introduction: 1985 November.
Ingredients: Chocolate: Water, cane sugar, soybeans, defatted cocoa, modified starch, fructose, thickener, natural aroma (vanilla), sea salt.
Wt/Vol., Packaging, Price: 500 gm Tetra Brik Aseptic carton.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Chocolate: Per 100 gm.: Protein 3.5 gm, fat 1.7 gm, carbohydrate 13.0 gm, calories (kcal) 77 (325 kJoules).
New Product–Documentation: Letter from Remy Mayer of PHAG. 1990. Oct. 2. This product was introduced in Nov. 1985. His company distributes the product, which is made by their sister company DE-VAU-GE in Lueneburg, Germany. The strawberry flavor is no longer sold.

Labels sent by Mayer. 1991. Jan. 24. 500 gm Tetra Brik Aseptic cartons. Chocolate: Dark brown, tan, red, and green on white. "Pure and made from plants. Ready to use. It can also be used as a pastry filling. 100% from plants. Contains no coloring agents."

2553. Sanchez, Albert; Horning, M.C.; Shavlik, G.W.;

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Wingeleth, D.C.; Hubbard, R.W. 1985. Changes in levels of cholesterol associated with plasma amino acids in humans fed plant proteins. *Nutrition Reports International* 32(5):1047-56. Nov. [39 ref]
Address: Dep. of Nutrition and Dep. of Biostatistics and Epidemiology, School of Health, Loma Linda Univ., Loma Linda, California 92350.

2554. Praskin, Laurie Sythe. 1985. The Farm soy history: An overview. Part I. Los Gatos, California. 10 p. Dec. 1. Unpublished manuscript. [Eng]
• ***Summary:*** "In 1971, a unique group of people settled in the Tennessee backwoods to live an alternative lifestyle, committed to living collectively off the land. The community of 200 people came to be known as The Farm and over the years grew to 1,500 residents, gaining international and domestic fame for its community ideals, lifestyle, alternative technologies, [midwifery], and vegetarian diet based on soybeans. Soy technologies practiced and developed on The Farm became the seed for many tofu and tempeh shops that sprang up around the world in the years that followed. Community members started the first [sic, sixth] commercial soy ice cream company, and the first soy 'deli.' Some went on to start several of the major tempeh shops across the United States and Canada and others helped start a network on international soy programs in underdeveloped countries. Innovative recipes developed by Farm members led to the publication of three cookbooks which have made a large contribution to the growing acceptance of soybeans and tofu in the American diet.

"When The Farm was first settled in 1971, most of the people were already vegetarians. There were a variety of reasons for their personal choices: (1) an unwillingness to kill in order to live (feelings which stemmed from religious beliefs similar to the Buddhist religion, as well as pacifist attitudes deepened during the Vietnam War); (2) a growing awareness that meat was too costly to produce and that if more people at lower on the food chain there would ultimately be more food to go around in the world; (3) evidence of the healthful benefits of a vegetarian diet; (4) a belief that the dairy industry practiced cruel and exploitive methods on animals and a reluctance to support that system.

After the community was established, the entire membership decided to adhere to a complete vegetarian [vegan] diet devoid of all animal products, including eggs and dairy. They wanted to create a self-sufficient community, eating primarily what they grew on the land. They also wanted to be an example of how people could eat foods lower on the food chain to help create a larger supply of food in the world. During the search for a nutritionally sound vegetarian diet, they settled on soybeans as the main form of vegetable protein, as soybeans have one of the highest and most complete protein contents and are more versatile than any other vegetable protein. Many of the members had already been eating tofu and other soy products before The Farm, but acquiring these foods in the middle of the Tennessee woods was not an easy job. Soybeans were readily available, as they were used as local cattle food, but the challenge was how to create healthy and appetizing foods from them. Besides the Asian population and some Seventh-day Adventists, there weren't many people in the U.S. at the time actually eating soybeans, let alone trying to use them as the main source of protein.

"There were not many physical resources available as the people arrived with few possessions, lived in buses and tents, and had little capital to work with (a typical Third World situation). Some people owned Corona hand mills and occasionally ground soybeans to make fresh milk or tofu, using the recipe in the Seventh Day Adventist's Ten Talents cookbook. Fearn Instant Soya Powder was purchased and used for making soymilk, tofu, yogurt, and 'soy butter.' Just a few families owned pressure cookers so people cooked large communal pots of soybeans, taking turns 'watching the pot,' since they boiled them for 16 to 20 hours, to be sure they were digestible.

"By 1972 the Farm had its own flour mill that ground soybeans into full-fat soy flour and soy grits. The community was then able to make fresher soymilk, and tofu, as well as add soy flour to baked goods for added protein. They developed a curded soy flour base that was spiced and used as a sandwich spread, and they also baked soy flour 'souffle.'

"During these early days while the diet was still being worked out, the young children were given eggs for their protein source. Margaret Nofziger, the Farm's dietician, wanted to provide the babies and young children with a soy formula as a weaning food. She asked Alexander Lyon, a Farm member with a Ph.D. in microbiology, to research how the community could make the formula. He began an extensive research both in libraries and through correspondence. Fortunately, there were studies available about the uses of soy for human food consumption. Alexander, (Dr. Lyon) contacted Dr. Hesseltine and Dr. Wang of the Northern Regional Research Center in Peoria, Illinois, and Dr. Steinkraus of Cornell University in New York. These researchers provided a treasure of information to Dr. Lyon and to the soy technicians that followed. Other scientists who should be credited for their early and helpful research are Dr. Harry Miller with Loma Linda Foods and Malcolm Bourne with Cornell University.

"All of the information gathered by Dr. Lyon led to the start of the Farm Soy Dairy in 1972. After learning the basic processes involved in soy milk preparation, Alexander began collecting used equipment that could be adapted for the use of making soymilk. The original soy dairy was very small, with a production capacity of 20 gallons of soymilk a day, and expanded over the years as the soy technicians were able to find and add new equipment to their dairy. This dairy became a cross between a Japanese tofu shop and

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American ingenuity. The Farm Soy Dairy had no capital to start operations and no investors beside the Farm itself. Cash was hard to come by and as with all other commodities on the Farm, the products were distributed freely to community members. For these reasons, the soy technicians had to be creative and imaginative in how they obtained equipment and how they adapted such equipment to their needs. Over the years, they went to auctions, scrap metal yards and used restaurant equipment houses. They bought, bartered and traded for their equipment. They designed their own systems in their welding shop and then re-designed them to make improvements and to increase production. They became a school, learning as they went along. In 1975, Laurie Sythe Praskin, one of the early workers in soy dairy, succeeded Dr. Lyon in managing the operation. Over the next 4 years, with David Handel and Michael Halpin as equipment developers, weekly production increased to 800 gallons of soymilk, 600 lbs. of tofu, 80 gallons of soy yogurt, and a varied amount of soy ice cream." Continued. Address: 17969 Oak Dr., Los Gatos, California 95030.

2555. *SoyaScan Notes.* 1985. Chronology of soybeans, soyfoods and natural foods in the United States 1985 (Overview). Dec. 31. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Jan. 2. The soybean crushing industry begins a year of major restructuring as the big get bigger and two pioneers drop out. Ralston Purina announces that it has sold six of its soybean crushing plants to Cargill, Inc. A seventh at Memphis was closed. This removed the company from the soybean commodity business. With this transaction Cargill passes ADM to become America's largest soybean crusher.

Jan. 3. "Myth or Miracle: Debunking the Tofutti Fad," by Mark Medoff published in *Whole Life Times.* The first exposé of Tofutti, which contains very little tofu. Jan. 13 Medoff appears on the Gary Null Show, Natural Living, to discuss his findings for 1 hour on prime time radio.

Jan. 12. A.E. Staley Manufacturing Co. announces that it is basically getting out of the soybean crushing business. It has sold five of its six soybean plants (having a combined crushing capacity of some 275,000 bushels daily) to Independent Soy Processors Co., which is closely affiliated with Archer Daniels Midland. Staley was unable to sell its Decatur facility, which ceased operations indefinitely in Jan. 1984. With this transaction ADM has probably regained a slight lead as America's largest soybean crusher.

Jan. 14-26. Soybean Utilization Workshop held at Soyafoods Research Center in Gannoruwa, Peradeniya, Sri Lanka, sponsored by the Sri Lanka Soybean Project and INTSOY. 24 representatives from 12 developing countries participate. The world's first event of its kind (*Soyanews*, Dec. 1985).

Jan. 25-27. Natural Foods Expo at Anaheim. Soy ice creams steal the show. Tofu standards are debated heatedly at Soyfoods Association board of directors meeting on Jan. 28, especially by Ralston Purina attorney. Board decides funds are too limited to try to hire an executive director for SAA. Jan. 31. Paul Obis, founder and editor of *Vegetarian Times*, is seriously considering buying *Soyfoods* magazine from Doug Fiske. He makes a firm offer in late March.

Feb. "Designer Beans," an excellent overview of the U.S. soyfoods movement and its gourmet connections by Sandy MacDonald, published in *New Age* magazine.

Jan. American Soybean Association introduces SIS (Soybean Information Service), a computerized database focusing on soybean production and marketing, and oil and meal. The earliest record is 1958.

Feb. 21. *Tofutti and Other Soy Ice Creams: Non-Dairy Frozen Dessert Industry and Market*, by Shurtleff and Aoyagi published by The Soyfoods Center. Two volumes, 352 pages. This is the first study of the rapidly emerging soy ice cream market, and of Tofutti.

Feb. 27. "Tofu Products May Be In, but Its Fans Wonder if There's Tofu in the Products" by Trish Hall published in *The Wall Street Journal.* Second major exposé on so-called "tofu ice creams" (such as Tofutti and Gloria Vanderbilt Glace), which contain only a token amount of tofu, as a marketing gimmick.

March 13-14. The theme of the Feb. 27 *Wall Street Journal* article picked up by the NBC evening news and the Today Show. Very positive coverage for tofu. Gary Barat of Legume, David Mintz of Tofu Time, and Gloria Vanderbilt each speak about tofu.

March 22. *The Book of Tempeh*, extensively revised second edition by Shurtleff and Aoyagi, published by Harper & Row. New bibliography (374 entries), history chapter, and list of tempeh producers.

March 26. Soyfoods Association's Tofu Standards (7th draft) presented to eight senior officials at the U.S. Food and Drug Administration's Center for Food Safety and Applied Nutrition, in Washington, DC, by Tom Timmins (Head of SAA Standards Committee), Gary Barat (President of SAA), Steve McNamara and Tom Donegan (SAA Food & Drug attorneys). The FDA group hears an hour long presentation on tofu, the standards, and the Soyfoods Association of America.

March. Soyarella (later renamed Soy Mozzarella), a tofu-based cheese, is introduced. It becomes an instant hit. Distributed by Neshaminy Valley Natural Foods of Huntingdon Valley, Pennsylvania, it is labeled as "non-dairy," yet it melts, and it tastes like cheese. Shrouded in secrecy, its manufacturer is unknown and the ingredients are questionable. It is sold in large blocks and labeled at individual stores.

March. American Soybean Assoc. launches a campaign among its members to write USAID and encourage them to cancel support for U.S. programs (such as INTSOY) aiding soybean production in Third World nations. The campaign is

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successful.

April 1. INTSOY signs a new cooperative agreement with USAID. Their work will henceforth focus on soybean utilization. The shift toward utilization began in 1983 and all work on soybean production and varietal development stopped in Aug. 1986.

April. *Tempe: An Annotated Bibliography,* compiled by Siagian and Sofia in Indonesia. Containing 273 references, it is the first bibliography to introduce the extensive Indonesian-language research on tempeh, the majority of which has been published since 1980.

April 15-16. International Symposium on Tempeh held in Jakarta, sponsored by the Indonesian Ministry of Health. 113 people attend.

April. Central Soya buys Griffith Laboratories' line of protein products.

May 31. Barricini Foods acquires Farm Foods, which then becomes a trade name for Barricini's natural / health foods line of non-dairy frozen desserts, including the pioneering product, Ice Bean, and Barricini Tofulite.

May. Morinaga, one of Japan's largest dairy companies, establishes Morinaga Nutritional Foods, Inc., a subsidiary with offices in Los Angeles, to focus on promoting their long-life silken tofu in America.

May. At the 6th Annual Natural Foods Merchandiser Merchandising Awards, soyfoods do well. Miso Mustard by American Natural Foods and Malteds by Westbrae win gold medals. Ah Soy by Great Eastern Sun wins a silver.

May. Soft Tofu Cheese, a non-dairy cream cheese cultured in miso, launched by Simply Natural, Inc.

June. Tofu Topper launched by Worthington Foods.

June. Ralston Purina publishes its 1985 Consumer Attitudes Monitor. Soy Protein in Foods, based on a nationwide survey of 628 adults. Indicates positive attitudes toward soy protein and soyfoods.

July 19. Shamrock Capital, a private company headed by Roy Disney, buys Central Soya, a publicly owned corporation. Agreement to buy was announced April 2.

July. Soy Supreme, spray-dried tofu powder, launched by Oberg Foods Div. of St. Peter Creamery.

July. Asian Symposium on Non-Salted Soybean Fermentation held at Tsukuba, Japan.

July 31. Tofu Time's sales of Tofutti increased more than sevenfold last year to $17,114,886 as compared with $2,361,391 for the previous year. Net income increased nearly 100-fold to $2,006,451.

July. New Gallup survey on vegetarianism of 1,033 Americans shows that millions are eating less meat and tens of millions agree with the move away from meat. 72% disagree with what used to be the standard notion: "The vegetarian diet is just a fad that will pass." A majority (52%) believe that "no one really needs to eat meat more than once or twice a week."

Aug. The DE-VAU-GE soymilk plant in West Germany starts production. Built by STS, with 4,000 liters/hour of soymilk capacity, they make Granose and GranoVita brands of soymilk.

Aug. Lightlife Meatless Tofu Pups (hot dogs) introduced by Tempehworks / Lightlife Foods of Greenfield, Massachusetts. The product sold nearly $250,000 in the next 10 months.

Sept. Soyfoods Center introduces SOYA, a computerized bibliographic database on soybean utilization, history, nutrition, processing, marketing, and production. Contains 18,500 references from 1100 B.C. to the present.

Sept. 30. Fearn Natural Foods in Illinois sold by Louis Richard to Modern Products, Inc. in Milwaukee.

Sept. 30 to Oct. 4. Tropical Soybean Workshop held at the International Institute of Tropical Agriculture (IITA), Ibadan, Nigeria. Proceedings are published in 1987 as Soybeans for the Tropics. Also this year IITA established a soybean utilization unit.

Sept. Tofulicious, a tofu-based non-dairy ice cream launched by Eastern Food products of Minneapolis. It was developed in conjunction with the University of Minnesota and funded by the Minnesota Soybean Research and Promotion Council. By 1986 it has become the first soyfood product in recent times to be actively promoted by state soybean associations, who sell it at many state and county fairs... where it is a big hit. Through Tofulicious many soybean growers begin to warm up to soyfoods.

Oct. 8th Draft of the Tofu Standards finished, incorporating extensive suggestions from FDA. Compiled by William Shurtleff.

Oct. Mori-Nu brand aseptically packaged tofu introduced by Morinaga Nutritional Foods.

Oct. Cream of the Bean Soygurt, a cultured soymilk yogurt, launched by Cream of the Bean, Inc.

Nov. Kikkoman introduces a long-life tofu in a foil retort pouch, imported from Japan. Poor quality causes the product to be withdrawn. It was re-introduced later.

Dec. Tofu Time starts exporting Tofutti to Japan. The first order by Daiei (a large retailer) of tubs for their parlors, is $350,000. This may be the first major export of a soyfood product (not including ingredients such as soy protein isolates) to Japan.

* The International Institute of Tropical Agriculture (IITA) in Ibadan, Nigeria, starts a program to promote processing and utilization of soybeans in Nigeria and throughout Africa. Continued.

2556. Hirayama, Takeshi. 1985. Mortality in Japanese with life-styles similar to Seventh-Day Adventists: Strategy for risk reduction by life-style modification. *National Cancer Institute Monograph* No. 69. p. 143-53. Dec. Fourth Symposium on Epidemiology and Cancer Registries in the Pacific Basin. [1 ref]

• ***Summary:*** Japanese with life-styles similar to those

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of Seventh-Day Adventists (SDA; i.e. no smoking, no drinking, no meat consumption daily and eating green and yellow vegetables daily) had risks that were one-fifth or less compared with Japanese having opposite life-styles for cancers of the mouth, pharynx, esophagus, and lung, and subarachnoid hemorrhage. Risks were less than one-half for cancers of all sites, stomach, and liver, and for peptic ulcer and heart disease. Address: Div. of Epidemiology, National Cancer Center Research Inst., Tsukiji 5-chome, Chuo-ku, Tokyo 104, Japan. Present address: Inst. of Preventive Oncology, HI Building, 1-2 Sadohara-cho, Ichigaya, Shinjuku-ku, Tokyo 162, Japan.

2557. Mack, Thomas M.; Berkel, J.; Bernstein, L.; Mack, W. 1985. Religion and cancer in Los Angeles County. *National Cancer Institute Monograph* No. 69. p. 235-45. Dec. Fourth Symposium on Epidemiology and Cancer Registries in the Pacific Basin. [29 ref]
Address: Dep. of Preventive Medicine, Univ. of Southern California School of Medicine, 2025 Zonal Ave., Los Angeles, California 90003.

2558. *SoyaScan Notes.* 1985. Development of the book *History of Soybeans and Soyfoods* (Overview). Compiled by William Shurtleff of Soyinfo Center.
• ***Summary:*** 1980 Oct. 22. First Table of Contents for Soyfoods History. I started this book because Nahum Stiskin of Autumn Press refused to let us use material from our tofu and miso books in our next book, titled *Soyfoods,* and it's hard to write the history portions of soyfoods. Inspired by Dr. Harry W. Miller and Henry Ford.

Dec. 9. Start to put bibliographic records on 3 x 5 inch file cards.

1981 March 13. Add chapters on Nutrition, National Soybean Processors Assoc., T.A. Van Gundy.

April 26. Add Society for Acclimatization, Li Yu-ying, Horvath, Lager.

May 15. Make Overview into four chapters. Add Soybean Chronology, Sri Lanka, History of Soybean Production, Asian History, Berczeller, USDA.

May 30. Change book title to History of Soyfoods and Soybeans from Soyfoods History.

June 6. Make Chronology Chapter 1. Make History of Soybean Production a separate chapter. Add McCay, Soyfoods Producers in the West (Listing of companies), changed title from Soyfoods History to History of Soyfoods.

August 21. Four Soybean Processors (Staley, ADM, Ralston Purina, Central Soya), Hymowitz, Bureau of Plant Introduction.

Oct. 8. Cargill, Co-op Processors, drop Hymowitz, Soybean Production Pioneers, put Soy oil ahead of soy flour, change the order of many chapters.

Nov. 3. Change title to *History of Soybeans and Soyfoods.* Put soy nuggets [fermented black soybeans] before miso.

Nov. 7. Set up first 3+2 character cataloging codes for Soyfoods Center library and documents, e.g. Hym-81.

1982 Jan. 2. Brief History of Fermentation East and West.

Feb. 2. Macrobiotics and Soyfoods, Kikkoman.

March 21. K.S. Lo and Vitasoy. Relocate East Asian pioneers at end of Pioneers section.

June 18. Separate Fermented Tofu and Fermented Soymilk.

July 22. Separate Soy Oil and Meal from Hydrogenated Soy Oil Products.

Aug. 21. Put all country histories together.

Oct. 25. Start using % instead of percent in Margarine chapter.

Nov. 13. D.W. Harrison.

Nov. 19. Decide to do separate chapter on Lecithin. Retitle each country from "History of Soyfoods in X" to "History of Soybeans and Soyfoods in X."

1983 Jan. 1. Switch from 3-letter codes to 4-letter. Hymo-73.

April 17. Changed "at" to KW = (keyword) on cards.

May 5. Dr. Fearn.

Nov. Added Cereal-Soy Blends at Flour chapter, Iowa State University, History of Soyfoods and Health Foods in Los Angeles.

1984 March. Meals for Millions, SFM-Rodale.

Sept. 22. Added 12 chapters on individual countries. Divided hydrogenation into 3 chapters: Oil, margarine and shortening. Change book's subtitle to "Past, Present, and Future." Structure it into four volumes.

Oct. 31. Completely restructure Soybean Production chapter into 16 parts. Discuss each by decade.

Dec. 26. Ice Cream.

1985 Jan. 19. Change ModProt to ProtMod, ProtIsol, etc.

March 8. Add PPC = Pioneering Protein Companies: Glidden, Rich Products, Gunther, Griffith Labs, I.F. Laucks. 9th. Add the Chemurgic Movement and US Regional Soybean Industrial Products Lab: Industrial Uses of Soybeans. United Nations, History of World Food and Protein, Hunger and Malnutrition.

April 17th. Redo outline, giving each company its own line and bibliography, like Adventists. Print outline vertically. Address: Director, Soyfoods Center, Lafayette, California 94549. Phone: 510-283-2991.

2559. **Product Name:** Natural Touch Spicy Chili.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1985 December.
Ingredients: Water, wheat gluten, red beans, tomato paste, soybean oil, spices, food starch, yeast, garlic, onion, sea salt,

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fruit juice concentrate.
Wt/Vol., Packaging, Price: 20 oz can.
How Stored: Shelf stable.
New Product–Documentation: "Ready to heat and eat."
Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2560. Fitzsimmons, S.C. 1985. Familial and environmental risk factors for elevated blood pressure in youth. DrPH (Doctor of Public Health) thesis in Epidemiology, University of California at Berkeley. *
Address: Berkeley, California.

2561. Great Eastern Sun. 1985. All About AhSoy–The Really Soft Drink (Leaflet). Enka, North Carolina. 1 p. Front and rear. 28 cm.
• ***Summary:*** Questions and answers about this soymilk. It is made by San-iku Foods in Japan. "It drinks like a shake–and you can use it to bake." Address: Enka, North Carolina.

2562. Halvorsen, B.A.; Svendsen, B. 1985. Lavere dodelighet av kreft og hjerte- og karsykdommer hos adventister [Lower death rates from cancer, heart- and coronary-diseases among Seventh-day Adventists]. *Tidsskrift for den Norske Laegeforening* (*J. of the Norwegian Medical Association*) 24:1620-25. [Nor]*

2563. **Product Name:** Millstone Vegeburger (Meatless Burger).
Manufacturer's Name: Loma Linda Foods Inc.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1985.
Ingredients: Wheat gluten, water, whole wheat flour, hydrolyzed vegetable protein, oat flour, soy flour, dried yeast extract, onion powder, caramel color, salt, garlic powder, thyme, celery powder.
Wt/Vol., Packaging, Price: 19 oz can.
Nutrition: Per 3.8 oz.: Calories 110, protein 20 gm, carbohydrate 3 gm, fat 2 gm, cholesterol 0 mg, sodium 450 mg, potassium 75 mg.
New Product–Documentation: Loma Linda took over the Millstone line from Millstone Foods Inc. (Box 323, Penryn, CA 95663. Phone: 916-663-3302) in 1985. Label sent by Loma Linda Foods. 1988. Oct. 5. 11 by 4.25 inches. Green, yellow, black, and white. A color photo of the ready-to-serve dish is on the front panel.
Bowles. 1987. Total Health. Aug. p. 24. Called Information. 1988. Sept. 22. No listing for Millstone in Penryn or Sacramento, California.

2564. **Product Name:** Millstone Burger-Like.
Manufacturer's Name: Loma Linda Foods Inc.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1985.
Ingredients: Water, textured soy protein, soy sauce, salt, onion powder, caramel color, garlic powder, cumin, sage, celery powder, thyme.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 4 oz.: Calories 90, protein 13 gm, carbohydrate 8 gm, fat less than 1 gm, cholesterol 0 mg, sodium 440 mg, potassium 430 mg.
New Product–Documentation: Loma Linda took over the Millstone line in 1985. Label sent by Loma Linda Foods. 1988. Oct. 5. 11 by 4.25 inches. Green, yellow, black, and white. A color photo of the ready-to-serve dish is on the front panel.

2565. **Product Name:** Millstone Burger Mix (Dry Mix).
Manufacturer's Name: Loma Linda Foods Inc.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1985.
Ingredients: Flavored textured soy protein (soy flour, natural [vegetable] flavors, salt, spices, caramel color), rolled oats, dehydrated onion, egg whites, garlic powder, spices (basil, parsley, dill weed).
Wt/Vol., Packaging, Price: 4.5 oz can.
How Stored: Shelf stable.
Nutrition: Per 1 oz.: Calories 90, protein 10 gm, carbohydrate 12 gm, fat less than 1 gm, cholesterol 0 mg, sodium 370 mg, potassium 35 mg.
New Product–Documentation: Loma Linda took over the Millstone line in 1985. Label sent by Loma Linda Foods. 1988. Oct. 5. 11 by 4.25 inches. Green, yellow, black, and white. A color photo of the ready-to-serve dish is on the front panel.

2566. **Product Name:** Millstone Meatless Loaf (Dry Mix in Can).
Manufacturer's Name: Loma Linda Foods Inc.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1985.
Ingredients: Flavored textured soy protein (soy flour, natural [vegetable] flavors, salt spices, caramel color), rolled oats, dehydrated onion, egg whites, vegetable mix (carrots, celery, tomato, spinach, red peppers, green peppers), garlic powder, spices (basil, parsley, dill weed).
Wt/Vol., Packaging, Price: 4.5 oz can.
How Stored: Shelf stable.
Nutrition: Per 1 oz.: Calories 90, protein 10 gm, carbohydrate 12 gm, fat less than 1 gm, cholesterol 0 mg, sodium 380 mg, potassium 290 mg.
New Product–Documentation: Loma Linda took over the

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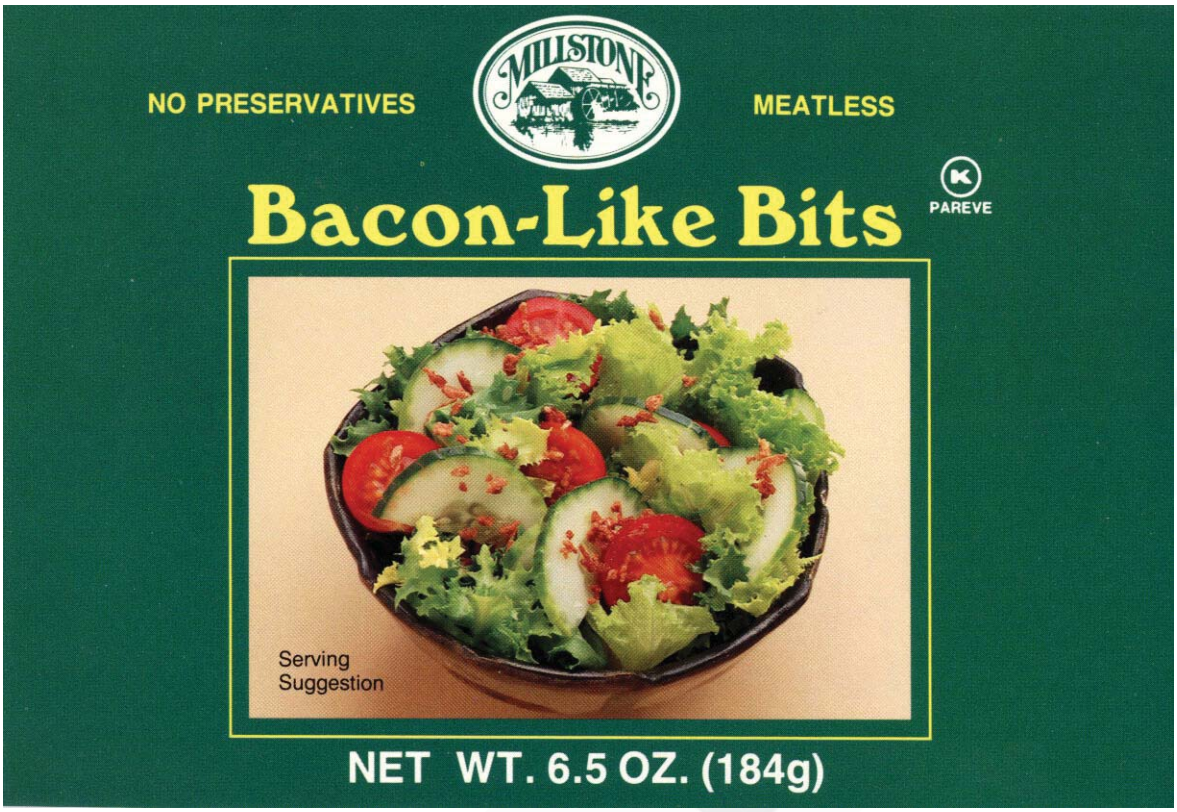

Millstone line in 1985. Label sent by Loma Linda Foods. 1988. Oct. 5. 11 by 4.25 inches. Green, yellow, black, and white. A color photo of the ready-to-serve dish is on the front panel.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2567. **Product Name:** Millstone Bacon-Like Bits.
Manufacturer's Name: Loma Linda Foods Inc.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1985.
Ingredients: Soy flour, soy oil, salt, natural (vegetable) flavor, artificial colors.
Wt/Vol., Packaging, Price: 6.5 oz can.
How Stored: Shelf stable.
New Product–Documentation: Loma Linda took over the Millstone line in 1985. Label sent by Loma Linda Foods. 1988. Oct. 5. 11 by 4.25 inches. Green, yellow, black, and white. A color photo of the ready-to-serve dish is on the front panel.

2568. **Product Name:** Millstone Nut Meat.
Manufacturer's Name: Loma Linda Foods Inc.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1985.
Ingredients: Water, peanuts, soy flour, corn flour, onion powder, salt.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 71 gm.: Calories 150, protein 7 gm, carbohydrate 6 gm, fat 10 gm, cholesterol 0 mg, sodium 280 mg, potassium 260 mg.
New Product–Documentation: Loma Linda took over the Millstone line in 1985. Label sent by Loma Linda Foods. 1988. Oct. 5. 11 by 4.25 inches. Green, yellow, black, and white. A color photo of the ready-to-serve dish is on the front panel. Loma Linda also makes three Millstone products that contain no soy: Wheat Fries, Vege-Beans, and Breading Meal.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2569. **Product Name:** Loma Linda Olive Loaf Deli Slices (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515. Phone: 800-442-4917 or 714-687-7800.
Date of Introduction: 1985.
Ingredients: Soy protein concentrate, stuffed olives (olives, pimiento), wheat gluten, soy protein isolate, water, corn oil, egg whites, natural (vegetable) and artificial flavors, dried yeast, corn starch, dextrose, salt, caramel color, onion

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powder, calcium carrageenan, garlic powder, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: Paperboard box.
How Stored: Frozen.
Nutrition: Per 2 slices (2.0 oz–57 gm): Calories 140, protein 10 gm, carbohydrate 4 gm, fat 9 gm, cholesterol 0 mg, sodium 660 mg, potassium 170 mg.
New Product–Documentation: Bowles. 1987. Total Health. Aug. p. 24. Talk with Iris Ram. 1988. Sept. 27.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1985. See copyright date.

2570. Repace, J.L.; Lowrey, A.H. 1985. A quantitative estimate of nonsmokers' lung cancer risk from passive smoking. *Environmental International* 11:3-22. *

2571. Brown, James T. 1985. Harvest of the sun: An illustrated history of Riverside County. Northridge, California: Windsor Publications, Inc. 248 p. See Loma Linda Foods. p. 188-89.
• ***Summary:*** "In the early 1900s Southern and Northern California Seventh-day Adventists were actively working in the areas of diet and health. Some of their efforts resulted in the formation of the Loma Linda Sanitarium and Loma Linda College of Medical Evangelists.

"Loma Linda Foods began in 1906, supplying bakery goods for the sanitarium, the college, and the small community of Loma Linda. It made a variety of baked stone-ground, whole-wheat breads, health cookies, and fruit crackers.

"Demands from residents for the bakery goods grew quickly. They liked the life-style and diet and came to rely on the company for its products. By 1907 increased production required the construction of a separate building, a small white-frame structure located on Anderson Street across from the railroad station in Loma Linda.

"Now there was room for the production of foods similar to Dr. Kellogg's original line of foods as well as experimentation with new lines. Breakfast cereals, meat analogs from soybean and wheat, soy milk, and canned tofu were added, and bakery items became less important over the years.

"In 1933 the name was officially changed to Loma Linda Foods and by 1935 delivery routes brought the firm's products to stores within a 125-mile radius. Since working space was cramped and Loma Linda Foods wanted to concentrate on production of the breakfast cereal, Ruskets, the decision was made to relocate. The company opted for a site next to La Sierra Junior College near Riverside, with the promise of student employment cinching the move. In Nov. 1938 the first section of the present plant began operation."

"Before the relocation sales had totaled $60,000 a year. Sales increased rapidly during World War II, almost doubling during the first 6 months of 1943. Annual sales now total several million dollars..."

"Loma Linda Foods' association with Dr. Harry Miller provided a major impact on its growth. In January 1951 the company took over his International Nutrition Laboratories, Inc., in Mt. Vernon, Ohio. Dr. Miller donated the sales profit to form the International Nutrition Research Foundation at the Arlington plant near Riverside. Under his direction the foundation did much to establish soy foods as a scientifically recognized source of superior vegetable protein for human needs.

"By 1966 the company was producing six types of soy milk, which now accounts for 70% of its market. In the late 1960s Loma Linda Foods adopted a further innovation in the vegetarian protein foods field–spun protein fiber, which it now manufactures."

"From humble beginnings Loma Linda Foods has now grown to employ 250 people in its two plants and to carry a line of 70 products."

Large photos show: (1) The original building and staff in 1925; over the doorway is written "Loma Linda Food Co. Bread and Health Foods. Wholesale Only." (2) The present facility at 11503 Pierce Street, Riverside. Address: California.

2572. Ferguson, Lynette R.; Alley, P.G.; Gribben, B.M. 1985. DNA-damaging activity in ethanol-soluble fractions of feces from New Zealand groups at varying risks of colorectal cancer. *Nutrition and Cancer* 7(1/2):93-103. [19 ref] Address: 1&3. Cancer Research Lab.; 2. Dep. of Surgery. All: Univ. of Auckland School of Medicine, Auckland, New Zealand.

2573. Jedrychowski, Wieslaw; Tobiasz-Adamczyk, B.; Olma, A.; Gradzikiewicz, P. 1985. Survival rates among Seventh Day Adventists compared with the general population in Poland. *Scandinavian J. of Social Medicine* 13(2):49-52. [10 ref]
• ***Summary:*** A Seventh Day Adventist community in Poland of 236 members was studied for 10 years. Adventists (all of who abstain from smoking and alcohol) lived longer than non-Adventist Poles. Address: Dep. of Epidemiology, Inst. of Social Medicine, Medical School, 7 Kopernika Street, Kraków [Cracow], Poland.

2574. Leeds, Anthony R. ed. 1985. Dietary fibre perspectives: reviews and bibliography 1. London: John Libbey. viii + 358 p. Bibliographical editor Alinson Avenell. Foreword by Denis P. Burkitt. 25 cm. [997 ref]
• ***Summary:*** This is one of the most interesting and comprehensive books published to date on the subject of fiber in human diets. Contents: Foreword, by Denis P. Burkitt. The authors and editors. Introduction by A.R. Leeds. Part I: Reviews. 1. Fiber and the large gut, by G. Roth and

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C. Leitzman. 2. Dietary fibre and blood lipids in man, by Patricia A. Judd and A. Stuart Truswell. 3. Dietary fibre and gallstones, by Patricia A. Judd. 4. Fibre and diabetes–new perspectives, by David B. Peterson. 5. Dietary fibre in obesity, by Marcin Krotiewski and Ulf Smith. 6. Dietary fibre supplements and weight reduction, by Kjeld R. Ryttig. 7. Fibre and mineral absorption [phytic acid], by Barbara F. Harland and Eugene R. Morris. 8. Fibre and food products, by Peter R. Ellis. Index.

Part II: Bibliography. 9. Dietary fibre in human nutrition: a bibliography to 1977, compiled by Hugh C. Trowell, with Foreword by K.W. Heaton. Subject index. Author index. Addendum. 10. Dietary fibre in human nutrition: a bibliography for 1978-1982, compiled by Alison Avenell, Anthony R. Leeds, and Hugh C. Trowell–1978 = 481 references, 1979 = 528 references, 1980 = 480 references, 1981 = 657 references, 1982 = 610 references.

Part III: Indexes to Part II. Structure of subject indexes 1978-1982. Then there is a subject index and an author index to the bibliographies for each year from 1978 to 1982.

The worldwide bibliography to 1977, compiled by Trowell, was first published in 1979 by John Libbey (London) for Kellogg Company of Great Britain Ltd. (which see for details).

In the Foreword, Denis P. Burkitt (now at The Old House, Bussage, Near Stroud, Gloucestershire, England) begins by noting: "Nothing more dramatically illustrates the phenomenal growth of interest in dietary fibre which has been witnessed during the last 15 years than the explosive increase in scientific publications on the subject. Within a decade the annual rate of publications on the subject rose a remarkable 40-fold."

Fibrim soy fiber is mentioned in chapters on "Fibre and the Large Gut," "Dietary Fibre and Blood Lipids in Man," "Fibre and Diabetes," and "Fibre and Mineral Absorption." Address: Dep. of Food and Nutritional Sciences, Queen Elizabeth College (Univ. of London), Campden Hill Road, London W8 7AH, England.

2575. Loma Linda Foods Inc. 1985. Millstone Foods product catalog. Riverside, California: Loma Linda Foods. 4 panels.
• ***Summary:*** See next page. In 1985 Loma Linda began making the following ten products under the Millstone label. A color photo shows each can: Tender cuts. Vegeburger. Burger-like. Wheat fries. Nut meat. Meatless loaf. Breading meal. Bacon-like bits. Vege-beans. Burger mix. A description of each product is given as well as the weight and number of cans per case, but no prices. Address: 11503 Pierce St., Riverside, California 92515. Phone: 1-800-442-4917 or 1-800-932-5525.

2576. McDougall, John A. 1985. McDougall's medicine: A challenging second opinion. New Century Publishers, Inc. 220 Old New Brunswick Road, Piscataway, NJ 08854. xi + 308 p. Illust. Index. 23 cm. [980* ref]
• ***Summary:*** A very influential book by a physician advocating a natural, vegan diet (no animal foods) and lifestyle. Dr. McDougall graduated from Michigan State University, where he earned both undergraduate and medical degrees. He moved to Hawaii for postgraduate training at the University of Hawaii. He had a private medical practice in Hawaii for over 10 years and was Assistant Medical Professor at the University of Hawaii's School of Medicine. By 1987 he was living in California and was Medical Director of the McDougall Program at the Seventh-day Adventist St. Helena Hospital and Health Center (in the Napa Valley), P.O. Box 50, Deer Park, CA 94576. Phone: 707-963-6365. His medical work has focused on the prevention and treatment of disease through the use of proper diet and lifestyle.

Contents: 1. Why a challenging second opinion. 2. Cancer. 3. Osteoporosis. 4. Atherosclerosis. 5. Heart Disease. 6. Hypertension. 7. Diabetes. 8. Arthritis (incl. gout, osteoarthritis, rheumatoid arthritis, purines, and uric acid [p. 234-37]). 9. Urinary Disease. Epilogue. Underlying and Repeating Themes. How to Choose a Doctor. The Elimination Diet. Address: San Rafael, California (1/88).

2577. Money, John. 1985. The destroying angel: Sex, fitness, and food in the legacy of degeneracy theory, Graham crackers, Kellogg's Corn Flakes and American health history. history. Buffalo, NY: Prometheus Books. 213 p. Index. 24 cm. *
• ***Summary:*** This is a scholarly work that focuses on the sexual prohibitions of early vegetarians and health reformers. Address: 1. Dr., Prof. Emeritus of Pediatrics, Johns Hopkins School of Medicine, Baltimore, Maryland.

2578. Register, U.D. 1985. The Seventh-day Adventist diet and lifestyle and the risk of major degenerative disease. In: R.J. Morin, ed. 1985. Frontiers in Longevity Research: Applications of Nutritional and Other Discoveries in the Prevention of the Age-Related Disorders. Springfield, Illinois: Charles C. Thomas. xvii + 278 p. See p. 74-82. *

2579. Richter, Dr. Joachim; Torre, Ursula della; Richter, Nora. eds. 1985. Tofu Kochbuch [Tofu cookbook]. Verlag Dr. Richter GmbH, D-8000 Munich 82, West Germany. 72 p. Illust. No index. 20 cm. [Ger]
• ***Summary:*** Contains numerous full-page color photos and over 100 tofu recipes and preparation tips. Nora Richter developed and tested the recipes in cooperation with DE-VAU-GE Gesundkostwerk / granoVita. The tofu was made by Tofu Kost-Werk TKW GmbH in 4724 Wadersloh 3, Germany (which now also sells the book).

Contents: Tofu, a delicacy for 2000 years. What one should know about tofu. Varieties of tofu. Buying tips. Cooking tips. The ABCs of tofu preparation. Little recipes

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Millstone products - natural wholegrain goodness, are especially prepared with your health and well-being in mind.

No harsh spices, animal fats or preservatives are used. Millstone's rich and hearty flavors are a blend of nature's finest ingredients.

Millstone recipes are available by writing to:
Loma Linda Foods, Inc., 11503 Pierce Street, Riverside, CA 92515

BURGER-LIKE

Burger-Like is a seasoned all soy product, juicy and tender. Excellent in chili, stuffed peppers, tacos, spaghetti sauces and more.
Case pack - 12/19 oz.

NUT MEAT

A delicious nut-flavored, "meatless" loaf. Open both ends of can, loosen with a knife and push out of the can. Use cold in sandwiches, salads or as cold cuts. Serve hot in casseroles or with a variety of sauces.
Case pack - 12/19 oz.

TENDER CUTS

Juicy, tender, whole wheat, gluten steaks in tasty broth. For easy entree, just bread, brown, and serve with gravy.
Case pack - 12/19 oz., 12/50 oz.

VEGE-BEANS

Delicious white beans, cooked in its own homemade tomato sauce. Ready to serve, Vege-Beans can be heated or enjoyed right out of the can.
Case pack - 12/19 oz.

VEGEBURGER

Delicately flavored, ground wheat gluten. Vegeburger has endless uses, sandwiches, loaves, casseroles, anywhere ground meat is called for.
Case pack - 12/19 oz., 12/50 oz.

WHEAT FRIES

Tasty and tender chunks of gluten simmered in a savory broth. Wheat Fries is delectable in stews, kabobs, sweet and sour, and casseroles. Save broth for gravies, soups, or stews.
Case pack - 12/19 oz., 12/50 oz.

MILLSTONE

Millstone Foods

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for getting to know tofu. Fried tofu (Gebratener tofu). Tofuletten. Salads. Salad dressings. Tofu sauces and dips. Soups and hot-pots. Tofu for stuffing/filling. Tofu dumplings and meat balls (*Nocken, Klopse und Klösse*). Souffles and gratins. Classical tofu recipes from East Asia. Desserts, baked goods, cakes, pastries, and tarts. Address: Munich, West Germany.

2580. Skinner, Sherlyn; Martens, Richard A. 1985. The milk sugar dilemma: Living with lactose intolerance. Medi-Ed Press, P.O. Box 957, East Lansing, MI 48823. 193 p. [13 ref]
• ***Summary:*** A continuation of high lactase activity to adulthood is limited to persons of northern and western European ancestry and some nomadic tribes of Africa. The approximate incidence of lactose intolerance in various ethnic groups is as follows: African blacks 97-100%, Dravidian Indians (India) 95-100%, Orientals 90-100%, North American Indians 80-90%, Central/South American Indians 70-90%, Mexican Americans 70-80%, North American blacks 70-75%, Mediterraneans 60-90%, Jews 60-80%, Central & Northern Indians (India), 25-65%, Middle Europeans 10-20%, North American Caucasians 7-15%, Northwestern Indians (India/Pakistan) 3-15%, Northern Europeans 1-5%.

Contents: About the authors (autobiographical). Foreword. Preface. 1. Lactose intolerance: A case history, the origin of lactose intolerance, congenital lactose intolerance, primary acquired lactose intolerance, incidence of lactose intolerance, secondary lactose intolerance, other case examples, why did lactose intolerance appear, symptoms of lactose intolerance, diagnosis of lactose intolerance, the trouble with tests, the do-it-yourself test (lactose challenge, lactose-free test), conclusion, counter-point, living with lactose intolerance. 2. Digestion. 3. Good nutrition without lactose. 4. The lactose-restricted diet. 5. Setting your lactose level. 6. Shopping for foods. 7. Dining away from home. 8. Lactose-free food products. 9. Recipes. 10. Appendices.

Soyfoods that are mentioned include Isomil, Nursoy, Prosobee, Soyagen and Soyamel (made by Worthington Foods), Tofutti, Tofree. Pages 90-91 discuss soymilk. Address: 1. Nutritional consultant, Gastroenterology Associates, East Lansing, Michigan; 2. Clinical gastroenterologist (M.D.), East Lansing, Michigan.

2581. Plenty Canada. 1986. The Soya Centre (Calendar). Castries, St. Lucia.
• ***Summary:*** This is the head of a calendar, 8½ by 11 inches. On the top three-fourths of the page is a large black-and-white photo of the Soya Centre, looking from the outside in through two open doors–on each of which is written "Soya Beans" in large diagonal letters, above an illustration of a soya bean plant. Inside are about 10 local black people. On the back right is a food retail counter and snack bar, staffed by several women. On the back wall is a blackboard with a price list and menu written on it in chalk.

On the bottom quarter, in large black letters is written "The Soya Centre" in an arch. A laughing Santa Claus on the left is holding the word "The." Below the arch is written the Center's address: "19 Grass St., Castries, St. Lucia. Tel: 26421." To the right of the arch is a line drawing of a dove, and below it: "With the Compliments of Plenty Canada and the Staff of the Soya Centre." The calendar itself is missing.

Talk with Maya Clarke of Ontario, Canada. 1998. June 25. Maya worked for 7 years as a nutritionist and soyfoods instructor/technician for Plenty Canada at this Soya Centre in St. Lucia. She remembers this calendar well but does not have a copy. "There could possibly be one in the Plenty archives" at Lanark, but she is not too sure. Plenty made a calendar like this for two years, and this was the first of the two. It was designed by Plenty and printed in Castries (the capital city, by the person who prints *The Voice* newspaper) in December 1985 and presented on 1 Jan. 1986 as a New Year's gift to the Center's popular customers and friends. The calendar had a photograph as the head, then one page for each month below. The soya bean plants on the two big doors were painted by a Rastafarian man named Papa. Many of the people shown in the picture, the same as those who came to the Centre, were Rastafarians, who are vegetarians (very important) and consider themselves members of the lost tribe of Israel. They esteem Marcus Garvey, who they consider one of their forerunners. Note: *Webster's Dictionary* (1985) defines Rastafarian (derived from *Ras Tafari*, the precoronation name of Haile Selassie), a word first used in 1955, as "an adherent of Rastafarianism." The latter word, first used in 1968, is defined as "a religious cult among black Jamaicans that teaches the eventual redemption of blacks and their return to Africa, employs ritualistic use of marijuana, forbids the cutting of hair [it is worn in long braids called dreadlocks (first used in 1960)], and venerates Haile Selassie as a god."

The Soya Centre, which was constructed specifically for this purpose by the team just before Maya (John Baranni and Christine Kilgour from Plenty with local labor), was located in the middle of a black ghetto in Castries, and there were lots of social problems in the area. In the back of the Centre was a soyfoods factory. The factory was used to train all the people who subsequently opened up soyfoods businesses in St. Lucia. "What went on with soyfoods in St. Lucia was very significant–much more so than what happened in Jamaica, etc. At any given time, up to ten local people worked (for pay) at the Centre. The Centre was self-sufficient, so the money from the foods they sold went to pay the workers. Two guys would start very early in the morning (about 4:00 a.m.) to make soymilk and tofu. Then a crew of ladies would come in about 7:00 a.m. and use the tofu and soymilk to make second generation products from soymilk, tofu, and okara–such as "bakes" (like a little doughnut) and "accras" (like a fritter, in which the traditional salt cod was

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replaced by okara). The use of okara made the products more affordable. Tempeh was made at time, but it did not catch on as well as tofu and soymilk, and it was somewhat hard to get the spores. "Tofu caught on almost immediately "The local people just took it up; they just seemed to know what to do with it." Soymilk ice cream was one of the most popular products. Soymilk, imported soy flour, and okara were use to make little breads. Many people would bike or walk to the Centre to buy tofu in bulk over the counter–which was also a snack bar. The Centre was both a business and an education/ training center. Many local Seventh-day Adventists came to cooking classes at the center, and Maya also taught classes in their churches, schools, and homes. Maya remembers that one day a 13-year-old kid named Sooner knocked on the door of the Center at 7 o'clock in the morning and said to her: "I want to know everything there is about soyfoods." She happily invited him in, and began to teach him. For a while there was a "Comments Book" at the Centre; in it people wrote soy poems and soy songs–some of which Maya still has.

At one time some 10-12 soyfoods businesses were started in St. Lucia by local people who had first trained at Plenty Canada's Soya Centre. About 6 of those businesses are still in operation. A good example is La Soyarie. The reasons the others did not survive had nothing to do with local acceptance of soyfoods; they failed largely for reasons related to money or business management skills.

St. Lucia is a very small (27 miles long) independent country; It was granted self-government by the British in 1967 and attained independence on 22 Feb. 1979. The population is about 160,000 (1998). About 90% of the population is of African descent, with a small minority of Europeans and a few Carib Indians. Bananas are the chief crop. The official language is English, but Creole is the language most widely spoken. It is largely an oral culture.

Note: This is the earliest calendar seen (Oct. 2001) that mentions soy. Address: 19 Grass St., Castries, St. Lucia. Phone: 26421.

2582. Amatos, Christopher A. 1986. No fat in sight at Worthington Foods: The new president's goals–crack the mass market he sees developing for his company's product lines of fatfree substitutes and double 1985 sales of $30 million by 1990. *Dispatch* (*Columbus, Ohio*). Feb. 16. p. C1. Business section.

• ***Summary:*** President Dale Twomley thinks that Worthington's future lies in avoiding fat–both the corporate and the animal kind."

"A fertile market can produce many opportunities, and Worthington Foods plans to pursue most, if not all, of them. The company plans to encourage grocers to put more of its products in the main food aisles vs. the specialty sections; supply products to the ever more health-conscious fast-food industry; license its protein production technology to overseas interests; develop its institutional sales operation, and complete at least one major acquisition this year...

"The company has had three successful years under new ownership... Profits last year were slightly under $1 million with per share results for the 265-employee firm growing to $1.98 from $1.43.

"Worthington Foods was started in 1939 by Dr. George T. Harding Sr. in the basement of a white Colonial house on Proprietors Rd. Harding, a Seventh Day Adventist, saw a business opportunity in supplying food for hospital patients and church members, many of whom adhere to a meat-free diet. At that time, the company developed the process of spinning soy protein...

"In 1970, Worthington Foods was acquired by Miles, which at the time was interested in the health-related food market and introduced the Morningstar Farms brand to the product line. One of Morningstar's most successful products is a cholesterol-free egg substitute now called Scramblers.

"Miles' interest in the company waned, however, when it was bought [in late 1977] by Bayer A.G. Ltd., the German chemical concern. So, the company's founders arranged a leveraged buyout, which was completed in October 1982...

"While Worthington Foods still relies on the religious market for about 50 percent of its sales, that's not where the company is putting its emphasis."

A sidebar titled "Demographics, health concerns cook up ready market" notes that Worthington made the cover of *Time* magazine on 26 March 1984; the subject was cholesterol.

Photos show: (1) Dale E. Twomley (portrait). (2) Women packaging Morningstar Breakfast Patties in paper trays as they come out of automated fryer. (3) Employees operating food equipment. Address: Dispatch business reporter.

2583. *Dispatch* (*Columbus, Ohio*). 1986. Demographics, health concerns cook up ready market [for Worthington Foods]. Feb. 16. p. 1C. Business section.

• ***Summary:*** When cholesterol became the subject of a cover story in *Time* magazine on 26 March 1984, the publicity was a major boon to Worthington Foods–for cholesterol has become Worthington's "main engine of growth." Worthington Foods produces 3 major lines aimed at the meatless market. Of these, the Morningstar Farms line is the best known. "Its Scramblers egg substitute is sold in virtually every major grocery and is the leading product of its type in the country... Any of the Worthington Foods products deemed to be appropriate for the mass market will be formulated and repackaged under the Morningstar Farms label...

"A large component in the company's marketing plan is based on the country's aging population and increased health consciousness and concern about cholesterol, said Franklin D. Poston, director of marketing. By the year 2000, the over-

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50 age group will have grown 23 percent, compared to a 14 percent growth in the general population, he said. 'The older you get the more concerned you are about cholesterol,' he said."

2584. *East West.* 1986. The best & worst natural foods. East West's first annual awards. March. p. 83-86.
• ***Summary:*** "Frozen non-dairy desserts. Best hard-serve product: Rice Dream by Imagine Foods of Palo Alto, California. Leaves all the soy products with their squabbles about tofu content and soy isolate use in the dust." Address: Massachusetts.

2585. Robeznieks, Andis. 1986. Frozen foods: Nutritious and convenient [Worthington Foods, Legume, and Walker & Wilks Tofoods]. *Vegetarian Times.* March. p. 39-41.
• ***Summary:*** Ed Walker, a long-time teacher of transcendental meditation, has been testing his recipes for the past 8 years on groups of meditators. Tofoods currently has 3 entrees and will add 5 more this year. Last year Center for Science in the Public Interest evaluated 360 frozen entrees for taste and nutrition. Two by Legume, Inc. were in the top five: Tofu Bourguignon and Sesame Ginger Stir-Fry.

2586. STS–Soya Technology Systems Ltd. 1986. Turnkey Soymilk Plant. First in Europe (Leaflet). 11 Dhoby Ghaut #11-06, Cathay Building, Singapore 0922. 3 panels each side. Each panel: 30 x 21 cm. March. Also published in Chinese in March 1986. [Eng; Chi]
• ***Summary:*** Contains 15 glossy color photos with descriptions of the process and showing key parts of the DE-VAU-GE soymilk plant in Germany.

2587. *Tomorrow's Foods: Nutrition News from Worthington Foods.* 1986. Tracking the Adventist consumer: Trend toward a simpler, meat-free diet. Spring/summer. p. 3.
• ***Summary:*** See next page. "Seventh-day Adventist consumers remain in the forefront of a sweeping U.S. lifestyle change toward a simpler, meat-free diet.

"Half of a national survey group of SDA households indicated their consumption of meat had declined in recent years, while fewer than 5 percent said they were eating more meat.

"However Adventist consumers appeared to be cutting back rather than cutting out meat consumption entirely. Survey results showed that more than half of Seventh-day Adventists eat meat one or more times a week." Address: Worthington, Ohio.

2588. **Product Name:** [Frika Vita].
Manufacturer's Name: Pural.
Manufacturer's Address: 15 rue Leon Blum, 92113 Clichy cedex, France.
Date of Introduction: 1986 April.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in Le Compas. 1986. March-April. Inside front cover. "Le No. 1 de la proteine vegetale vous propose une gamme complete de produits a base de soja [The Number One in Vegetable Protein Offers You a Complete Line of Soyfoods]." Canned.

2589. **Product Name:** [Granotose].
Foreign Name: Granotose.
Manufacturer's Name: Pural.
Manufacturer's Address: 15 rue Leon Blum, 92113 Clichy cedex, France. Phone: 731.25.75.
Date of Introduction: 1986 April.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in Le Compas. 1986. March-April. Inside front cover. "Le No. 1 de la proteine vegetale vous propose une gamme complete de produits a base de soja [The Number One in Vegetable Protein Offers You a Complete Line of Soyfoods]." Canned.

2590. **Product Name:** [Meatless Soy Meat].
Foreign Name: Sojafleisch.
Manufacturer's Name: Pural.
Manufacturer's Address: 15 rue Leon Blum, 92113 Clichy cedex, France. Phone: 731.25.75.
Date of Introduction: 1986 April.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in Le Compas. 1986. March-April. Inside front cover. "Le No. 1 de la proteine vegetale vous propose une gamme complete de produits a base de soja [The Number One in Vegetable Protein Offers You a Complete Line of Soyfoods]." Canned.

2591. **Product Name:** [Meatless Soy Meat].
Foreign Name: Soja Mignon.
Manufacturer's Name: Pural.
Manufacturer's Address: 15 rue Leon Blum, 92113 Clichy cedex, France. Phone: 731.25.75.
Date of Introduction: 1986 April.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in Le Compas. 1986. March-April. Inside front cover. "Le No. 1 de la proteine vegetale vous propose une gamme complete de produits a base de soja [The Number One in Vegetable Protein Offers You a Complete Line of Soyfoods]." Canned.

2592. **Product Name:** [Meatless Soya Cutlets].
Foreign Name: Koletts.
Manufacturer's Name: Pural.
Manufacturer's Address: 15 rue Leon Blum, 92113 Clichy cedex, France. Phone: 731.25.75.
Date of Introduction: 1986 April.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in Le Compas. 1986.

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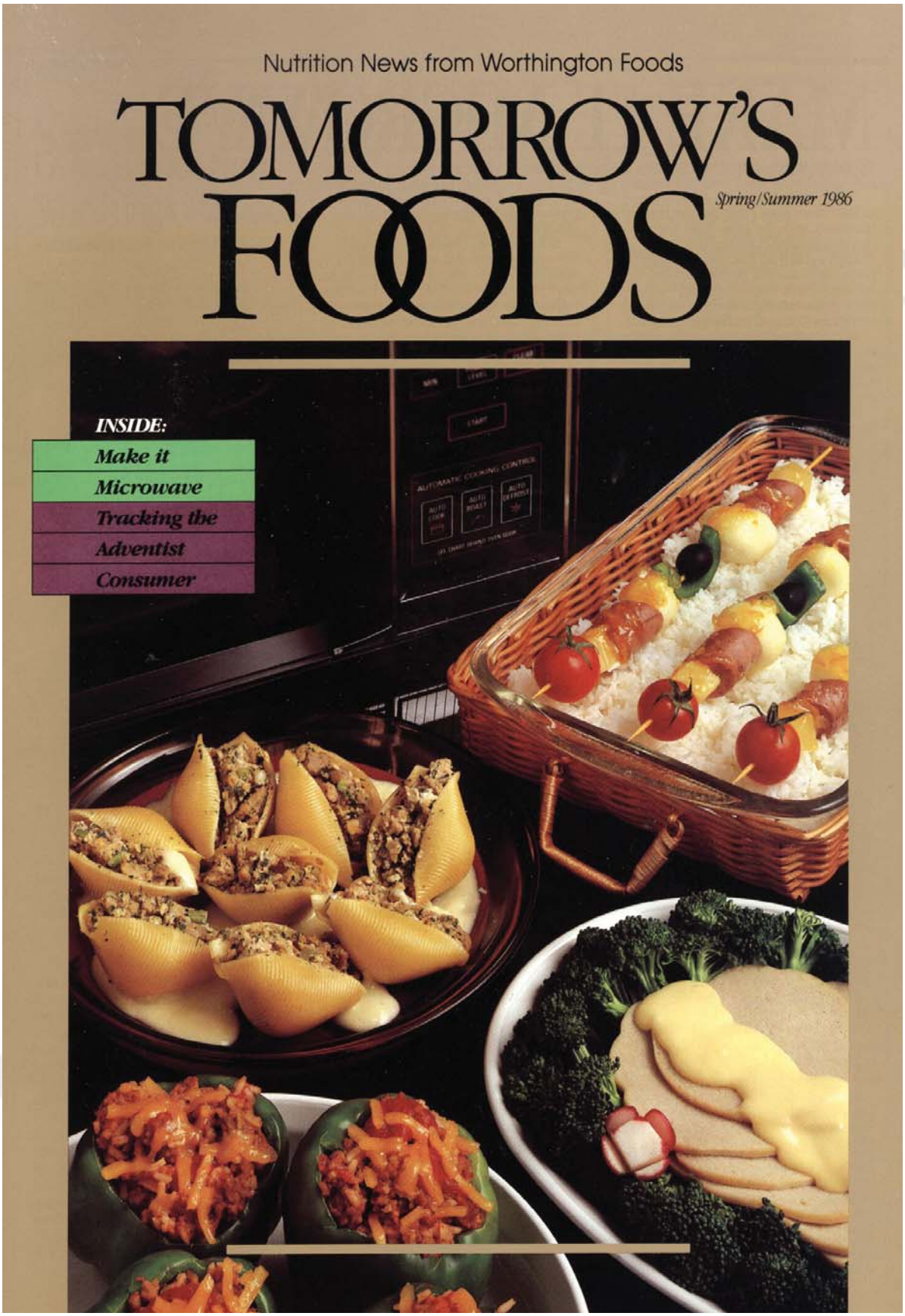

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March-April. Inside front cover. “Le No. 1 de la proteine vegetale vous propose une gamme complete de produits a base de soja [The Number One in Vegetable Protein Offers You a Complete Line of Soyfoods].” Canned.

2593. **Product Name:** [Lactic Soymilk].
Foreign Name: Lait de Soja Lactis.
Manufacturer’s Name: Pural.
Manufacturer’s Address: 15 rue Leon Blum, 92113 Clichy cedex, France. Phone: 731.25.75.
Date of Introduction: 1986 April.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in Le Compas. 1986. March-April. Inside front cover. “Le No. 1 de la proteine vegetale vous propose une gamme complete de produits a base de soja [The Number One in Vegetable Protein Offers You a Complete Line of Soyfoods].” Canned.

2594. **Product Name:** [Sojavite (Textured Soy Flour)].
Foreign Name: Sojavite.
Manufacturer’s Name: Pural.
Manufacturer’s Address: 15 rue Leon Blum, 92113 Clichy cedex, France. Phone: 731.25.75.
Date of Introduction: 1986 April.
New Product–Documentation: Ad in Le Compas. 1986. March-April. Inside front cover. “Le No. 1 de la proteine vegetale vous propose une gamme complete de produits a base de soja [The Number One in Vegetable Protein Offers You a Complete Line of Soyfoods].” In a box.

2595. **Product Name:** [Soya Fine Taste].
Foreign Name: Soja Gout Fin.
Manufacturer’s Name: Pural.
Manufacturer’s Address: 15 rue Leon Blum, 92113 Clichy cedex, France. Phone: 731.25.75.
Date of Introduction: 1986 April.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in Le Compas. 1986. March-April. Inside front cover. “Le No. 1 de la proteine vegetale vous propose une gamme complete de produits a base de soja [The Number One in Vegetable Protein Offers You a Complete Line of Soyfoods].” Canned. Note: This may be a soy sausage.

2596. **Product Name:** [Spiced Soya Quenelles].
Foreign Name: Sojanelles Epicees.
Manufacturer’s Name: Pural.
Manufacturer’s Address: 15 rue Leon Blum, 92113 Clichy cedex, France. Phone: 732.25.25.
Date of Introduction: 1986 April.
Wt/Vol., Packaging, Price: Can.
New Product–Documentation: Ad in Le Compas. 1986. March-April. Inside front cover. “Le No. 1 de la proteine vegetale vous propose une gamme complete de produits a base de soja [The Number One in Vegetable Protein Offers You a Complete Line of Soyfoods].” Canned.

2597. Pural. 1986. Le no. 1 de la protéine végétale vous propose une gamme complète de produits a base de soja [The number one in vegetable protein offers you a complete line of soy products (Ad)]. *Compas* (*Le*) (*France*) No. 26. Inside front cover. March/April. [Fre]
• ***Summary:*** Product types include vegetarian spreads for breads (*pâtes à tartiner végétales*), soya quenelles (forcemeat, *farce,* or fish balls), ready-to-serve dishes, and soymilk.

Individual soy-related products include: Granotose, Sojafleisch, Pasta Chuta, Koletts, Grano-San, Soja Mignon, Sojanelles Epicées, Soja gout fin, Frika Vita, Sojanelles, Sojavite. Address: 15 rue Léon Blum, 92113 Clichy cédex, France. Phone: 731.25.75.

2598. Robeznieks, Andis. 1986. What nutritional research is finding out about vegetarian diets. *Vegetarian Times.* April. p. 11-14. [5 ref]
• ***Summary:*** Contents: Introduction. Seventh Day Adventist studies. Gallstones. Ovarian cancer. High blood pressure. Pollutants in breast milk. Breast cancer. Diverticular disease. Kidney disease. High cholesterol. Vitamin B-12. Iron. Protein.

2599. **Product Name:** Crispy Chik (Breaded) [Patties, or Chunks].
Manufacturer’s Name: Worthington Foods, Inc.
Manufacturer’s Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1986 April.
Ingredients: Chik pieces: Textured vegetable protein (soy protein isolate and concentrate), egg whites, soybean and/or corn oil, flavorings (hydrolyzed vegetable protein, onion powder, turmeric, spice extractives), monosodium glutamate, carrageenan, niacinamide, etc. Batter: Water, wheat flour, corn flour, salt, leavening (sodium acid pyrophosphate, sodium bicarbonate), monosodium glutamate, paprika, spices, corn starch, onion powder, dextrose, garlic powder, turmeric, yeast, nonfat dry milk, hydrolyzed plant protein, eggs. Breading: Bleached white flour, yeast, sugar, salt.
Wt/Vol., Packaging, Price: Patties: 10 oz (284 gm) paperboard box. Chunks: 12 oz (340 gm) box.
How Stored: Frozen.
New Product–Documentation: Leaflet with coupon. 1986. “New! Crispy Chik.” Expires Dec. 31, 1986.

Vegetarian Meal Plan. 7th ed. Appendix A.6-27.

Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. 8 by 4 by 1¼ inches. Red, black, and golden brown on white. “A breaded vegetable protein product. Completely meatless. Microwaveable. Heat and serve convenience.” Package

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design is copyright 1987. The main ingredients are now: Patties: Textured vegetable protein (soy protein concentrate and isolate), egg whites, wheat flour, soybean oil, corn oil, corn flour, salt, whey, partially hydrogenated soybean oil, sugar, yeast leavening (sodium acid pyrophosphate, sodium bicarbonate), nonfat milk, natural and artificial flavors from non-meat sources, monosodium glutamate, spices, vegetable gum, celery, onion, garlic, niacin, iron, etc.

Soyfoods Center product evaluation. 1990. July 21. Too salty if served by itself. The photo on the package looks better than the actual product. When microwaved, they do not brown. When heated in an oven, they are too dry. Deep fried, they are good but still somewhat dry. Package design: Excellent.

2600. **Product Name:** [Sahm Yook Soy Cool (Plain Soymilk)].
Foreign Name: Sahm Yook Soy Cool.
Manufacturer's Name: Sahm Yook Korean Foods.
Manufacturer's Address: 320 Panjeong-ri, Jiksan-myun, Chunwon-gun, Choongchungnam-do 333-810, South Korea.
Date of Introduction: 1986 May.
Ingredients: Soy milk, high fructose corn syrup, raw cream, salt, vitamin C.
Wt/Vol., Packaging, Price: 200 ml foil retort pouch (Doypack). Retails for 200 Won (6/90).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Form filled out and label sent by C.Y. Yoon, General Manager, Sahmyook Korean Foods. 1990. June 23. The product was introduced in May 1986. Ingredients are listed in English.

Label (Foil retort pouch). Sent by C.Y. Yoon. 1990. June 23. 4 by 6.75 inches Red, yellow, dark green, and light green on silver. Front panel says "Soyalac" and an illustration shows 3 yellow soybeans in a green pod. The back panel shows the package being heated in a microwave oven. So this package is probably sold during the cold months. Note that this product contains dairy cream.

2601. *Madison Survey and Alumni News* (*Madison, Tennessee*). 1986. Edwin M. Bislaski: Obituary. 68(2):4. April/June.
• ***Summary:*** Born on 1 Feb. 1903 in Lancaster, Pennsylvania, he died on 11 April 1986 in his home at Bancroft, Michigan, at age 83. He came to Madison in 1931 to pursue the pre-medical course. "Later he became director of sales and then manager of Madison Foods. As director of sales for the food factory, he was in large part responsible for the wide distribution of Madison Foods through the technique of employing 'Health Educators' who distributed Madison Foods door to door and gave health lectures in communities all over the United States. He continued his work at the food factory until 1952."

In 1952 he and his wife, Eunice, adopted four sons and moved to Hot Springs, Arkansas, where he opened a healthfood store.

"In 1963 the family moved to Bancroft, Michigan, where Mr. Bisalski taught science in high school and pursued higher teaching certification at Michigan State University, which he obtained in 1967."

2602. **Product Name:** Natural Touch Loaf Mix (Meatless Entrees).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1986 June.
Ingredients: Textured soy protein concentrate, egg white solids, dehydrated vegetables (onion, bell pepper, garlic), corn starch, natural flavors from vegetable sources, fructose, sea salt, caramel, vegetable gum, spices.
Wt/Vol., Packaging, Price: 4.6 oz.
How Stored: Shelf stable.
New Product–Documentation: Ad (full page, color) in Natural Foods Merchandiser. 1986. Sept. "New! Natural Touch Entrée Mixes."

Poster. 1987. March (undated). "New! Natural Touch Entree Mixes. The taste nobody can touch. Purity Pledge."

2603. **Product Name:** Natural Touch Taco Mix (Meatless Entrees Dry Mix).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1986 June.
Ingredients: Textured soy protein concentrate, tomato powder, natural flavors from vegetable sources, fructose, sea salt, onion and garlic powder, spices.
Wt/Vol., Packaging, Price: 3.25 oz paperboard box. Retails for $1.50 (7/90, California).
How Stored: Shelf stable.
New Product–Documentation: Food Report (Lehmann). 1986. June. "Meatless main courses in minutes."

Ad (full page, color) in Natural Foods Merchandiser. 1986. Sept. "New! Natural Touch Entrée Mixes."

Poster. 1987. March (undated). "New! Natural Touch Entree Mixes. The taste nobody can touch. Purity Pledge."

2604. **Product Name:** Natural Touch Stroganoff Mix (Meatless Entrees Dry Mix).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1986 June.
Ingredients: Sour cream powder (sour cream solids, nonfat milk solids, citric acid), natural flavors from vegetable sources, textured soy concentrate, corn starch, wheat flour, corn oil, fructose, dextrose, onion, mushrooms, garlic

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powder, caramel.
Wt/Vol., Packaging, Price: 3.1 oz paperboard box. 3.2 oz retails for $1.50 (7/90, California).
How Stored: Shelf stable.
New Product–Documentation: Ad (full page, color) in Natural Foods Merchandiser. 1986. Sept. "New! Natural Touch Entrée Mixes."

Poster. 1987. March (undated). "New! Natural Touch Entrée Mixes. The taste nobody can touch. Purity Pledge."

2605. *Sunset* (*Menlo Park, California*). 1986. What's the marinade's mystery ingredient? Miso. 177:157-58. July.
• ***Summary:*** Seventh-day Adventists make Marmite, but Vegemite has most of the market. Includes recipes.

2606. Kuratsune, Masanori; Ikeda, M.; Hayashi, T. 1986. Epidemiologic studies on possible health effects of intake of pyrolyzates of foods, with reference to mortality among Japanese Seventh-Day Adventists. *Environmental Health Perspectives* 67:143-46. Aug. [9 ref]
• ***Summary:*** Broiled fish is a very common dish in Japan and is considered to be one of the major sources of mutagenic pyrolyzates of proteins ingested by the Japanese. Japanese who consume broiled fish twice or more weekly are 33% more likely to die of cancer and 67% more likely to die of stomach cancer than all Japanese. Broiled fish has the highest risk of any food of causing cancer in Japan.

Approximately 10,000 Adventists live in Japan. Good vital statistics existed on 6,742 of these. They have less overall cancer and less stomach cancer than Japanese in general. Address: 1. Nakamura Gakuen College and Junior College, Jyounan-ku, Fukuoka, Japan 814; 2. Dep. of Public Health, Faculty of Medicine, Kyushu Univ., Higashi-ku, Fukuoka, Japan 812; 3. Tokyo Sanitarium Hospital, Amanuma 3-17-3, Suginami-ku, Tokyo, Japan 167.

2607. Wulf, H.C.; Iversen, A.S.; Husum, B.; Niebuhr, E. 1986. Very low sister-chromatid exchange rate in Seventh-Day Adventists. *Mutation Research* 162(1):131-35. Aug. [25 ref]
Address: 1. Dep. of Dermatology, The Finsen Inst.; Skodsborg Sanatorium; 3. Dep. of Anaesthesia, Rigshospital; 4. The Univ. Inst. of Medical Genetics. All: Copenhagen, Denmark.

2608. Mitchel, Diana. 1986. Re: New developments with soymilk in Australia. Letter to William Shurtleff at Soyfoods Center, Sept. 1. 2 p. Handwritten.
• ***Summary:*** (1) Castle Trading (Ranwick, NSW) are now selling non-sweetened fresh soymilk in 2 litre containers at $3.00 Australian. (2) Biogenic (owned by Russels-Russels, which is owned by a New Zealand health chain) are selling 1 litre Tetra packs sweetened with honey at $3.40 each. (3) Sanitarium Health Food Company, a Seventh-day Adventist chain, are producing their own soya milk. It is apparently nice and cheap. (4) Soyfoods Australia P/L [Pty. Ltd.] at 14/2 Paton Place, Manly Vale (Phone: 02-949-7314) are producing soy milk "and have just spent $100,000 on equipment that is quite unsophisticated in comparison to the English equipment I was thinking of buying. Anyhow, they are contracting to sell fresh soya milk to all Coles supermarkets in NSW in plastic bottles." (5) Quite a few brands are selling in NSW, including: "Simply Better" (24-B Braeside Drive, Braeside, VIC 3195. Phone: 03-580-8505); Light Foods (37 Richards St., Hindmarsh, SA 5007); Earth Angel Soy Foods (Mt. Waverley, Victoria). Address: Squirrels on the Park, P.O. Box 4, Surry Hills 2010, NSW, Australia.

2609. Leiss, Richard S. 1986. Use of spun soy protein fibers at Worthington Foods (Interview). *SoyaScan Notes.* Sept. 12. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Worthington is still spinning soy protein isolates. They are using them all internally in meat analogs' they do not sell spun fibers to anyone. Loma Linda is also spinning soy protein fibers. Richard was told this by a Loma Linda employee while attending the AOCS short course in Hawaii in May. Address: Director, R&D, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

2610. Moll, Lucy; Barrett, Mariclare. 1986. Then and now: Authors of the best [vegetarian] cookbooks. *Vegetarian Times.* Oct. p. 26-31, 46, 54. [10 ref]
• ***Summary:*** Includes: The Hurd's and Ten Talents, Ed Brown and The Tassajara Recipe Book, Francis Moore Lappé and Diet for a Small Planet, Louise Hagler and The Farm Vegetarian Cookbook plus Tofu Cookery, Annemarie Colbin and The Book of Whole Meals, Mollie Katzen and The Moosewood Cookbook, William Shurtleff & Akiko Aoyagi and The Book of Tofu, Laurel Robertson and Laurel's Kitchen, Kathy Hoshijo and Kathy Cooks Naturally, Anna Thomas and Vegetarian Epicure. Address: Chicago, Illinois.

2611. **Product Name:** Granose Soya Dessert [Vanilla, Chocolate, or Strawberry].
Manufacturer's Name: Granose Foods Ltd. (Marketer). Made in West Germany by DE-VAU-GE Gesundkostwerk GmbH in West Germany.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1986 November.
Ingredients: Water, dehulled soya beans, raw cane sugar, maize starch, seaweed, sea salt, natural vanilla flavourings.
Wt/Vol., Packaging, Price: 525 gm Tetra Brik Aseptic carton retails for £0.45.
How Stored: Shelf stable.

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Nutrition: Per 100 gm: 72 calories. Fat fractions: polyunsaturates 58%, saturates 15%.
New Product–Documentation: Labels and color photo sent by STS. 1987. Blue, yellow, black, and green. Illustration of a bench in the park with glass of dessert on nearby table. Lindner. 1987. The World Soymilk Market.

2612. Fischer, R.W. 1986. Miller Farms, Dr. Harry Miller, and work with soymilk (Interview). Conducted by William Shurtleff of Soyfoods Center, Dec. 22. 2 p. transcript.
• ***Summary:*** Fischer has been involved with soy since 1960. He formed Soypro International in 1963. Before that he was with the Soybean Council of America. Address: Iowa.

2613. Miller, Clarence. 1986. Harry Miller, Willis Miller, and their work with soymilk (Interview). Conducted by William Shurtleff of Soyfoods Center, Dec. 24. 2 p. transcript.
• ***Summary:*** Clarence Miller, M.D., Dr. Harry Miller's eldest son, lives on the grounds of the St. Helena Hospital and Health Center.

The main purpose of this visit is for Shurtleff to pick up a copy of a manuscript on the life of Dr. Harry W. Miller written by Mr. Herbert T. Ford, 531 Sunset Dr., Pacific Union College, Angwin, California 94508. Phone: 707-965-2047.

Ford is in PR and a good writer. He interviewed Dr. Harry Miller in 1958. Raymond Moore later plagiarized this work. Ford does not have a copy of this manuscript. Clarence has the best original, which is a carbon copy.

The BIG picture in China. High level contacts are the key to getting somewhere in that country.

Harry's full name was Harry Willis Miller. His son Willis was named Harry Willis Miller, Jr.; he was generally called "Willis."

In Feb. 1948 Dr. Miller went to China for a few weeks and stayed in Shanghai with Clarence who, who had been there since 1946. Then back to states. When other Adventists had to vacate to Hong Kong the church asked Harry to go back to Shanghai. He stayed about 6 months after Dec. 1940 to early 1950. The Communists took over 14 Adventists hospitals in China.

Dr. Miller and his wife and group established the FIRST Adventist presence in China, in 1903. There were 4 physicians and 2 nurses. Maude was a physician. So they were of great historical significance.

The quality of medical care in Adventist hospitals in Asia is slipping dramatically, according to Clarence. He says: "My interest is in improving our medical activities."

Willis Miller started working with Bob Fischer about 3 years ago. They developed a mobile unit. Can ship these units to foreign countries. There are Now there are three other principals.

Dr. Thrasher is interested in having a soymilk plant as a student industry at an Adventist college in Thailand. This is the strongest interest Clarence found in Asia.

Miller Memorial Foundation. Clarence wants to set this up in Miller Farms contracts. The money would be used to advance Adventist health care activities.

Bob Fisher has traveled a lot outside the US in past years. Willis is a very competent soymilk engineer. Bob runs the business.

Their future has promise. Fisher went to China at the invitation of a corporation or group of entrepreneurs in Peking. Maybe interest in Shanghai via Dr. Yeung (spell?). Now at Kettering.

Clarence wants to reestablish Harry's original plant 50 years later. He wrote Mr. Milne, who is 90 some years of age and colleague of Harry, now in Hong Kong doing medical work. Has names of 5 people in Shanghai, settled on a few promising investors. One is a SDA businessman, in the cotton business. President of Rawcot International. Owns lots of cotton land.

In the early 1960s Dr. Miller went to Hong Kong, had a home there at the SDA college at Clearwater Bay, and was working with Longway and Milne to raise money to build the 2 hospitals. He had many old friends from Hong Kong. He wanted to have a little soy dairy at the college. It was established but did not take off. Chinese students see themselves as scholars, not domestic workers.

While Harry was in Hong Kong, Sally Awe, who lives in Hong Kong and is the heiress of the Tiger Balm Fortune, suggesting that she build a soymilk plant in Hong Kong for the use of the Chinese people. Dr. Miller encouraged her but his main interest was in the 2 hospitals. It never happened.

Dr. Miller's last surgery was in 1973, when he was 94 years old. From 1961-62 to 1973 he did only goiter operations–his specialty.

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Dr. Miller's first West Coast distributor, in early 1940s, was Joseph Lessin & Co. which later became Kahan & Lessin. It wasn't until 1941 that the plant in Mt. Vernon, Ohio, actually started to make any soyfoods. Harry basically didn't have a dime to his name when he returned to US in 1939 because he had been a missionary all the time. His brother Clarence, who lived in Chiff? City, Ohio, loaned him $5,000 to pay for the 150 acre farm that Harry bought in Mt. Vernon, Ohio. Harry then flew back on the Clipper to the Philippines and did thyroid surgery. He left half the money there for the Church and brought home $20,000.

Adventists developed Miller Memorial Sanitarium and Hospital in Cebu City, Philippines. He made only 2 trips to the Philippines to do thyroid surgery and each time came back with $20,000. He was only there a few weeks but would do 10-12 operations a day. They were all lined up and ready to go.

This manuscript by Herbert Ford did not come from Mr. Ford but from Mr. Milne in Hong Kong, out of a pile of papers that he said Dr. Miller left with him. Address: P.O. Box 97, Deer Park, California 94576. Phone: 707-963-7446.

2614. Loma Linda Foods. 1986. Soy to the world. Loma Linda Foods wishes each and every one of you a Happy Holiday Season (Ad). *Vegetarian Times.* Dec. Inside rear cover.
Address: 11503 Pierce St., Riverside, California 92515.

2615. Loma Linda Foods. 1986. Soy to the world (Ad). *Vegetarian Times.* Dec. Inside rear cover.
• ***Summary:*** See next page. The greeting above is written in red in the center of a wreath whose surface is covered with Loma Linda Foods' products used like decorative ornaments. Below the wreath: "Loma Linda Foods. Wishes each and every one of you a happy holiday season." Address: 11503 Pierce St., Riverside, California 92515. Phone: (714) 687-7800.

2616. **Product Name:** [Granix Soy Plus Crackers (Unsalted Tops)].
Foreign Name: Granix Galletitas con Soja.
Manufacturer's Name: Alimentos Granix.
Manufacturer's Address: Avda. San Martin 4625 (C.P. 1602), Florida, Buenos Aires, Argentina. Phone: 760-0307.
Date of Introduction: 1986.
Wt/Vol., Packaging, Price: 250 gm in cellophane package.

How Stored: Shelf stable.
Nutrition: Per 100 gm: Calories 422, protein 15.6 gm, fat 12.8 gm, fibre 0.7 gm, total carbohydrates 67.7 gm, calcium 64 mg, phosphorus 220 mg, iron 0.9 mg, sodium 1928 mg, vitamin B-1 0.18 mg, vitamin B-2 0.24 mg, niacin 5.02 mg.
New Product–Documentation: See page after next. Leaflet. 1988. Made with vegetable oil only. Letter and label sent by Jorge Manrique of Alimentos Granix. 1990. July 13. This product was introduced in 1986. It has both the English name and the Spanish name in equally prominent letters on the package. But note that it was introduced with only its Spanish name in 1978.

Leaflet in English and Spanish. Soy Plus. A color photo shows the cellophane-packed crackers (250 gm). "Every day, like the bread on your table! Vegetable oil only. Gives the nutritional composition."

2617. Chan, J.Y. 1986. A viewpoint of a Seventh-day Adventist. *Australian Family Physician* (*Sydney*) 15(9):1154. *

2618. **Product Name:** Loma Linda Chik-Patties (Meatless Chicken-like Patties).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1986.
Ingredients: Soy protein concentrate, soy protein isolate, corn oil, water, wheat gluten, egg whites, potato flakes, artificial flavors, whole wheat flour, salt, natural (vegetable) flavors, dried yeast, dextrose, onion powder, spices, vitamins

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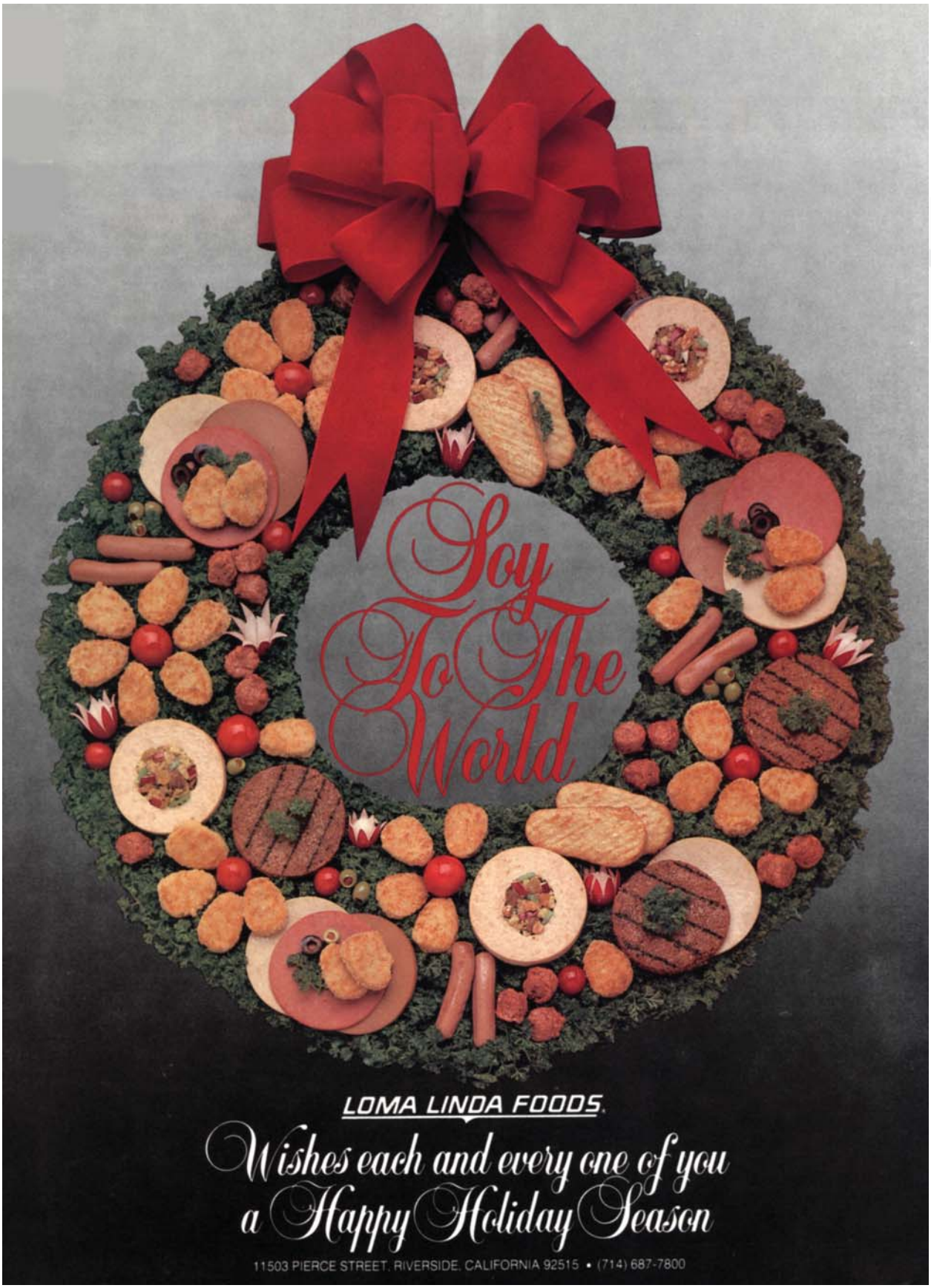

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Every day, like the bread on your table!

GRANIX

Soy Plus

Vegetable Oil Only

Alone, or with meals, the choice crackers for modern living pace and demands.

Delicious and healthfully nutritious, due to their high protein contents.

Soja

Solas o acompañando las comidas, son indicadas para el ritmo y las exigencias de la vida moderna.

Además de sabrosas, resultan sanamente alimenticias por su alto valor proteico.

Nº of Pktes. per carton	Pktes Grs.	Pktes. oz	Carton m^3	Weights (Grs.) Net	Weights (Grs.) Gross	Carton Measurements (mm) Lenght	Width	Height
20	270	9 1/2	0,0229	5.400	6.600	365	220	285

	GRAMOS / GRAMS					MILIGRAMOS / MILLIGRAMS					
			CARBOHIDRATOS CARBOHYDRATES			MINERALES MINERALS			VITAMINAS VITAMINS		
CALORIAS CALORIES	PROTEINAS PROTEINS	GRASAS FATS	FIBRA FIBRE	TOTAL	Ca	P	Fe	Na	B_1	B_2	NIACINA NIACIN
442	15,6	12,8	0,7	67,7	64	220	0,90	1928	0,18	0,24	5,02

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(niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). Breader: Bleached wheat flour, salt, yeast, sugar, oleoresin paprika, leavening (sodium acid pyrophosphate, monocalcium phosphate, sodium bicarbonate), hydrogenated soy oil, mono & diglycerides, nonfat milk, whey. Batter: Water, corn flour, modified food starch, leavening (sodium acid pyrophosphate and sodium bicarbonate) and spice.
Wt/Vol., Packaging, Price: 10 oz paperboard box.
How Stored: Frozen.
Nutrition: Per 1 patty (2.5 oz–71 gm): Calories 190, protein 11 gm, carbohydrate 13 gm, fat 11 gm, cholesterol 0 mg, sodium 540 mg, potassium 150 mg.
New Product–Documentation: Bowles. 1987. Total Health. Aug. p. 25.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1986.

2619. Mills, P.K. 1986. Dietary relationships to fatal breast cancer among Seventh-day Adventists. PhD thesis, School of Public Health, University of Texas. *

2620. Neiman, David C. 1986. Vegetarianism: Nutritional adequacy and relationships to health and fitness. Loma Linda, California: Loma Linda University. 67 p. *
• ***Summary:*** A handout for a class.

2621. **Product Name:** Natural Touch Tofu.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1986.
New Product–Documentation: Soya Bluebook. 1986. p. 107.

2622. Burkitt, Denis P.; Spiller, Gene A. 1986. Dietary fiber: From early hunter-gatherers to the 1980s. In: Gene A. Spiller, ed. 1986. CRC Handbook of Dietary Fiber in Human Nutrition. Boca Raton, Florida: CRC Press, Inc. 483 p. See p. 3-6. [18 ref]
• ***Summary:*** A graph (p. 4, from Klikx 1978) shows the steady decline in fiber consumption by humans over the last 100,000 years. "In more recent history, the concept that *coarse* foods of plant origin help to combat constipation goes back to Hippocrates [famous Greek physician, lived ca. 460-377 B.C.] in the 4th century B.C., who commented on the laxative action of the outer layers of cereal grains, an observation repeated over 1,000 years later (9th century A.D.) by the Persian physician Hakim. Shakespeare referred to the action of cereal bran in his play *Corialanus* in 1610."

In the early 19th century Sylvester Graham (*Lectures on the Science of Human Life*, 1829) and J. Burne (*Treatise on the Causes and Consequences of Constipation*, 1840) in the U.S. and in the late 19th century and at the dawn of the 20th century Allinson in Britain extolled the virtues of whole grains in improving health by combating constipation.

"The history of dietary fiber and health in the first 50 years of the 20th century reveals occasional interest, but very few scientific publications. Fiber was relegated to being the cinderella of nutrients. It may be well to remember that these were the days of major discoveries in vitamins, minerals, and all other digestible nutrients. Somehow the concept that a group of substances practically indigestible by human GI enzymes could be important to health did not appeal to nutritionists, physiologists, and physicians in those days.

"In the 1920s, McCarrison (1921) drew attention to the good health of tribesmen in North India, which he attributed to the consumption of whole grains little tampered with by modern technology. In the same decade, John Harvey Kellogg was extolling the virtues of whole grains in the U.S. The convictions of the latter culminated in the development of the breakfast cereal industry. Cowgill and Anderson in the 1930s published well-controlled research which proved that 'fiber' was responsible for the laxative action of wheat bran. At the same, the British surgeon Albuthot Lane... recognized the 'dangers' of stagnant fecal content in the colon. His first reaction was to remove (!) the colon surgically, but fortunately he subsequently appreciated that the administration of bran was altogether simpler, safer, and equally effective. In the late 1930s, Dimock, a young British physician, reported his careful studies on the effectiveness of bran in treating constipation and, in the late 1940s, Walker of South Africa was one of the first to appreciate the properties of plant fibers and to study them in a truly scientific manner.

"In the years that followed, some epidemiological correlations, by Cleave in Britain (1956 to 1966) and Trowell in Africa, with his book, *Non-Infective Diseases in Africa*, attributed protective effects to unrefined carbohydrates and 'bulky' foods. This, we could say, is the early history of fiber." Address: 1. M.D., Unit of Geographic Pathology, St. Thomas Hospital Medical School, London, England; 2. D.Chem, PhD, Consultant in Nutrition Research, Los Altos, California.

2623. Calkins, Beverly M. 1986. Consumption of fiber in vegetarians and nonvegetarians. In: Gene A. Spiller, ed. 1986. CRC Handbook of Dietary Fiber in Human Nutrition. Boca Raton, Florida: CRC Press, Inc. 483 p. See p. 407-14. Chap. 8.2. [42 ref]
• ***Summary:*** A review of the literature reveals that vegetarians consume 86% more fiber than nonvegetarians. The fiber fractions that are significantly different between the two groups (for calorie-adjusted intake) are cellulose and pectin. The fraction which is consistently greater among Seventh-day Adventists (SDAs) than non-SDAs is lignin.

The SDA church has about 600,000 members in North America. About 50% of SDAs follow a lacto-ovo-vegetarian diet, and all abstain from drinking alcoholic beverages and

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from smoking. They also tend to avoid caffeine-containing beverages, rich, highly refined foods, and hot condiments and spices. About 60% of the SDA population are adult converts; the rest were raised in the church-recommended lifestyle as children of SDA parents.

A large table (p. 408-09) summarizes 18 studies, from 1958 to 1984, comparing the fiber intake of vegetarians and nonvegetarians. Address: D.H.Sc., Post-Doctoral Fellow, Epidemiology Dep., Johns Hopkins Univ., Baltimore, Maryland.

2624. Goddard, Susan. 1986. Focus on soya. Hove, E. Sussex, England: Wayland (Publishers) Ltd. 48 p. Illust. Index. 21 x 22 cm. Series: Focus on Resources. [3 ref]
• ***Summary:*** This is a brief introduction to the subject with many color photos. Contents: 1. The importance of soya. 2. The beginnings of soya. 3. Where soya beans are grown. 4. The beginnings of soya processing. 5. The soya plant. 6. Planting. 7. Harvesting. 8. Threshing and storage. 9. At the processing plant. 10. Extracting and refining the oil. 11. Making margarine. 12. Animal feed. 13. Soya protein products. 14. Textured vegetable protein. 15. Other soya products. 16. The nutritional importance of soya. 18. Soya as a world commodity. 19. The future. Facts and figures. Glossary. Books to read. Sources of further information.

Numerous large color photos show commercial soya products. Page 23: Granny Ann High Fibre Cooked Soya-Bran, Bilsons Fibrefit, Nature's Way Soya Flour. Page 24: Waitrose Soya Soft Margarine, Prewetts Pure Soya Bean Oil. Page 27: Life All Natural Salad Cream Style Dressing (egg free) [with soya oil].

Page 30: Mapletons Body Bulk (Malt flavoured milk & soya protein drink mix. Make with milk), Healthcrafts Soya Protein Powder (84% protein). Page 31: Cauldron Foods Vegetable Pâté (mushroom flavour), Cauldron Foods Tofu Burgers (nut style, chilli, or vegetable), Direct Foods Protoveg Menu 5 Grain Burgamix, Direct Foods Protoveg Menu Minced Soya & ___ Mix, Direct Foods Bean __ st (Oriental Style), Direct Foods Protoveg Menu Sizzles, Direct Foods Protoveg Menu Sausmix, Direct Foods Protoveg Menu Burgamix, Sunrise 4 Vegetarian Quarterpound Burgers.

Page 33: Direct Foods Mr. Fritzi Fry's Soy Sausage Mix, Granose Vegetarian Goulash, Direct Foods Protoveg (textured soya protein food) Beef Flavour Chunks. Page 34: Duchesse All-Natural Tofu Dressing & Dip, Amoy Light Soya Sauce, Witte Wonder Organic Tofu Spread (with paprika), Morinaga Ever-Fresh Silken Tofu. Page 35: Plamil Soya Milk Rice Pudding, Provamel Soya Dessert (vanilla [made by Alpro in Belgium]), Sunrise Soya Milk (500 ml, sugar-free, or sweetened with raw cane sugar).

2625. Green, Harvey. 1986. Fit for America: Health, fitness, sport, and American society. New York, NY: Pantheon Books. xvi + 367 p. Illust. Index. 28 cm. [250+* ref]
• ***Summary:*** This is a serious and sympathetic study of the American quest for perfect health in the period from 1830 (a watershed year in this as in so many other aspects of American culture) to 1940. The author suggests that the pursuit of physical perfection is a way to compensate for the experience of social failure. The Strong Museum, where he works, is the only major U.S. museum devoted entirely to documenting life in Victorian America [1837-1901]. The author has MA and PhD degrees from Rutgers University, New Jersey, and is presently also an adjunct professor of history at the University of Rochester, in New York.

Contents: Preface. Acknowledgments. Part I: Millennial dreams and physical realities, 1830-1860. 1. Health, medicine, and society. 2. Spices and the social order. 3. The springs (and shocks) of life. 4. "Bad air" and the "movement cure." Part II: The price of civilization, 1860-1890. 5. The sanitation movement and the wilderness cure. 6. The new "American nervousness." 7. Electricity, energy, and vitality. 8. "Muscular Christianity" and the athletic revival. Part III: Regeneration, 1890-1940. 9. Living the strenuous life. 10. Old-time quiet in a breathless age. 11. Dietetic righteousness. Epilogue. Notes. Picture credits.

Contains many interesting photos. Address: Deputy director for interpretation, Strong Museum, Rochester, New York. Home: Palmyra, New York.

2626. Lacey, Robert. 1986. Ford–The men and the machine. Boston and Toronto: Little, Brown and Co. xix + 778 p. Plus 48 pages of plates. Index. 24 cm. [450* ref]
• ***Summary:*** Contains a chapter titled "Food for Thought" (Chap. 13, p. 220-236 + photos at end) plus extensive endnotes, a 23-page bibliography, and a good map of Dearborn and Detroit. An insightful, very well researched, and slightly irreverent overview of Ford's work with soybeans and attitudes toward diet and health.

Henry Ford had a distrust of doctors. He blamed a doctor for his mother's death and for the operation that marked the end of his wife's childbearing in the 1890s. In Nov. 1932 he was admitted, at age 69, to the Henry Ford Hospital for a hernia operation. It was the first medical operation of his life. The next morning he insisted on getting up, against doctor's orders, and sitting in a chair beside his bed. Persisting with his own therapy, a week after the operation he declared himself ready to go home. Five days later he was back at work, totally cured. To his surgeon's amazement he remained cured. "It was not long before postoperative ambulation became one of the new features of treatment at the hospital."

"Old Henry Ford had always believed that we are what we eat. Dietary reform had been one of the radical new strands of thought swirling through Michigan in his youth, thanks to the Seventh Day Adventists' Western Health Reform Institute, founded in Battle Creek in 1866."

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Henry Ford was a pioneer in employing Negroes and treating them fairly. William Perry, his first black worker, was employed in 1914. "By the early 1920s there were more than 5,000 blacks working for Ford and by 1926 there were double that number–a tenth of the entire work force. The Ford Motor Company employed more blacks than all other car companies put together... But Ford never paid a man more, or less, on account of his skin. Henry Ford's black employment policy was genuinely ahead of its time."

Henry Ford had been thinking in terms of chemurgy and villages for many years. "As early as 1916 he had formed a company with Edsel, 'Henry Ford & Son Laboratories' to carry out 'mechanical, botanical and chemical research.' Henry had a notion that alcohol could be distilled from vegetable matter for use as a tractor fuel, thus making the farmer totally self-sufficient, and he hired his old school friend, Dr. Edsel Ruddiman, away from his university researches to work on this. He set Dr. Ruddiman up in a corner of the Dearborn tractor plant, and here the chemist analysed all manner of vegetable produce from the ever-growing acreage of the Henry Ford farms." One of the crops he analyzed was soybeans. Ford's interest in the soybean was not primarily in its nutritional value but rather in the potential that it held for use by industry.

Of the several Western prophets who popularised the soybean, Henry Ford was the first to try growing and harvesting the crop on a major scale, using farm machinery extensively.

"Chemurgy, a technological child of populism, sprang from the woes of American farmers in the 1920s and 1930s. As unemployment grew, there were fewer and fewer customers to purchase the abundant crops grown by farmers. Surpluses resulted and the glut sent prices plummeting. Chemurgy was based on the "hope that modern science might be able to teach farmers to produce more than just food. If the agricultural sector was producing more than people could eat, while the industrial sector was languishing, it seemed obvious that the two should get together... the latest developments in chemistry suggested that this was where the future lay. Wood was providing the raw material for the miraculous new fibre, rayon... Both the technology and ideology meshed with the causes dearest to Henry Ford's heart, and it turned out that he had been a chemurgical pioneer all the time without realising it, since the coil cases of the 1915 Model T had been constructed from a plastic based on wheat gluten. As the chemurgical movement gathered strength in the early 1930s, its champions found a ready audience in Dearborn, and in 1935 the Dearborn Inn became the site of America's first chemurgical conference, under the sponsorship of Henry Ford." The first conference, and the second, held at the same location the next year, were, "like all enterprises associated with Henry Ford, a curious blend of vision and nostalgia."

In an attempt to maintain the chemurgic spirit, Henry Ford appeared in 1939 in a silklike soya-bean tie while wearing a soya-bean suit.* (Footnote: *The suit was more fragile than its woollike texture suggested; its tailor gave Henry Ford firm orders not to cross his legs in public.)"

Lacy is an Englishman, who writes non-fiction company histories. A Ballantine Books edition (832 p., 18 cm) was published in 1987. Address: England.

2627. Land, Gary. ed. 1986. Adventism in America: A history. Grand Rapids, Michigan: William B. Eerdmans Publishing Co. ix + 301 p. Series: Studies in Adventist History, Vol. 1. 22 cm. [925* footnotes]

• ***Summary:*** Contents: Preface. 1. The Millerite movement, 1830-1845, by Everett N. Dick. 2. Sectarianism and organization, 1846-1864, by Godfrey T. Anderson. 3. Years of expansion, 1865-1885, by Emmett K. VandeVere. 4. The perils of growth, 1886-1905, by Richard W. Schwarz. 5. Shaping the modern church, 1906-1930, by Gary Land. 6. The church under stress, 1931-1960, by Keld J. Reynolds. 7. Coping with change, by Gary Land (Discusses church growth especially in the Third World, the denomination's strong cultural conservatism with respect to beards, long hair, dress and rock music, the Association of Adventist Forums (established in 1967 outside the church organization) and its quarterly journal *Spectrum*, racial adaptations, the women's issue, theological debates, debate over righteousness by faith, debate over Ellen White and her borrowings / plagiarism, Ronald L. Numbers's Prophetess of Health (1976), Walter Rea's work showing that an alarmingly large portion of White's work was borrowed (but mention of his book *White Lie* is carefully omitted), the Sanctuary Doctrine, Adventism in transition, from sect to church, summary).

Appendix 1. Seventh-day Adventist statements of belief. Appendix 2. Seventh-day Adventist membership statistics. Notes. Bibliographical essay. Contributors.

Appendix 2B, titled "World Membership by Geographical Region," shows the following regions to have the largest number of members of the SDA church in 1979: Africa 757,986, North American 585,050, South American 558,395. Asia 523,648, and Interamerican (Central America and the Caribbean) 515,226. Worldwide church membership in 1979 was 3,308,191. It had grown from 5,440 in 1870, to 67,131 in 1900, to 245,220 in 1925, to 756,712 in 1950.

Each of the chapters in this book was written by a Seventh-day Adventist with a PhD in history. It is not uncritical and there are none of the typical providential explanations that appear in most Adventist histories. Considerable attention is given to Dr. John Harvey Kellogg and Battle Creek Sanitarium. The second and last volume, which is planned to be topical, may never be published. Prof. Ronald Numbers, now in the History of Medicine Department, University of Wisconsin at Madison, organized the project years ago, but when he left Loma Linda University it got stalled for many years until

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he finally persuaded Gary Land to bring at least the first volume to completion. Prof. Numbers was fired from Loma Linda University, but in exchange for receiving one year's severance pay he wrote a letter of resignation. Address: Prof., History Dep., Andrews Univ., Berrien Springs, Michigan.

2628. Ludlow, Rose Budd. 1986. Total health and food power: Principles of healthful living and outstanding vegetarian recipes from Glendale Adventist Medical Center. Santa Barbara, California: Woodbridge Press. 239 p. Illust. Recipe index. 23 cm.

• ***Summary:*** Section 1 of this book consists of 18 chapters on Seventh-day Adventist principles of healthful living. Part 2 contains more than 200 vegetarian recipes from the Glendale Adventist Health and Medical Center. Soy-related recipes include: Soybean waffles (p. 118). Corn chowder with imitation Baco-Bits (p. 127). Lemon juice-soy mayonnaise (with soy milk powder, p. 149). Gado-gado salad (with fried tofu, p. 165). Tofu salad deluxe (p. 171). Chinese-style sautéed tofu (p. 185). Fried tofu patties with eggs and vegetables (p. 192). Leafy Chinese tofu (p. 196). Soy-cheese patties (with tofu, p. 206). Soy-cheese scallops (p. 207). Tofu balls or cutlets (p. 210). Tofu balls with tartar sauce (p. 210). Tofu with mushroom sauce (p. 211). Tofu and brown rice casserole (p. 212).

Many recipes also use meatlike products made by Seventh-day Adventist food companies; a list is given on p. 174. These include Soyameat (p. 162), Meatless Chicken (p. 167), Nuteena (p. 200, 213), Vege-Burger (p. 211, 214). Address: Consulting Dietitian, Formerly, Director of Dietary Service, Glendale Adventist Medical Center, Glendale, California.

2629. Madison College Alumni Association. 1986. A pictorial history of Madison College, a school of divine origin 1904-1964. Madison, Tennessee. viii + 269 p. Illust. 28 cm.

• ***Summary:*** Several articles about Madison from other publications (e.g. Hastings 1938; Holman 1941) are reprinted in this book. Pages 42 gives a history of "The Madison Food Factory." There are photos of the outside and inside of the building on pages 43 and 46. "In a letter dated March 10, 1907, directed to the directors of the Nashville Sanitarium and Southern Union Conference Committee, Ellen G. White wrote: 'It would be a great advantage to the school in Madison if a food factory were put into operation in connection with the work of the school.'

"About this same year a large flakefood factory was built at Edgefield, near what is now known as Edenwold. The people of the South had not yet become conditioned to the eating of health foods; so the factory became a white elephant on the hands of the owners. It passed from hand to hand without success. [One of the operators was Jethro Kloss.] After much discussion on the part of the school faculty a decision was made to purchase the plant, dismantle it and bring it to Madison. It was opened in 1918. The plan was to begin in a small way and to educate the workers, step by step, in the new industry. Mr. and Mrs. Andrew Wheeler were in charge of the work, under the direction of Mrs. Druillard, who had had years of experience in other institutions.

"The purpose of the Food Factory was to produce foods that would be suitable substitutes for meat in the dietary of the vegetarian and others whose health required the elimination of animal products. Consequently most of the foods manufactured were rich in protein. The foods were made from such products as soy beans, peanuts, and gluten. Some of the trade names developed were Zoyburger, Yum, Mock Chicken, Nu-Steak, Not-Meat, Vigoroast, and Ches-O-Soy. A cereal substitute for coffee was Zoy-Koff.

"Some of the men who played an important part in the later growth and development of the food factory were Joe Hansen, C.H. Dye, T.A. McFarland, Captain Calvin Bush, Edwin Bisalski, George Norris, Leslie Brooks, John Brownlee, H.M. Mathews and Frank Holland. Of this group, H.M. Mathews and John Brownlee played a very important part in experimentation and development of the foods. Dr. P.A. Webber and Ulma Doyle Register did outstanding work in research to develop better texture, more palatability, and greater nutritional value. Mr. E.M. Bisalski was outstanding in the experimentation and development of the foods. During his term as manager of the Factory, great expansion took place. A practically new plant, with one section four stories in height was constructed in 1941. Car loads of products were shipped to jobbers in Chicago, Boston, New York, and other large distributing centers until Madison products were found in all states and Canada.

"In August of 1964 Madison Foods was sold to Worthington Foods, Inc. Worthington, Ohio. The same products that had been produced in the past were continued to be available under the Madison label and brand names used in the past. Mr. K.P. Stepanske was appointed manager. The food factory was operated on the Madison Campus until 1972 when it was moved to Worthington, Ohio (p. 42).

Elder Julius Gilbert White, a nationally-known health lecturer, came to Madison and delivered a 10-day series of lectures on health, with the use of illustrated slides. This led to the development of many health institutes and short courses at Madison from 1932-1940 (p. 44).

"Vegetarian Cafeterias: Another type of health work carried on by the Madison school was the operation of a treatment room and vegetarian cafeteria in Nashville. Workers drove back and forth each day from the school to Nashville. It was started in rented quarters in 1917. In 1922, because of advancing rents, a new building was constructed on a permanent location at 151 Sixth Ave. North. A successful work continued for over a decade. Advancing trend of business in the center of the city made the location

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undesirable and the business closed out and the building was sold. The Birmingham [Alabama] cafeteria was started in 1920. An eighty-seven acre farm purchased as a rural base supplied vegetables and farm produce.

"In 1920 the Louisville treatment rooms were making good progress and opened a cafeteria.

"In December of 1920 a group of workers opened a city cafeteria in the cities of Knoxville, Memphis, and Chattanooga. These were among the early beginnings of this type of work in our denomination." A photo shows the Vegetarian Cafeteria and Treatment Rooms, 151 6th Ave., Nashville, Tennessee (p. 45).

There are photos of each graduating class. Pages 126-173 are biographical sketches, usually with a photo, of Madison "Personalities," including E.A. Sutherland, Bessie DeGraw Sutherland, Percy Magan, Nellie Druillard, Frances L. Dittes (1891-1979) and her sister Florence, Dr. Ulma Doyle Register, Dorothy Mathews, William Cruzen Sandborn, and Mable H. Towery.

A sample student menu is given (p. 265). Breakfast includes "Fried Soyburger," and dinner includes "Soyburger Patties." "At the noon and evening meals toasted Soyburger sandwiches, chocolate soy milk, and soy buttermilk are always available." Cow's milk is also available at all 3 meals. Address: Madison, Tennessee.

2630. Phillips, Roland L.; Snowdon, David A. 1986. Mortality among Seventh-day Adventists in relation to dietary habits and lifestyle. In: R.L. Ory, ed. 1986. Plant Proteins: Application, Biological Effects, and Chemistry. Washington, DC: American Chemical Society. ix + 285 p. See p. 162-74. [23* ref]

• ***Summary:*** "This report summarizes 21 years of mortality follow-up for 25,000 California members of the Seventh-day Adventist church." They have a "marked reduction in risk of fatal large bowel cancer, coronary disease, stroke, diabetes and nontraffic accidents. Compared to Adventists who heavily use meat the vegetarian Adventists have a substantially lower risk of fatal coronary disease, fatal diabetes and death from any cause, especially among men. Among Adventist men who use few animal products (meat, milk, cheese, eggs) the risk of fatal prostate cancer is one third that of Adventist men who heavily use such products. Moderate use of coffee is associated with an increased risk of fatal large bowel cancer among both sexes and an increased risk of coronary death and all-cause death among males." Address: Loma Linda Univ., School of Medicine, Center for Health Promotion, Loma Linda, CA 92350.

2631. Elmer, Vickie. 1987. Loma Linda Foods Inc. consolidates for growth. *Daily Commerce* (*Los Angeles, California*). Feb. 2. Also in Press-Enterprise (Riverside, CA). Jan. 26.

• ***Summary:*** Loma Linda Foods was founded in October 1906. Company sales now top $20 million a year, growing at 7% annually. Worthington sales top $30 million, and grew last year by 13%. Loma Linda Foods plans to shut down its plant in Mount Vernon, Ohio, and move it to Riverside in late 1987. Mr. Alejo Pizzaro is now company president. Address: Riverside, California.

2632. Lease, Carol Ann. 1987. Firm's bread and butter comes from meatless foods. *Dispatch* (*Columbus, Ohio*). Feb. 18. p. 2. Neighbor news section.

• ***Summary:*** "The inside of the Worthington Foods plant at 900 Proprietors Rd. looks like any meat packing plant... The only difference is, there's no meat at Worthington Foods," now in its 48th year with about 270 employees. Discusses the company's history and 3 product lines. "Meat rationing during World War II gave the company a shot in the arm as people turned to Choplets when they couldn't get pork chops.

"Worthington Foods still makes some peanut-based products, but most of its no-meat meats today are made from soy protein. The work of Robert Boyer, a Michigan researcher, enabled the company to spin soy into a substance resembling muscle fiber."

David Schwantes, manager of marketing communications, said the Morningstar Farms line is in about 70% of U.S. Supermarkets. James Remer, director of manufacturing, said Scramblers, which are made from egg whites, also is the company's fastest-growing product. Schwantes said that "a 1985 Gallup poll turned up 6 million vegetarians in the United States. That's a five-fold increase since the last time they asked the question in 1979.

"According to the National Institutes of Health, he added, one in four households has someone on a low-cholesterol diet, whether self-imposed or recommended by a doctor...

"The company also is to break ground this spring on a 80,000-square-foot storage facility on Sinclair Rd. and is expanding manufacturing activities into second-floor areas of its Proprietors Rd. plant that now are being used for storage. All this growth is not happening without problems. The sanitary sewer line serving the plant, for example, is at capacity. Last year, a clog in the line caused sewage to back up in the basements of homes on E. Stafford Ave. The city has suggested that Worthington Foods put in a pumping station to pump the sewage to another line or that a new sewer line be built on Proprietors Rd. to serve Worthington Foods exclusively. The latter would cost an estimated $525,000."

2633. *Vegetarian Times.* 1987. Vegetarian nutrition congress. Feb. p. 56.

• ***Summary:*** "In an effort to pull together all the research ever done on vegetarian nutrition, the Loma Linda University Medical Center and several other Seventh-Day

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Adventist-affiliated institutions are sponsoring the first International Congress on Vegetarian Nutrition. The congress will be held March 16-18 at the Loews L'Enfant Plaza Hotel in Washington, D.C. The registration fee is $235. For more information, write Loma Linda University, Dept. of Nutrition, School of Health, Loma Linda, California 92350."

2634. Lease, Carol Ann. 1987. Food company may buy railway museum land. *Dispatch* (*Columbus, Ohio*). March 11. p. 12. Neighbor news section.
• ***Summary:*** "Worthington Foods at 900 Proprietors Rd. may expand onto neighboring property owned by the Ohio Railway Museum."

2635. Worthington Foods. 1987. Health Wise (Portfolio). Worthington, Ohio. 22 inserts. March 18. 30 cm.
• ***Summary:*** See next page. The inserts (each 8½ x 11 inches, glossy) are: (1) New! Crispy Chik (leaflet, front and back). (2) Worthington and Natural Touch product catalog (4 p.). (3) Sodium content per serving. (4) Less than 500 mg sodium per serving. (5) Less than 50, 100, and 150 Kcal [calories] per serving. (6) Less than 200, 300, and 450 Kcal [calories] per serving. (7) Composition of foods having similar uses in the diet (2 p). (8) Day codes / shelf life. (9) Decal and banner: The good taste of natural living. (10) Health Wise point of purchase sign. (11) Meat free. Cholesterol free (banner). (12) Tofu Topper. (13) Worthington Foods order form. (14) Worthington. For all the right reasons. (15) Ingredient information (Glossary of terms). (16) Soar into spring with savings on these Worthington specials. (17) Bill back form. Address: Worthington, Ohio 43085.

2636. Johnsson, Julie. 1987. The case for meatless meats: Meat substitutes have lower fat and cholesterol than meat. And they sort of, kind of, maybe taste like meat! *Signs of the Times.* March. p. 12-13, 27. [3 ref]
• ***Summary:*** Meat substitutes or analogs have lower fat and cholesterol than meat, and the sort of, kind of, maybe taste like meat. Address: Washington, DC.

2637. Loma Linda Foods. 1987. Loma Linda product catalog. Quality foods since 1906. Riverside, CA 92515.
• ***Summary:*** See page after next. Lists 36 VP [vegetable protein, canned or dry mixes] products, all shelf stable, and 13 frozen food products. All are vegetarian. The products are grouped into categories, which are not named. For each product is given: Product, code, and how packed (e.g., 12/14 oz.).

The VP products are: Nuteena. Proteena. Vegelona. Sandwich spread. Sizzle franks. Linkettes. Big Franks. Little Links. Dinner Cuts. Tender Rounds with Gravy. Swiss Steak with Gravy. Tastee Cuts. Stew Pack. Vege-Burger, Redi-Burger. Fried Chicken with Gravy. Chili Beans. Green Soybeans. Soybeans Boston Style. Vege-Scallops. Tender Bits. Savory Dinner Loaf. Patty Mix. Chicken Supreme. Ocean Platter. Vita-Burger Chunks. Vita-Burger Granules. Gravy Quik. Krispy Quik Breading Mix. Loma Linda Wheat Bran. Loma Linda 7 Grain–Crunchy. Loma Linda 7 Grain–No Sugar. Ruskets. Breakfast Cup (free of caffeine). Soyagen Powder. Savorex (savory vegetable-yeast seasoning).

Frozen foods: Sizzle Burger, Meatless Bologna. Savory Meatballs. Chik–Nuggets. Chik–Patties. Meatless Fried Chicken. Meatless Chicken. Meatless Roast Beef. Meatless Salami. Meatless Turkey. Griddle Steaks. Ocean Filets. Meatless Corn Dogs.

At the bottom of the last page we read: "Loma Linda Foods' commitment to quality, health and customer satisfaction began in 1906 and continues as we develop new recipes, modify existing ones, and explore new processes in technology; all in search of excellence.

"At Loma Linda Foods our mission goes beyond the marketing of textured vegetable proteins and infant formulas. Instead, we consider ourselves to be in the healthful living business. Equal with this mission is the responsibility to educate the public in healthful and economical living and to provide the health foods and beverages needed for this quality lifestyle. We trust that Loma Linda's extensive product range will continue to be your #1 choice whenever the occasion calls for a delicious meatless adventure." Address: Riverside, California.

2638. Loma Linda Foods. 1987. Sooey, sooey, sooey. Soy, soy, soy [Make big money imitating sausage] (Ad). *Natural Foods Merchandiser.* March. p. 82-83. Also in Whole Foods. March. p. 56-57.
• ***Summary:*** See two pages after next. A 2-page full color ad for Loma Linda's soy-based sausage analogs: Little Links, Big Franks, Sizzle Franks, Linkettes, Meatless Corn Dogs.

Note: A 4-page version, available from the company and titled "Make big money imitating a sausage," also lists the company's 42 U.S. distributors. Address: Riverside, California.

2639. *Vitasoy Vitabrations.* 1987. Vitasoy celebrates 50 years of soymilk pioneering. 1(1):1. March.
• ***Summary:*** "From its conception in 1937, Vitasoy became the world's pioneer in soymilk manufacturing and marketing... To celebrate its 50th anniversary of soymilk pioneering in March 1987, Vitasoy is proud to inaugurate its fifth manufacturing facility in Hong Kong's New Territories. The $20 million plant, occupying 370,000 square feet and equipped with state of the art soymilk processing equipment, has a daily capacity of 1.2 million Tetra Pak units." An illustration (line drawing) shows the new plant.

Note: This article is inaccurate and misleading. First, Vitasoy was not the "world's first pioneer in soymilk manufacturing and marketing." Dr. Harry W. Miller, for example, had a thriving and very innovative soy dairy in

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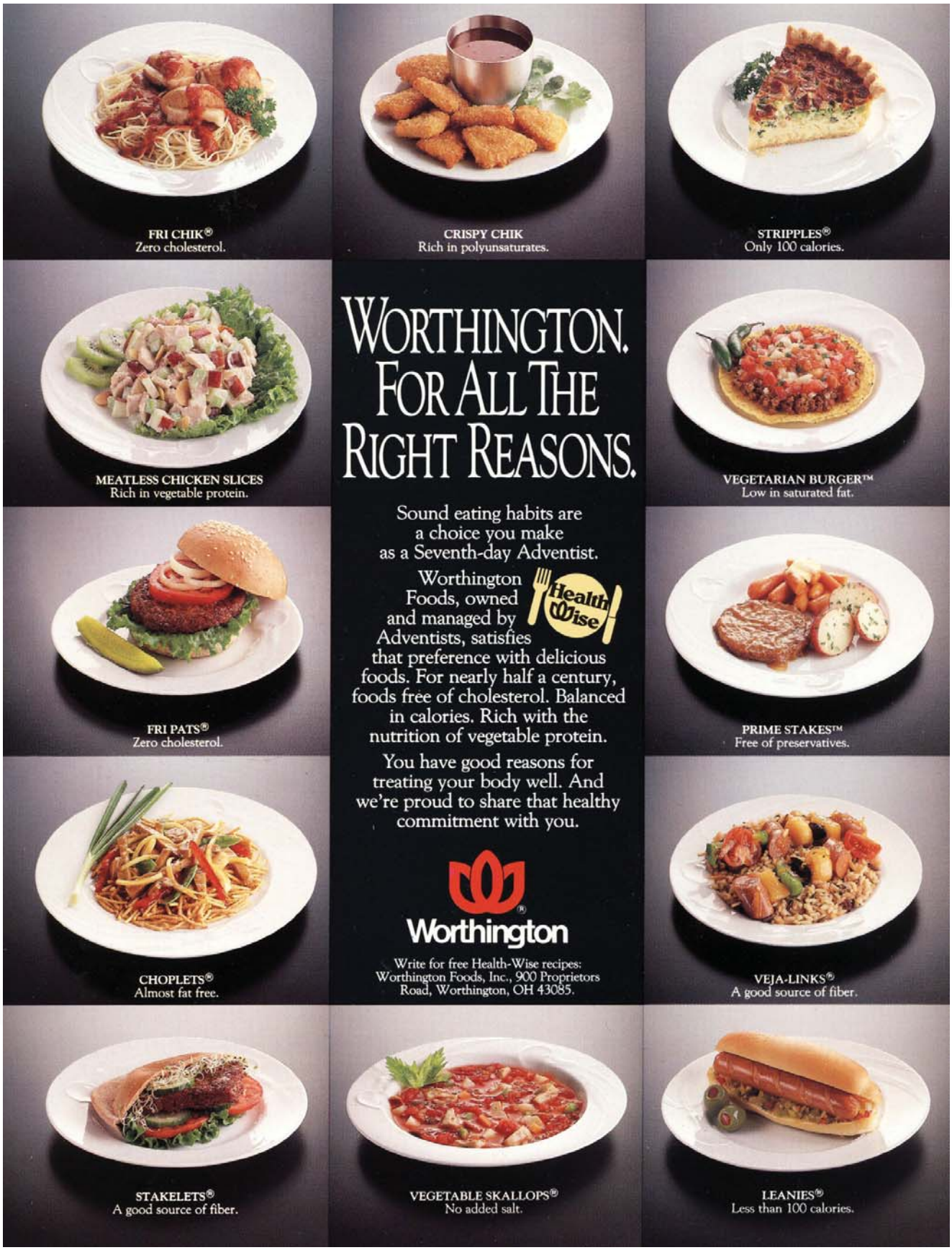

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FROZEN FOODS

SIZZLE BURGER

Pre-cooked frozen patties with an outstanding flavor and texture. They make quick, easy and great tasting burgers.

Code #0/004/0 **Packed: 12/30 oz. (1 lb. 14 oz.)**
Code #0/005/0 **Packed: 6/75 oz. (4 lb. 11 oz.) (Institutional)**
Code #0/007/0 **Packed: 12/10 oz.**

MEATLESS BOLOGNA

Flavor and texture make this a perfect meatless sandwich. Ready-to-serve luncheon also tastes great with a savory gravy served over mashed potatoes.

Code #0/008/0 **Packed: 12/8 oz. (Deli Slices)**
Code #0/012/0 **Packed: 4/64 oz. (4 lb. Roll)**

SAVORY MEATBALLS

Vegetable Protein Savory Meatballs are pre-cooked, ready to heat and serve. This versatile product makes meal planning quick, easy and delicious.

Code #0/016/0 **Packed: 12/10 oz.**
Code #0/019/0 **Packed: 6/80 oz. (5 lb.) (Institutional)**

CHIK - NUGGETS

Tasty chunks of chicken-flavored goodness are great as a hot hors d'oeuvre or an easy-to-fix entree. Try them for school lunches and picnics with tangy barbeque or sweet & sour sauce.

Code #0/022/0 **Packed: 12/12 oz.**
Code #0/025/0 **Packed: 6/4 lbs.**

CHIK - PATTIES

Discover the golden goodness of tasty Chik-Patties. These thick chicken-tasting patties are generously coated with crispy-crunchy breading. Serve Chik-Patties in the sauce of your choice, or serve crisp in bun with lettuce and tomato.

Code #0/024/0 **Packed: 12/10 oz.**
Code #0/029/0 **Packed: 6/75 oz. (4 lb. 11 oz.)**

MEATLESS FRIED CHICKEN

This frozen fried chicken-like entree can be heated in a pan or the oven, and served with a variety of savory sauces. It is also delicious cubed in salads or in sandwiches.

Code #0/023/0 **Packed: 12/8 oz.**
Code #0/026/0 **Packed: 6/80 oz. (5 lb.) (Institutional)**

MEATLESS CHICKEN

These ready-to-eat, all vegetable protein slices are mild and deliciously flavored to your taste. A new idea for chicken salads and soups.

Code #0/031/0 **Packed: 12/8 oz. (Deli Slices)**
Code #0/033/0 **Packed: 4/64 oz. (4 lb. roll)**

MEATLESS ROAST BEEF

Hearty roast beef flavor without the animal fat makes these not just good-tasting, but good for you, too! A healthy alternative that works great in grinders and sandwiches.

Code #0/036/0 **Packed: 12/8 oz. (Deli Slices)**
Code #0/038/0 **Packed: 4/64 oz. (4 lb. roll)**

MEATLESS SALAMI

These spicy, cholesterol-free slices are perfect for any meal. Try them with scrambled eggs or hash browns, in luncheon salads, or in your favorite casserole recipe.

Code #0/041/0 **Packed: 12/8 oz. (Deli Slices)**
Code #0/043/0 **Packed: 4/64 oz. (4 lb. roll)**

MEATLESS TURKEY

A soy protein delicacy with mild turkey flavoring. A must for your Christmas and Thanksgiving holiday recipes.

Code #0/046/0 **Packed: 12/8 oz. (Deli Slices)**
Code #0/048/0 **Packed: 4/64 oz. (4 lb. roll)**

GRIDDLE STEAKS

Rich and hearty in a tasty, tender, meatless steak. It's pre-cooked, so just heat and serve, Great fried or barbecued, too.

Code #0/051/0 **Packed: 12/10 oz.**
Code #0/055/0 **Packed: 6/80 oz. (5 lb.) (Institutional)**

OCEAN FILLETS

Fillets with a mild white fish flavor and texture. They're ideal for main entrees, sandwiches and salads.

Code #0/061/0 **Packed: 12/10 oz.**
Code #0/065/0 **Packed: 6/80 oz. (5 lb.) (Institutional)**

MEATLESS CORN DOGS

Drenched with a delicious corn bread batter, these Big Franks can be served hot with relishes or dips. Kids love 'em.

Code #0/070/0 **Packed: 12/10 oz.**
Code #0/072/0 **Packed: 6/50 oz. (3 lb. 2 oz.)**
Code #0/075/0 **Packed: 1/90 oz. (5 lb. 3 oz.) (Institutional)**

Loma Linda Foods' commitment to quality, health and customer satisfaction began in 1906 and continues as we develop new recipes, modify existing ones, and explore new processes in technology; all in search of excellence.

At Loma Linda Foods our mission goes beyond the marketing of textured vegetable proteins and infant formulas. Instead, we consider ourselves to be in the healthful living business. Equal with this mission is the responsibility to educate the public in healthful and economical living and to provide the health foods and beverages needed for this quality lifestyle. We trust that Loma Linda's extensive product range will continue to be your #1 choice whenever the occasion calls for a delicious meatless adventure.

Tastes Great . . . Naturally!

LOMA LINDA FOODS INC.®

RIVERSIDE, CA 92515, U.S.A.
(714) 687-7800
CALIF. ONLY: (800) 442-4917 / (800) 932-5525

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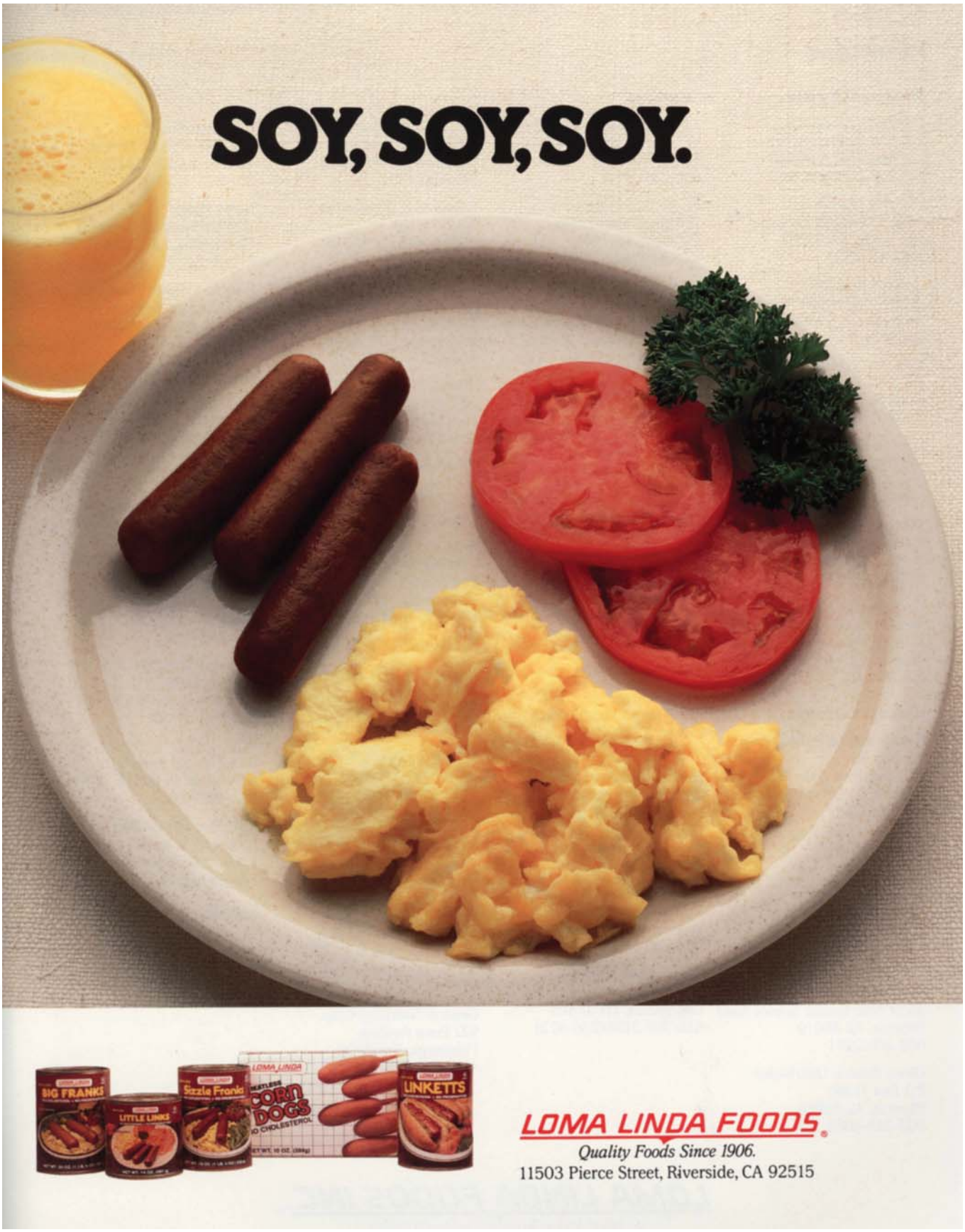

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Shanghai in 1936, and in Mt. Vernon, Ohio, in 1939. Second, Vitasoy was not founded until 1939, and production began in 1940. The 50th anniversary should be celebrated in 1989 or 1990. Third, less than half of the 1.2 million units capacity of the new plant is used for soymilk. Address: P.O. Box 77321, San Francisco, California 94005.

2640. Zobler, Kathleen K. ed. 1987. First International Congress on Vegetarian Nutrition: Abstracts. Loma Linda, California: Loma Linda University Medical Center. 40 p. Held 16-18 March 1987 in Washington, DC. No index. 22 cm. [62 ref]

• ***Summary:*** Contents: Introduction. Continuing education information. Exercise program. Program. Poster sessions. Abstracts–Program participants: Monday 16 abstracts, Tuesday 14, Wednesday 7. Abstracts–Poster session participants: 31 abstracts.

This pioneering congress was a joint effort of eight Seventh-day Adventist universities and health care organizations, with support from three Adventist food companies (Worthington Foods, Loma Linda Foods, and Sanitarium Foods) plus S.E. Rykoff/Sexton. Publication of the abstracts in this small book, potentially very interesting, was extremely poorly done. The type is so small and often weak that it is virtually illegible. No editor or publishing body is listed. What a shame.

Fortunately, however, the papers were published in the Sept. 1988 Supplement of the *American Journal of Clinical Nutrition* 48(3):707-927.

2641. *INTSOY Newsletter* (*Urbana, Illinois*). 1987. INTSOY to expand contacts with Ugandan soyfoods company [Africa Basic Foods]. No. 35. p. 3. April.

• ***Summary:*** In January 1986 INTSOY director Harold E. Kauffman and utilization program leader Alvin I. Nelson met in Washington, DC, with Dr. D. Warren Harrison, founder of ABF. Discussions focused on how the two groups could work together to increase use of soyfoods in Uganda. ABF is receiving strong support from both President Yoweri Museveni and Prime Minister Samson Kiskekka of Uganda. ABF has remained in continuous operation since its founding in 1965 despite several years of political and social turmoil in Uganda. In 1983 it employed about 50 people and used 2-3 tons of soybeans a day. At the invitation of the prime minister, Harrison is spending a year in Uganda to work on expanding the soyfoods operation.

2642. **Product Name:** Sanitarium Health Foods So Good: The Non-Dairy Soy Drink (Soymilk).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, N.S.W. 2076, Australia.
Date of Introduction: 1987 April.
Ingredients: Soya isolate, vegetable oil, maltodextrin, sugar, mineral salts [incl. calcium] (332, 229, 340, 504, 509), vitamins (101, 301), water added.
Wt/Vol., Packaging, Price: 250, 500, or 1,000 ml in Combibloc Aseptic carton.
How Stored: Shelf stable.
Nutrition: Water 86.4%, soya extracts 4.1%, vegetable oil 3.5%, maltodextrine 3.3%, sugar syrup 1.7%, mineral salts and vitamins. Percentage of RDA per 600 ml: Calcium 700 mg/100%, vitamin B-12 1.8 mcg/90%, riboflavin 1.0 mg/65%, iron 3 mg/30%.

New Product–Documentation: Shurtleff & Aoyagi. 1986. Soymilk Industry and Market, Update. This company makes its own brand, which is economically priced. Label (photocopy). 1987, undated. "The non-dairy soy drink. Cholesterol free. Lactose free. Long lasting." Manufacturer's catalog. 1989. "Juices and Drinks: The newest introduction into this drink category is So Good, a soy-based drink which is designed as an alternative to milk. This is particularly popular with those who have a lactose sensitivity and a need to reduce the cholesterol intake. It is made to a Sanitarium-inspired formula from soy isolate (the protein component in the soya bean) and has the distinct advantage of having a calcium level equivalent to that of cow's milk."

The Supermarket Circle. 1988. "So Good was awarded a 'Golden Sial' award or 'Food Oscar' at the AIDA-SIAL '88 International Oscars, judged in Paris on June 10. The Oscars is a bi-annual competition between 16 nations, including Canada, Great Britain, Italy and the USA. Each country presents products in 7 food and beverage categories: Grocery, alcoholic drinks, non-alcoholic drinks, dairy, deep-frozen, meat/poultry and delicatessen.

"The retail trade in each country nominates the representative products. With outstanding sales success since its launch by Sanitarium in 1987, Australia's retailers

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nominated So Good to represent the country in the 'non-alcoholic drinks' category."

Alfa-Laval. 1988, June. Soyfoods: Old traditions with new potentials. p. 9. A color illustration on the front of the package shows a glass of soymilk by a bowl or cereal on a table in front of a window facing a stylized rural landscape with the sun rising behind rolling hills. Green. blue, brown, and white. Subtitle: "The non-dairy soy drink. Cholesterol-free. Lactose-free. Long lasting."

Technique Laitiere & Marketing. 1988. No. 1034. Nov. p. 61. Gives nutritional composition. p. 65 So Good is an Australian soymilk product which won the 1988 SIAL gold medal (SIAL d'Or 88). SIAL is the International Food and Dairy Exhibition in Paris.

Sanco News. 1988. Dec. "Now the world thinks we're as good as gold: The Gold Food Oscar for So Good."

Talk with Eric C. Fehlberg, director International Health Food Assoc. 1990. March 7. So Good has had remarkable success in the past few years. Sanitarium Food Co. was the first to make soymilk in Australia. It caught on rapidly, and soon prompted 4-5 competing brands to be launched, but none of them have sales nearly as large as So Good. The main problem has been the company's inability to produce enough to keep up with demand. It was launched in April 1987. In Oct. 1989 they sold 1,738 long tons (2,240 lb/ton). The equipment used to produce the soymilk is Adventist technology, not that purchased from Alfa-Laval, STS, etc. Originally the product was packed under contract by a nearby dairy company in Combibloc cartons. After a year or so they purchased their own Combibloc packaging machine. Sanitarium Foods has a very strong research lab.

Sanitarium Nutrition Education Service. 1990. April. "So Good." This 4-page leaflet gives a clear explanation of each ingredient used, plus nutritional and other information.

According to competitors, in 1991 Sanitarium's So Good was Australia's leading soymilk product. But the fact that it is made from soy protein isolates rather than whole soybeans is considered a drawback by the natural foods market. Sun Gold is another major soymilk product.

2643. **Product Name:** Better Than Milk? (Powdered Tofu-Soymilk Blend) [Natural, Chocolate, or Carob].
Manufacturer's Name: Sovex Natural Foods, Inc. (Marketer-Distributor).
Manufacturer's Address: 9104 Apison Pike, Box 310, Collegedale, TN 37315. Phone: 800-227-2320.
Date of Introduction: 1987 April.
Ingredients: Natural: Maltodextrin, soy oil, calcium carbonate, dehydrated tofu, sodium caseinate [from cow's milk], sea salt, natural flavor, cyanocobalamin (vitamin B-12).
Wt/Vol., Packaging, Price: 27 or 21 oz can with reusable plastic lid.
How Stored: Shelf stable.
Nutrition: Per 8 fl. oz (liquid): Calories 90, protein 2 gm, carbohydrates 10 gm, fat 5 gm, cholesterol 0 mg, sodium 120 mg, lactose 0 mg.
New Product–Documentation: See next page. Ad in Natural Foods Merchandiser. 1987. June. p. 20. "Better than milk?" Ad in Bestways. 1987. July. p. 9; Sept. p. 12. 8½ by 11 inches. Color. "Tofu naturally. Luscious tofu non-dairy. 3 rich-n-creamy flavors. Rich in calcium. Just add water."

Ad in Natural Foods Merchandiser. 1989. Sept. p. 50. "Better than milk?"

Label sent by Maryann Brkich of Walnut Creek, California. 1992. Oct. 14. 6.75 by 13 inches. Brown, yellow, white, and black. Photo of a glass of milk and a small bottle of milk on a breakfast table next to a bowl of cereal. "Naturally Tofu. Delicious Tofu Non-Dairy. Rich-n-Creamy Natural. Makes 8 quarts. All natural. No cholesterol. Natural B-12. Rich in calcium. Lactose free. Just add water. Scoop inside." The 21 oz can now retails for $8.95. Sovex is now at Box 2178, Collegedale, Tennessee 37315.

2644. Vandemoortele, Philippe. 1987. Editorial. *Soyfoods* (*ESFA*) 1(2):2. April. [Eng]
• ***Summary:*** "Since Alpro Belgium pioneered a new soymilk six years ago, many things have changed. The new soya milk with a nice taste and a high nutritional value of 3.6% protein attracted a lot of consumers. In a few years, the total European market increased from 500,000 litres to the today's estimation of 15 million litres. But also the number of producers grew and companies such as Celnat (France), Sapov (France), Soya Health Food (England), Soyana (Switzerland), DE-VAU-GE (Germany) and recently Cacoja (France) started to produce soya milk. The total capacity of the 4 largest producers amounts to 60 million litres which is 4 times more than the market volume...

"We are on the verge of a boom for soyfoods. Manufacturers will need the technology to make quality soymilk, tofu and other soyfoods... But this will not be enough; marketing is essential to make sure that our products fill a need and please the consumer."

2645. Jacobs, Barbara; Jacobs, Leonard. 1987. Cooking with seitan: Delicious natural foods from whole grains. New York, NY: Japan Publications. 256 p. Foreword by Aveline Kushi. Index. 26 cm. [16 ref]
• ***Summary:*** "Seitan is cooked and flavored gluten that has been extracted from [high-gluten] wheat flour. It is very rich in protein, while being extremely low in fat and calories... The traditional Japanese way of seasoning seitan is to cook it in a broth using kombu sea vegetable, natural soy sauce, and fresh ginger root. This... is the one taken for granted as the 'standard seitan flavor' by commercial seitan makers and most people who are familiar with seitan. Many other mixtures of seasonings can be added to the basic seitan broth. Several earlier books on wheat gluten have been

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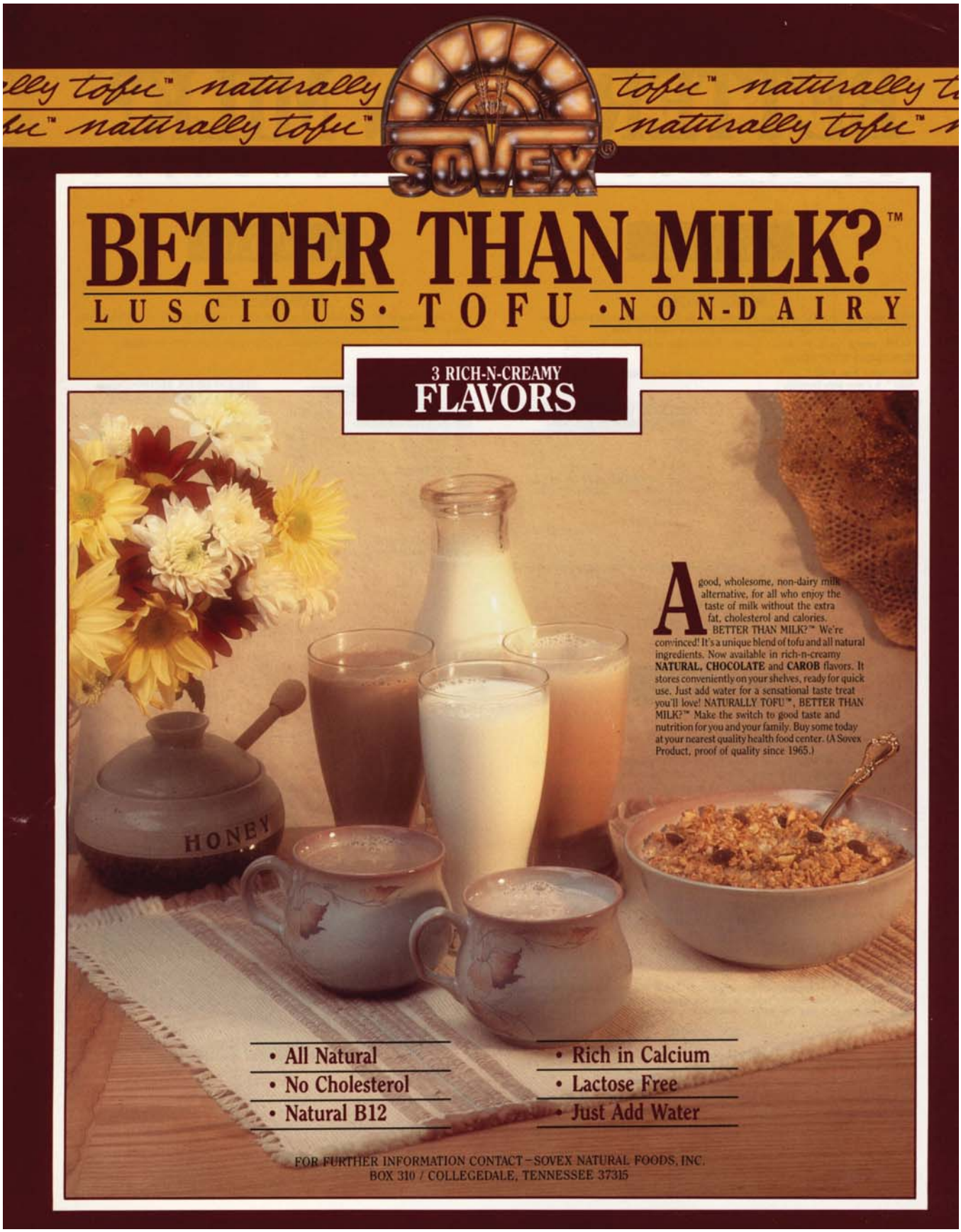

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written, generally by Mormons.

This book offers you the history, nutritional information, a variety of preparation techniques, and hundreds of recipes that will allow you to convert wheat into a delicious and nutritious food. Especially suited for vegetarians who are interested in high-protein substitutes for animal foods.

Contents: Acknowledgments. Introduction: About wheat gluten, gluten, commonly asked questions about seitan. Getting started. Creating seitan from wheat flour (at home in 30-40 minutes). Using the seasonings. Additional methods of cooking. Appetizers. Soups. Main dishes and casseroles. Side dishes. Salads. Sauces, dressings and marinades. Condiments. Sandwiches. Desserts. From the pantry. Sample lunch and dinner menus. Appendix: 1. All about saving and using wheat starch. 2. Storing uncooked seitan. Storing cooked seitan. 4. Commonly encountered problems and some solutions. Nutritional information. Questionnaire for readers. About our ingredients (discusses natural soy sauce, and soymilk). Glossary (includes fu [dried gluten], miso, natural soy sauce or shoyu, soymilk, tamari, tofu). Bibliography.

Recipes containing soyfoods include: Miso soup with fu and wakame (p. 79). Miso-lemon dressing (p. 171). Tangy miso-tahini sauce (p. 180). Tofu spread with variations (p. 181). Seitan-tofu paté (p. 181-82). Tofu "feta cheese" (p. 192-93). Miso-tahini sauce or spread (p. 209).

When Michio and Aveline Kushi started the Seventh Inn Restaurant in Boston in 1971, they introduced seitan, a food that George Ohsawa had popularized in Japan, especially among macrobiotic people. Yumie Kono taught the chefs, one of whom was Lenny Jacobs, how to make seitan (p. 5).

The Introduction (p. 17-18) states: "Seitan is a food with a long history. Although not widely known in the West, it was traditionally eaten in China, Korea, Japan, Russia, the Middle East, and probably many other countries that grew wheat. In America, the Mormons and the Seventh Day Adventists made gluten and used it on a regular basis... The name *seitan* comes to us from the Japanese, who have prepared cooked wheat gluten for hundreds of years... Some natural foods industry insiders think seitan will become the 'tofu of the '80s.'

"Seitan was introduced to the U.S. natural foods industry about sixteen years ago [1970] when a Japanese variety, shrink-wrapped and quite dry and salty, was first imported. There had been several other varieties available from vegetarian groups, primarily the Seventh Day Adventists and the Mormons. Chinese restaurants have also been preparing wheat gluten for many years. The Chinese call it *mien ching*, or *yu mien ching.* Chinese restaurants often refer to it as 'Buddha Food,' claiming that it was developed by Buddhist monks as a meat substitute. There is also a dried wheat gluten available in Oriental food markets called *fu* by the Japanese and *k'ao fu* or *kofu* by the Chinese."

In the USA, about 130,000 pounds of seitan are made each year. The market is growing rapidly. Current U.S. seitan manufacturers are: 1. Upcountry Seitan in Lenox, Massachusetts, the largest known producer in America, which makes about 600 lb/week and distributes it in 6 states. The company, started about 3½ years ago (counting from Jan. 1987, i.e. founded in about mid-1983) by Win Donovan, is now owned and operated by Wendy Rowe and Sandy Chianfoni. They get a yield of 1.33 (i.e. 90 pounds of flour result in 120 pounds of seitan). 2. Rising Tide Natural Market in Long Island, New York. Michael Vitti has been making seitan for 6 years. About 1/3 of his production is bought by another company for use in making sandwiches. 3. Grain Dance in San Francisco, California. Ron Harris has been making seitan for 8 years and is currently selling 250 lb/week in 8 oz. packages. 4. Creative Kitchens in Miami, Florida. Yaron Yemini has been making seitan for 3 years. and has seen a 5-fold increase during this time. He now makes 120 lb/week. His yield is 0.7. 5. The Bridge in Middletown, Massachusetts. The company was founded in March 1981 by Roberto Marrocchesi and Bill Spear. They were making seitan by Oct. 1982. Steve Lepenta now makes 400 lb of cooked seitan each week and claims that sales have doubled in the past two years. 6. Maritime Foods in Portland, Maine. Rosemary Whittaker makes 50 lb/week of seitan. 7. Real Foods of Towson, Maryland. Sharon Warren has been making seitan for 6 years and now makes 150 lb/week.

Reviewed by Linda Elliot in East West. June 1987, p. 94. Note: Talk with Lenny Jacobs. 1990. Sept. 10. There has been little growth in the U.S. seitan industry since the book was published in May 1987. Problems with price and quality. If seitan is frozen, after defrosting it can become spongy and soggy. Address: Massachusetts. Phone: 617-232-1000.

2646. Kissinger, D.G.; Sanchez, A. 1987. The association of dietary factors with the age of menarche. *Nutrition Research* 7:471-79. [29 ref]

• ***Summary:*** In a study of 230 white, non-Hispanic girls from southern California, menarche was found to start 6 months earlier for meat eaters than for vegetarians. And those who use meat analogues had menarche 9 months later than those who did not use meat analogues. "These results are consistent with the hypothesis that diet affects the age of menarche... These data point to a vegetarian lifestyle as an important factor in retarding the onset of menarche among well nourished girls." Address: 1. Center for Health Promotion; 2. School of Health, Dep. of Nutrition, Lomon Linda Univ., Loma Linda, California 92350.

2647. **Product Name:** Solait (Powdered Soy Beverage). Renamed Soylait Soy Beverage by Dec. 1988.
Manufacturer's Name: Miller Farms Food Co., Inc.
Manufacturer's Address: 314 Main St., Cedar Falls, IA 50613. Phone: 319-277-8600.
Date of Introduction: 1987 May.
Ingredients: Soybeans, rice syrup, corn oil, sea salt.

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Wt/Vol., Packaging, Price: 26 oz can makes 6 quarts. Or 60 lb nitrogen flush bag.
How Stored: Shelf stable.
Nutrition: Per 1 oz. powder or 8 oz. liquid: Calories 135, protein 6 gm, carbohydrates 13 gm, fat 7 gm, sodium 145 mg, calcium 50 mg.
New Product–Documentation: See next page. Talk with Harry W. Miller, Jr. 1987. Oct. 21. Label and leaflet (Printed on back of label). 1987. "Solait. Powdered Soy Beverage." Miller Farms Food Co. 1987. Sumptuous Solait Recipes from Miller Farms. Letter from R.W. Fischer. 1987. Oct. 30. "We started selling the product in May. Market response is outstanding." Soya Bluebook. 1987. p. 89. New Product News. 1988. Dec. 9. This powdered soy beverage is now named Soylait. The same ingredients are still used. Product Alert. 1989. Jan. 23. The product is now called Soylait. It comes in a 24 oz can. Ad in Vegetarian Times. 1989. May. p. 20.

Talk with Miller Farms. 1991. Dec. 3. Solait and Creme d'Soy are still on the market.

Leaflet (8.5 x 11 inches, full color) from the Natural Foods Expo at Anaheim, California. 1992. April. "Solait: Powdered Soy Beverage." The company name is now given as Solait International Ltd., P.O. Box 885, Carroll, Iowa 51401. "Solait is made from only four ingredients–Premium grade soybeans, rice syrup, corn oil, and sea salt. No chemicals or additives." Solait is high in fiber. A nutritional analysis is given. The product is sold in 24-oz reusable containers or 60-lb bulk packs.

Leaflet (8 panels). 1992. April. "Cooking with Solait–Helpful hints and delicious recipes."

Soya Bluebook. 1993. Sept. The company name is now given as Devansoy, Inc. located at 202 West 7th St., P.O. Box 885, Carroll, Iowa 51401. Phone: 1-800-747-8605. Elmer Suttler is president. Talk with Bev Tierney of Devansoy. The company changed its name from Solait International Inc. to Devansoy, Inc. in Jan. 1993. It makes only one product–Solait Powdered Soy Beverage–however in mid-1993 it started selling soy flour, tofu powder, and textured soy flour made by other companies.

2648. Peng, Andrew. 1987. Soybean food products. *Ohio Extension Bulletin* No. 741. p. 121-25. May. Beuerlein et al. eds. The Soybean in Ohio. iv + 128 p.
• ***Summary:*** The article focuses on modern soy protein products. Most tables are long outdated. He seems to be largely unaware of the many developments with consumer soyfoods in the USA during the past ten years. Address: Prof., Horticulture, Ohio State Univ.

2649. Probber, Jonathan. 1987. The soybean eaters: Everybody is a suspect. *New York Times.* June 24. p. C1, C6. Living section.
• ***Summary:*** Central Soya has $1,370 million annual sales. L.D. Williams, head of the chemurgy division, recalled the early 1970s. "Positioning textured soy protein as an extender was a mistake which set the industry back. The cost saving image just didn't fly." Dan Reuwee of the American Soybean Assoc. notes: "We haven't done much in this country on promoting soy foods, because the livestock industry is our biggest customer. We don't want to promote meat substitutes."

Worthington Foods Inc. (of Worthington, Ohio) has yearly sales of $34 million. The Morningstar Farms line accounts for 55-60% of total sales, has grown at 15-18% over the past 4 years, and is sold in 80% of U.S. supermarkets. Their market is divided between those age 50 and over having cholesterol concerns and those age 25 to 40 who don't eat meat.

William Shurtleff is director of Soyfoods Center, a "clearinghouse for information on soy products" in Lafayette, California. He believes that tofu will follow the same growth pattern that yogurt did in the USA, building slowly then growing rapidly when larger food companies begin to apply their marketing clout. Tofu is a $75-$100 million/year industry growing at about 15% a year, according to Shurtleff.

2650. **Product Name:** Solait Riché (Powdered Soy-Based Frozen Dessert Mix).
Manufacturer's Name: Miller Farms Food Co., Inc.
Manufacturer's Address: 314 Main St., Cedar Falls, IA 50613. Phone: 319-277-8600.
Date of Introduction: 1987 June.
Ingredients: Premium soybeans, sugar, corn oil, coconut oil, corn syrup, sea salt, microcrystalline cellulose (cellulose gel), cellulose gum, mono- and diglycerides, carrageenan, standardized with dextrose and salt.
Wt/Vol., Packaging, Price: 28 oz (794 gm).
How Stored: Shelf stable.
Nutrition: Per 0.75 oz. powder or 3 oz. frozen dessert: Calories 120, protein 3 gm, carbohydrates 9 gm, fat 8 gm, sodium 65 mg.
New Product–Documentation: See next page. Talk with Harry W. Miller, Jr. 1987. Oct. 21. Leaflet. 1987. "Solait. Powdered Soy Beverage." Product is not yet available. Label. 1987. Oct. 14.5 by 6.5 inches. Purple, green, red, yellow, and blue on white. Illustration of sun and rainbow above clouds. "No cholesterol. No lactose. No animal fat." Talk with Bob Fischer. 1987. Nov. Says product was introduced in June.

2651. Miller Farms Food Co., Inc. 1987. Solait. Powdered Soy Beverage (Leaflet). Cedar Falls, Iowa. 1 p.
• ***Summary:*** "In 1926 the world-renowned 'China Doctor,' Harry W. Miller, developed his first soy-based nutritional drink for China's protein-deficient population. In the 1930s, Dr. Miller and his son, Harry W. Miller, Jr., built their first

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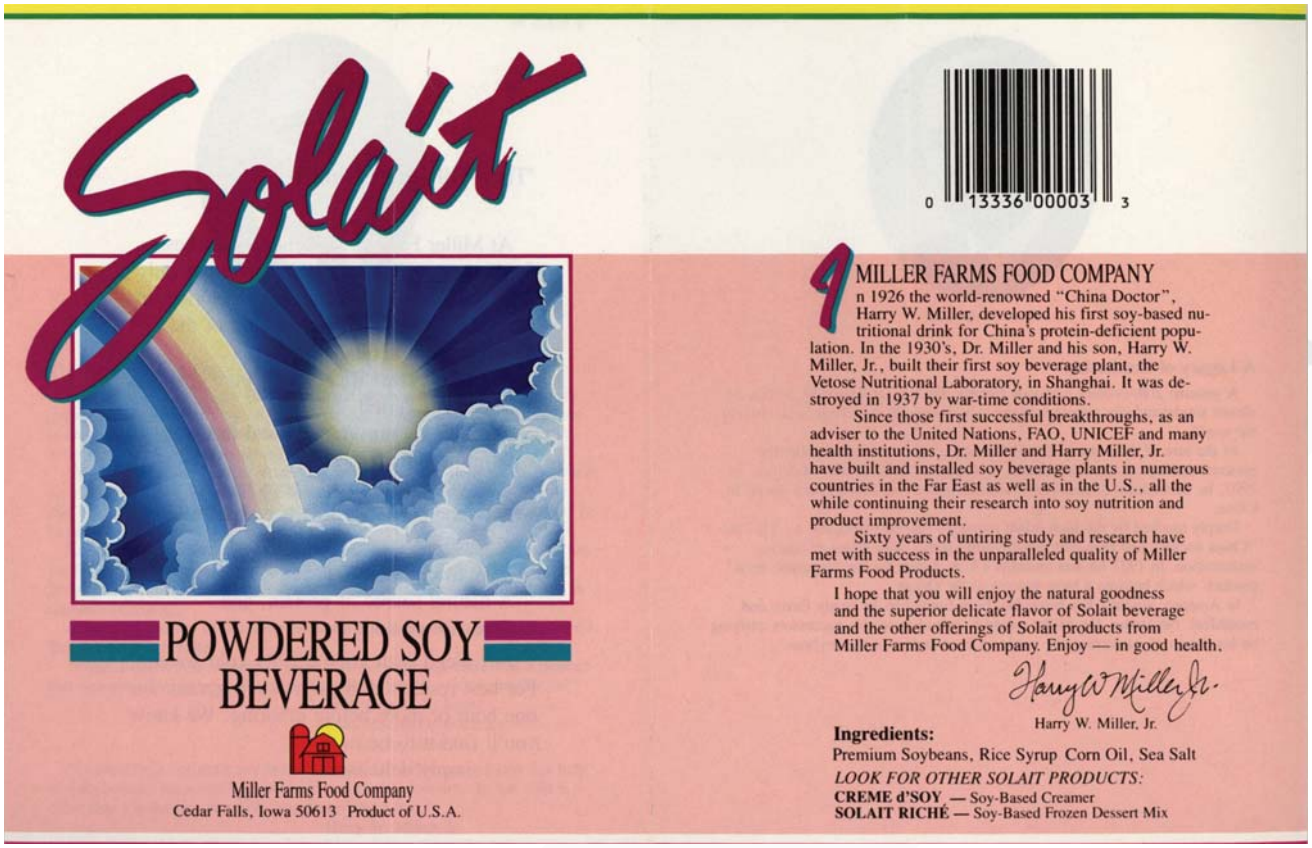

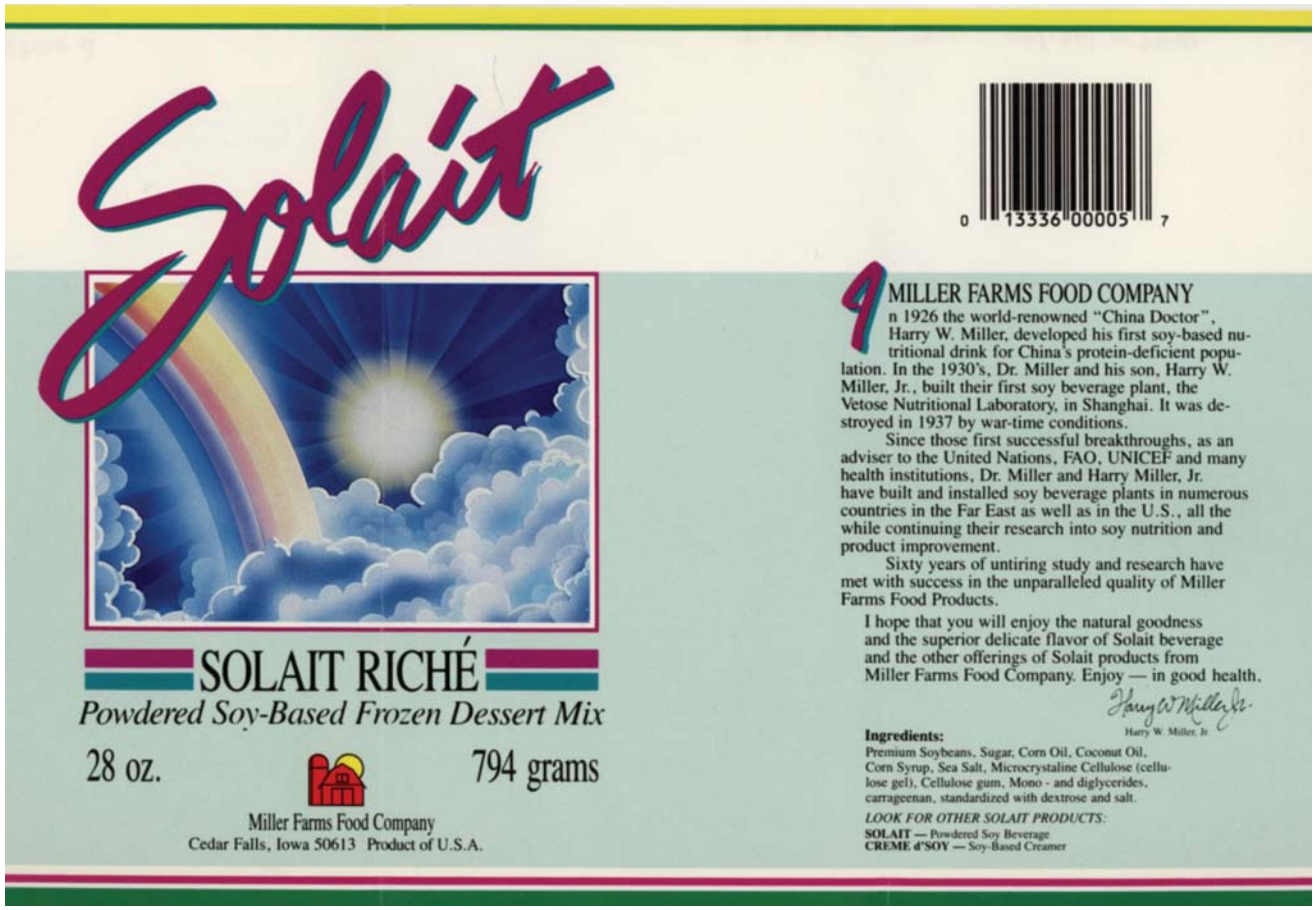

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soy beverage plant, the Vetose Nutritional Laboratory, in Shanghai. It was destroyed in 1937 by war-time conditions." Address: 314 Main St., Cedar Falls, Iowa 50613.

2652. Moll, Lucy. 1987. Guess what? Veg diet lauded by scientists. *Vegetarian Times.* June. p. 6.
• ***Summary:*** "An estimated 500 experts converged on Washington, DC, this spring to ponder an increasingly appreciated subject: vegetarian nutrition.

"A testament to vegetarianism's growing stature and acceptance, the First International Congress on Vegetarian Nutrition [sponsored by Loma Linda Medical Center and several other Seventh-day Adventist affiliated organizations] brought together scientists, medical doctors, and dietitians from as far away as India and Sweden.

"'Vegetarianism has gotten a bad rap for many years,' said Johanna Dwyer, professor of medicine and community health at Tufts University Medical School and director of the Frances Stern Nutrition Center."

"Here are some of the findings: Vegetarians are less likely than meat eaters to be obese, become diabetic, develop kidney stones or gallstones, have high blood pressure, or die from cancer of the breast, colon, prostate or ovary.

"It's a myth that the vegetarian diet stunts the growth of children. On the average, vegetarian children tend to be shorter and lighter than their meat-eating counterparts but certainly are in normal range.

"Children on a strict vegan diet sometimes risk health problems. The vegan diet tends to contain excess bulk and is void of vitamins B-12 and D. As a result, some children do not receive enough calories and may become deficient in these vitamins.

"Vegetarians may absorb zinc, iron and calcium less efficiently than meat eaters. But conflicting data suggest that poor food choices, rather than inherent defects in the diet, may be the cause of less-than-optimal mineral status.

"An overriding conclusion of the congress was that additional research on vegetarian nutrition is sorely needed. The organizers believe new research will be stimulated by the congress and expect about one scientific paper on vegetarian nutrition a month."

2653. Medoff, Marc. 1987. Whole frauds in the news. Have they no shame department: Tofutti and Coca-Cola promotion. *Whole Life.* June/July. p. 49-50.
• ***Summary:*** "Talk about unholy alliances; the new team of Diet Coke and Tofutti has got to be one of the most sickening combinations of junk food we've seen in years. Insulin shock anyone?... the gruesome twosome. Talk about a one way ticket to Sugar Shock City." It is also alleged that Mintz learned how to make soy ice cream from Country Life, a Seventh-day Adventist restaurant in New York.

2654. **Product Name:** [PHAG Soya Drink (Without Sugar, Strawberry, Sweetened)].
Foreign Name: PHAG Soja-Drink (Sans Sucre, Fraise, Avec Sucre).
Manufacturer's Name: PHAG Sàrl (Produits Hygièniques Alimentaires Gland) (Marketer-Distributor). Made in Belgium by Alpro.
Manufacturer's Address: La Ligniere, CH-1196 Gland, Switzerland. Phone: 022/64 11 18.
Date of Introduction: 1987 July.
Ingredients: Without sugar: Water, soybeans, lecithin (as emulsifier).
Wt/Vol., Packaging, Price: 0.5 liter and 1.0 liter Tetra Brik Aseptic cartons.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 100 gm.: Protein 3.6 gm, fat 2.8 gm, carbohydrate 1.7 gm, calories (kcal) 46 (196 kJoules).
New Product–Documentation: Letter from Remy Mayer of PHAG. 1990. Oct. 2. The 2 sugarless products were introduced in July 1987 in 0.5 liter and 1.0 liter cartons. The strawberry soymilk was introduced in Sept. 1987 in a 0.5 liter carton. It is no longer on the market. The sweetened soymilk was introduced in Dec. 1987 in a 0.5 liter carton. His company distributes the product, which is made by their sister company DE-VAU-GE in Lueneburg, Germany.

Labels sent by Mayer. 1991. Jan. 24. Unsweetened 0.5 liter and 1 liter Tetra Brik cartons. Red and orange on white. "Pure and made from plants (Purement végétal–Rein pflanzlich). Contains magnesium. Rich in vitamin E. Linoleic acid 51% (of lipids), linolenic acid 7%." All text is in French and German. These labels are similar in design to the DE-VAU-GE labels.

Leaflet (6 by 8.25 inches, color) sent by Mayer. 1991. Jan. 24. "The vegetarian alternative" (l'alternative végétale; die pflanzliche Alternative). PHAG soya-drink. The front shows 3 milk shake-like glasses with fresh fruits and yogurt. The back shows 7 of the company's soy drinks and desserts.

Pamphlet (6 by 8.25 inches, green and red on white, 4 pages) sent by Mayer. 1991. Jan. 24. "PHAG Soja Drink." 2 pages are in French and 2 in German. Describes the product by answering questions: Who uses it? Is it pure and natural? Is it a fresh product? Can it be used in cooking? Why is it packaged like it is? The ingredients for the sweetened (incl. 3% non-refined cane sugar) product are listed, then the nutritional composition.

2655. **Product Name:** Natural Touch Mexican Entrees: Vegetarian "Beef" & Cheese Burritos, Bean & Cheese Burritos, Cheese Enchiladas.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1987 July.
Ingredients: Vegetarian "Beef" & Cheese Burritos: Vegetable protein (wheat gluten, soy protein concentrate),

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soybeans and/or corn oil, egg white solids, calcium caseinate (milk protein), soy isolate, natural flavors (from vegetable sources), carob, onion, sea salt, garlic, spice, mild cheddar cheese, white colby cheese, flour tortillas (flour, water, vegetable shortening, sea salt, baking powder). Includes Hot Green Chili Sauce and Mild Red Chili Sauce.
Wt/Vol., Packaging, Price: 15 oz.
How Stored: Frozen.
New Product–Documentation: See next page. 19832a" Ad in *Vegetarian Times.* 1987. Aug. Inside front cover. Full-page color. "Olé! Finally true south of the border flavor in all-natural entrees! Try new Mexican Entrees from Natural Touch–four savory combinations made with real cheeses, whole pinto beans and vegetable protein. They're meat-free, but sizzling with more natural flavor than you can shake a sombrero at. You'll find them in your store's frozen-food section." Across the bottom is a 25¢ coupon on any Natural Touch Mexican Entree.

Leaflet. 1987. New Mexican Entrees. Lists ingredients.

2656. **Product Name:** Natural Touch Mexican Entrees: Bean, Vegetarian "Beef" & Cheese Burritos.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1987 July.
Ingredients: Beans (water, pinto beans, butter, onion, sea salt), vegetable protein (wheat gluten, soy protein concentrate), soybean and/or corn oil, egg white solids, calcium caseinate (milk protein), soy isolate, natural flavors (from vegetable sources), carob, onion, sea salt, garlic, spice, mild cheddar cheese, white colby cheese, corn flour tortillas (flour, water, vegetable shortening, sea salt, baking powder). Includes Hot Green Chile Sauce and Mild Red Chile Sauce.
Wt/Vol., Packaging, Price: 19.5 oz.
How Stored: Frozen.
New Product–Documentation: Ad in Vegetarian Times. 1987. Aug. Inside front cover. Full-page color. "Ole. Finally true south of the border flavor in all-natural entrees." Leaflet. 1987. New Mexican Entrees. Lists ingredients.

2657. Blix, Glen. 1987. Re: Shutting down the soymilk plant in Mt. Vernon, Ohio (Interview). Conducted by William Shurtleff of Soyfoods Center, Aug. 18. 1 p. transcript.
• ***Summary:*** In mid-July 1987 the old brick soymilk plant in Mount Vernon, Ohio, which had been built by Dr. Harry Miller with his own hands, was finally shut down. It has not yet been sold. Earlier in the year the soymilk that had been made in Mt. Vernon started to be made at the Loma Linda Foods plant in Riverside, California. Address: Loma Linda Foods, 11503 Pierce St., Riverside, California 92515.

2658. Kavanagh, John. 1987. ANF [Australian Natural Foods] hopes for a soy cash-cow. *Business Review Weekly* (*Sydney, Australia*). Aug. 21.
• ***Summary:*** This publicly owned biotechnology company was launched two years ago. "Now it appears to be turning back on its high tech potential to enter the cut-throat beverage market... This week ANF launches Excel, Australia's first fresh soymilk product. ANF will produce 100,000 liters/week at its Sydney factory during the initial phase and hopes to take production up to 500,000 liters a week." United Dairies will handle distribution. David Glasheen is working on a number of new soy products including tofu, yogurt, and custard. Most of the soymilk products now available are imported. Sanitarium's So Good, aimed at the mass market, is doing well.

2659. Bowles, Willa Vae. 1987. The soy revolution! *Total Health.* Aug. p. 24-29. See followup in Oct. issue, p. 55. [1 ref]
• ***Summary:*** Soybean exports during the last fiscal year amounted to $11,000 million. They help keep the U.S. trade deficit, almost $170,000 million in 1986, from rising even higher. Tofu mixed 50/50 with any nut butter makes a fluffy spread for added protein and reduced fat and calories.

2660. Euler, Gary L.; Abbey, D.E.; Magie, A.R.; Hodgkin, G.E. 1987. Chronic obstructive pulmonary disease symptom effects of long-term cumulative exposure to ambient levels of total suspended particulates and sulfur dioxide in California Seventh-Day Adventist residents. *Archives of Environmental Health* 42(4):213-22. July/Aug. [89 ref]
Address: 1. School of Allied Health Professions, Loma Linda Univ., Loma Linda, California.

2661. Kauffman, H.E. 1987. Trip report: Zimbabwe, Swaziland, Uganda, Zambia, and Nigeria (July 5–24). INTSOY, University of Illinois at Urbana-Champaign. 17 p. Aug. Unpublished manuscript.
• ***Summary:*** An extremely valuable look at current developments with soybeans and soyfoods in each of these 5 countries, where interest is strong and there are many new activities. In Zimbabwe a Southern Africa Soybean Workshop was held in March 1986. Proceedings should be ready soon. In Zambia a Soybean Processing Workshop will be held on 12-16 Oct. 1987 and a soyfoods recipe book has just been published. In Uganda Africa Basic Foods is thriving. In Nigeria a soybean utilization program may be started. There is extensive activity with low-cost extrusion cookers.

Concerning Swaziland: The economy is tied very closely with that of South Africa which surrounds it on three sides. Maize (corn) is the dominant crop and food of the country. John Pali is a soybean agronomist with the Government of Swaziland. "Interest in soybeans in Swaziland began after the return of two participants in the 1982 INTSOY utilization short course. A survey at that time

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showed that 30 percent of the children under 5 years of age in the country were stunted in growth. They began promoting the use of soyfoods by the home economics section of the Ministry of Agriculture. Eventually the cropping systems program of USAID began working with the home economics section to promote soybeans in the rural areas. In 1986, Dale Allen, a commercial farmer, began growing soybeans. He is now investing in an INSTA PRO 600 extruder to become the first commercial processor of soybeans. There is a significant interest in soy as a food in Swaziland, and a growing poultry industry will require increased protein meal...

"Dale Allen had 20 acres of soybeans this season... Dale has ordered a used INSTA PRO 600 through INSTA PRO in England." Address: Director, INTSOY, Univ. of Illinois at Urbana-Champaign.

2662. Kauffman, Harold. 1987. Recent developments at INTSOY (Interview). *SoyaScan Notes.* Sept. 14. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** In July Dr. Kauffman visited 5 African countries. He will send Soyfoods Center his trip report. There is lots of activity with and interest in soyfoods, including extrusion cooking. INTSOY will hold a workshop on soyfoods in Zambia this October. They are discussing with USAID the establishment of a Soybean Utilization Network for Africa. Karl Weingartner's future at IITA is uncertain but he may get funding from AID. IITA's director would like to see the soy project there continue. Africa Basic Foods' sales have increased 500% this last year, including sales into Kenya. Dr. Harrison is back in Washington, DC. Rob Wynstra started as editor of the INTSOY Newsletter on 21 Feb. 1986. Address: Director, INTSOY, Univ. of Illinois: 113 Mumford Hall, 1301 W. Gregory Dr., Urbana, IL 61801. Phone: 217-333-6422.

2663. Karas, Thomas. 1987. Tofu in Germany, Soyastern, and Heuschen (Interview). *SoyaScan Notes.* Sept. 21. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Soyastern started making tofu in about December 1983, and is now the largest tofu manufacturer in West Germany. They now make 4,000 kg/week and sell it for DM 5/kg. Their other tofu products include Tofu & Herbs, Smoked Tofu, Paprika Spiced Tofu, Tofu Burgers. A Tofu Mayonnaise will be launched soon. Company is growing at 40% a year. Second largest in Germany is Yamato Tofuhaus GmbH. Heuschen in the Netherlands in the largest in Europe. They use Sermi, a new coagulant, which may be lactic acid, for their tofu is sour but inexpensive, DM2/kg. All other Dutch tofu companies except Morgenstond have quit; they can't compete with Heuschen's prices. DE-VAU-GE now makes their own soymilk. They used to buy from Alpro. But they buy tofu from Heuschen. Address: Soyastern Naturkost GmbH, Osterather Str. 26, 5000 Cologne/Koeln 60, West Germany.

2664. Ascrizzi, Lynn. 1987. The little soybean miracle [at the Kersey Children's Home in Nigeria]. *55-Plus* (*Waterville, Maine*). Sept. 30. p. 5.
• ***Summary:*** For several years the staff of the International Institute of Tropical Agriculture has worked with the Kersey Home in Ogbomosho (northeast of Ibadan) in western Nigeria, teaching women how to plant, grow, and prepare soybeans in many practical ways. Children who come to the Kersey clinic suffer from kwashiorkor and marasmus, due to protein and calorie deficiencies. They are started on soymilk and within 12-21 days show remarkable improvement. Mothers and guardians attend weekly classes on the use of soybeans in making soups, soymilk, and other dishes. According to an article in IITA research briefs, "...mothers learn to add soy flour or paste to boiling water before adding yam flour... When the women leave the clinic and return to their villages, they continue with the soy program and also teach it to other women in the villages." IITA was started by the Ford Foundation, The Rockefeller Foundation, and the Kellogg Foundation. In recent years it has been taken over by a New York organization called the International Institute of Education.

2665. Miller, Harry, Jr. 1987. Early work with soyfoods in China. Current work with Miller Farms Food Co. and Solait (Interview). Conducted by William Shurtleff of Soyfoods Center, Oct. 15. 2 p. transcript. [1 ref]
• ***Summary:*** He is now writing a book on his lifelong work with soyfoods around the world. Note: Unfortunately (as of Aug. 2013), that book was never published and apparently even the location of the manuscript is unknown.

"The Shanghai company was named Vetose Nutritional Laboratories. Its main products were soymilk, called 'Vetose Soya Milk.' On the bottle the name was printed only on the tops. Glass blowers blew the milk bottles in Shanghai. The tops were a wide mouth Crown closure that went on a milk bottle. The only flavor we had was the 'Acidophilus Vetose.'

"The soymilk ice cream was only made for the staff and patients at our institutions, the Shanghai Sanitarium and Hospital, and the Shanghai Sanitarium Clinic down town. It wasn't for sale, and wasn't advertised; we just called it 'Soy Ice Cream.' We just had it for parties etc. at the hospital. The Henningsen Produce Co. in Shanghai had a big ice cream plant; they used to make it for us at that time. Now they are in White Plains, New York (Phone 914-694-1000). They have an R&D plant in Omaha, Nebraska. Their biggest business was frozen egg whites and dried eggs. Now they are affiliated with a Chinese company in Shanghai.

"At first we made some meat analogs for our missionaries all over China. We went down to the Buddhist restaurant (I spent an awful lot of time down there) and we made gluten steaks that also contained tofu. Product name was 'Min-Jing.' My mother came back to the US for a

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vacation. While she was at the Washington Sanitarium and Hospital, the business manager asked her if she could help them make a new meat analog. They served it at the hospital. They had a little food processing plant there, and they started to make them there and can them. She showed them how to make the tofu. This happened in 1934-35. Ed Meisler or Misler (pron. MAI-zler) came out and specialized in making meat analogs. We also had a pure gluten analog with no tofu. By adding tofu we got a better grain and elasticity and it was a better vehicle for certain flavors.

"Also we took yuba, rolled it, added flavoring (duck, chicken, 2 or 3 flavors), cooked it in HVP. We were not selling these as products. They were mostly for Sanitarium use. Diet is the biggest problem that any hospital had in East Asia. My father brought out two top chefs to develop a dietary for our hospitals. We finally had 16 hospitals in China.

"We also made Nut-Mete (Dark or Light) from peanuts and starch, adopted from Battle Creek. That's about it for Shanghai meat analogs.

"I used to know Jethro Kloss. I used to play with his boys. I am not sure whether or not he ever had a company making commercial soy products. But I think in Pennsylvania some place he did have. Not on a big scale. Maybe kitchen type. I think his products were not commercial. I know he did not have a food processing plant in Takoma. He had a couple of kids in Washington Missionary College.

"I don't like the name Willis. The kids at school used to pronounce it like 'Will Ass.' Now everybody calls me 'Harry Junior.' My son is Harry III." Willis always calls his father Dr. Miller. I promise to do it this way.

"I'm working with a woman writer. We're going to bring out a book like China Doctor. I've started to work on it. Dad and the older folks would go to restaurants, but the chefs were guarded and would not reveal their recipes. The next day I'd go down, a kid of just l2 years old. They called me *Hsiao Mi Lai* meaning 'small rice.' My father's name in Chinese meant 'Rice.'" Willis is dictating it. He has now got stuff down on paper. Ivan is doing the work. "It will probably be out early summer next year. Its mainly about my work with soy."

"You see what happened, Bill. Most of Dad's time was spent with his medical work. But he was so interested in this that when I finished my pre-medical work he said, `Son, I think you better stay on foods.' That's what I followed. I was at SDA colleges: EMC = Andrews Univ. for l year then Washington Missionary College for 1 year then La Sierra College. I finished at Atlantic Union College. All undergraduate. Did some mechanical drawing and engineering too. Dad would tell me what he wanted. I worked out the formulas, made the machinery to do it, and his work was primarily gathering information in the field. I followed up and did the detailed work.

"I have a 4-foot long box of papers of our correspondence, on all these little plants he put in. He would ask me to design it. I would, and send him the designs.

"I'm now living in Cedar Falls." Note: In an apartment? Where is the 4-foot file?

"We've had a marvelous reception for Solait. It is powdered only. Just the natural flavor. We demoed it to Worthington Foods and Loma Linda Foods. Sold lots at Adventist Camp Meetings. We're working on an ice cream dry mix, but it's not perfect yet. We make Solait from soybean, corn oil, rice syrup, and a touch of sea salt. No stabilizers or artificial flavors.

Willis will send Soyfoods Center Solait and a label. "Its been on the market now for about 4 months. It's a Miller Farm Foods product."

Follow-up: Call Bob Fisher. Encourage the book. Please send a label. What was the introduction date of Solait. Ask him: Where is the 4 foot file of papers? Address: c/o Miller Farms Food Co., Cedar Falls, Iowa.

2666. Lindner, Anders. 1987. The world soymilk market and Soya Technology Systems (STS) (Interview). Conducted by William Shurtleff of Soyfoods Center, Oct. 21. 7 p. transcript.

• ***Summary:*** This far-ranging and very interesting interview discusses new soymilk developments in India with Noble House Great Shake, Godrej, and Amrit, and in Germany with DE-VAU-GE's big plant. Ultrafiltration offers an innovative new way to automate tofu production, already being tested by Island Spring. Major competitors for soymilk equipment (especially Alfa-Laval) are discussed, and details on the four plants that STS has sold in Germany, India, France and USA (Island Spring). A step by step description of the STS soymilk process is given. STS and Danish Turnkey Dairies were recently purchased by APV Baker, a big British baking equipment company.

Concerning the four plants that STS has sold: "Our biggest and most successful plant was sold to DE-VAU-GE, a Seventh-day Adventist food company in Lueneburg (near Hamburg), Germany. They started production in August 1985 and make Granose and GranoVita brands soymilk, sold mainly in the UK and West Germany, but also in Scandinavia and France. The plant is running at full capacity, which is 3,000 liters per hour of finished soymilk (3.5% protein), or 50,000 liters a day. They currently only make two products. Labels for the UK market read Granose Soya Milk (4 flavors) and Granose Soya Dessert (3 flavors of custard puddings gelled with natural carrageenan, a seaweed extract). Both products are packed in half liter or liter aseptic Tetra Brik cartons. The plant is doing very well, selling all it can make. This is the only one of the four that has started operation.

"We have also sold a plant to Island Spring (Vashon, Washington), which may be the next to start production. The

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capacity is also 3,000 liters/hour of soymilk base.

"Amrit in India should be in production by mid-1988. Their plant has the same basic capacity as the plant in Germany, but since their soymilk will contain only 2.25% protein, the actual output will be 6,000 liters per hour, which is larger than Germany. They will make both beverages and foods, mainly a paneer type cheese. The beverages will contain Indian flavorings.

"Our fourth plant is in France, but I am not allowed to divulge the name of the company until the product is on the market. They plan to make only liquid soymilk.

"Alfa-Laval installed their first European plant (a small one) in France this year, billing it as the "soymilk development center of Europe, the first plant on the continent" as if our large DE-VAU-GE plant did not exist."

Note: By 1987 STS had still sold only four soymilk plants. Address: STS, Singapore.

2667. Lindner, Anders. 1987. The world soymilk market and Soya Technology Systems (STS) (Interview). Conducted by William Shurtleff of Soyfoods Center, Oct. 21. 7 p. transcript.

• ***Summary:*** "On 21 Oct. l987 Anders Lindner, on a trip of the USA, visited the Soyfoods Center (SC). The following interview was conducted by William Shurtleff.

"SC: STS started five years ago, and in that time you have traveled the world, visiting every potential customer, and sold four soymilk plants. What major changes or trends have you seen in the world soymilk market during that time?

"STS: You must look at one region at a time. In the United States there is definitely an increased interest in and awareness of soymilk. Soyfoods are relatively well known. In Europe there has been a big increase in the number of enquiries about soymilk from all countries. The number of larger companies that have contacted us has also increased.

"Africa is still a dark continent as far as soymilk goes, with the possible exception of Nigeria, where we have a number of quotations pending, awaiting approval for foreign currency. This could take time.

"Looking at Asia, in India there was almost a frenzy of interest several years ago and we still get enquiries every week. The government gave permission to build many new soybean crushing plants. Soybean production is now over a million tons, and it is still not enough. So the price of soybeans is rising, which raises soymilk prices. But I'm not as optimistic about the future of soymilk in India today as I was 6 months ago. India's first major soymilk plant, established by the Noble Soya House group in Bhopal, has not been as successful as everyone had hoped it would be. Two of India's best known companies, the Great Eastern Shipping Company (also called the Bhiwandiwalla Group) and Godrej, backed the new company, which greatly bolstered public confidence in the project. Each owned 24% of the private limited company and the rest was publicly owned. Great Eastern provided financing and put a number of their very best people in the top management positions. Godrej, which is *the* marketing company in India par excellence, provided distribution and marketing. They specialize in soaps. Alfa-Laval supplied the plant and Kibun sold their technology know how. Production began in January 1987 and it had all the signs of being a very, very good project. Their soymilk, named Noble House Great Shake, comes in four flavors (chocolate, strawberry, mango, and American ice cream flavor, basically a vanilla) in 200 ml Tetra Brik cartons. I have heard it said that the products were not well formulated, the timing was poor, the prices were too high, and the products were marketed as a clearly Western-style of foreign product. The project got lots of big media publicity, but much of it was not favorable, we are sorry to say. Today the plant runs only about 2 hours a day.

"We have sold a plant to Amrit Soya and Protein Foods Ltd., owned by the Amrit Company, an old company. They are in Ghaziabad, Uttar Pradesh, on the outskirts of New Delhi and are expected to start production in mid-l988. This will be India's largest soymilk plant with a capacity of 6,000 liters/hour.

"Back to Asia, when we established STS we located ourselves in Southeast Asia, thinking that with the large consumption of soybean drinks there it would be quite simple to sell plants to make soybean milk as well. But that has not been the case. I find the food processing companies there extremely conservative. Our strategy now is to show the companies in East Asia that our concept works in the USA and Europe.

"China has been a disappointment. They seemed to be more interested in soymilk plants a few years ago.

"So generally speaking, the climate has gotten better, especially in Europe and the United States.

"SC: Has your strategy or basic approach for selling STS soymilk plants changed during this period?

"STS: Yes, it is changing now. We are expanding our product range by offering processes for other soymilk-based foods. Formerly we thought of ourselves as selling primarily liquid soymilk. Now we are offering process lines for tofu, ice cream, dressings, dips, spreads and other dairy analogs, plus what we call 'semi-products.' These are non-consumer, industrial food type products such as concentrated soymilk or curds for use as ingredients by food processors. We are investing in R&D on these. I think we will find new uses for our soymilk base, including new ways of making traditional products, dairy analogs, powdered products, and truly new products.

"SC: Have you made any major technological developments?

"STS: Yes. we are now offering an ultrafiltration system as part of our soymilk system. This is an important technological innovation. It allows you to concentrate soymilk by removing water without adding

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heat (thus preserving the good flavor of the product) or to remove certain components from the soymilk, such as oligosaccharides or perhaps trypsin inhibitors or lipoxygenase enzymes, using membranes. More important, it can help in automating tofu production. The soymilk base goes into the ultrafiltration plant, where it is concentrated. Coagulant is injected into the line and mixed. Rectangular cakes of tofu are chopped off as they come out the exit end. Luke Lukoskie at Island Spring has been a pioneer in developing these processes using a pilot plant, with an ultrafiltration unit, that we loaned him. This technology seems to have a very promising future for processing soymilk in the West, and for making soya panir (fresh curds) in India. There is not enough cow's milk in India to go around, and most of it is sold in the cities. I think soya panir will undersell dairy panir in India.

"SC: Which company do you feel is your strongest competitor?

"STS: Our main competitor everywhere is Alfa-Laval. After that, but much less, some of the Japanese companies such as Marusan-Seikensha and Mitsubishi. Given that we had just installed the largest soymilk plant in the Western world for De-Vau-Ge in Germany, I was surprised to note that Eden Foods in America chose Marusan-Seikensha without ever contacting us at all. Marusan seems to have only one English speaking person in the entire company, Mr. Tominaga. Mitsubishi competed with us selling systems in India and Nepal. Takai never seems to be in competition with us. Vandemoortele is no longer supplying systems, though the huge plant they built in Ambatolampy, Madagascar (35 million liters/year capacity) is still in operation. The company, Lalasoa SA (Societe Anonym) is run by a woman named Regina.

"SC: Could you tell us a little about the four plants that you have sold?

"STS: Our biggest and most successful plant was sold to De-Vau-Ge, a Seventh-day Adventist food company in Lueneburg (near Hamburg), Germany. They started production in August 1985 and make Granose and Granovita brands soymilk, sold mainly in the UK and West Germany, but also in Scandinavia and France. The plant is running at full capacity, which is 3,000 liters per hour of soymilk base (4.7% protein). This is 4,000 liters per hour of finished soymilk (3.5% protein), or 50,000 liters a day. They currently only make two products. Labels for the UK market read Granose Soya Milk (4 flavors) and Granose Soya Dessert (3 flavors of custard puddings gelled with natural carrageenan, a seaweed extract). Both products are packed in half liter or liter aseptic Tetra Brik cartons. The plant is doing very well, selling all it can make. This is the only one of the four that has started operation. we have also sold a plant to Island Spring (Vashon, WA), which may be the next to start production. The capacity is also 3,000 liters/hour of soymilk base. Amrit in India should be in production by mid-1988. Their plant has the same basic capacity as the plant in Germany, but since their soymilk will contain only 2.25% protein, the actual output will be 6,000 liters per hour which is larger than Germany. They will make both beverages and foods, mainly a panir type cheese. The beverages will contain Indian flavorings." (Continued). Address: STS, Singapore.

2668. Lindner, Anders. 1987. The world soymilk market and Soya Technology Systems (STS) (Interview). Conducted by William Shurtleff of Soyfoods Center, Oct. 21. 7 p. transcript.

• ***Summary:*** Continued: Our fourth plant is in France, but I am not allowed to divulge the name of the company until the product is on the market. They plan to make only liquid soymilk.

"Alfa-Laval installed their first European plant (a small one) in France this year, billing it as the "soymilk development center of Europe, the first plant on the continent" as if our large De-Vau-Ge plant did not exist.

"SC: Do you see any innovative or low-cost packaging for soymilk on the horizon.

"STS: All of our plants use or will use aseptic Tetra Brik cartons. The Indian plant has also purchased a Prepac aseptic plastic bag machine, like that used to package Sipso soymilk, but aseptic. Thus it needs no refrigeration. (Prepac is a French firm; Sipso was India's first commercial soymilk, made by Pantnagar Soymilk Products (P) Ltd.). The big advantage of aseptic bags is that they cost about half as much as Tetra Brik cartons. Disadvantages are consumer handling, transportation, outer wrapping cost, leakage problems, and the shelf life is not as long (which is not really a problem).

"SC: What basic soymilk systems do you sell and how much does each cost? With and without building. With and without packaging.

"STS: Our basic plant is 3,000 liters/hour of soymilk base (4.7% protein content). There are many variables that each customer can choose to have or not have, which affect the price. On average this plant costs about $1.5 million (US) including the building and silos but without packaging machines. Three aseptic Tetra Brik machines to package this dairylike soymilk in 250 ml cartons will add another $1.5 million to the cost, for a total of roughly $3 million. The most expensive components are the aseptic packaging machines, the UHT plant, and the decanter/centrifuge.

"SC: Does STS have any plans to get into smaller, less expensive systems?

"STS: Not at the moment. No.

"SC: In the USA soymilk is 3.4 to 5 times as expensive as cow's milk per unit volume. How can people in Third World countries afford this?

"STS: Cow's milk is relatively much less expensive in the USA than in most other countries, and especially Third World and Asian countries. In many countries, cow's milk is

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simply not widely available. In Nigeria several dairy plants are now being rebuilt for making soymilk. In India, packaged soymilk and cow's milk sell for about the same price. The soymilk is less expensive to produce but the packaging raises the cost a lot. Thus there is a big interest in selling soymilk unpackaged (as from a kiosk cooler dispenser) or packaged in bulk, as in the aseptic 1-20 gallon bag-in-the box, for institutions. A school could order one or two 20-gallon packs a day at very low cost. The equipment is made in California (by Scholle) and Australia. For developed countries, aseptic packaging looks like the wave of the future.

"SC: What is the biggest problem in selling soymilk to Third World countries, acceptability or lack of capital?

"STS: The latter. For example, in Sri Lanka we did acceptability tests among 5,000 primary school children and 95% either liked it or liked it very much. In addition to lack of government funds to build the plant, there was in-fighting among several government departments as to which would be in charge of the project. The government urged us to find a private party to build the plant, and they could sell the soymilk to the government. But that is a slow process.

"SC: Could you outline the main steps in the STS soymilk process?

"STS: Let me show you our color slide show of the De-Vau-Ge plant. This process is a continuous one with computerized monitors at all key points. Soybeans from the silos are screen, cleaned, steamed, dried, cooled, and dehulled. The hulls are removed by aspiration, and the cotyledons are destoned. In the continuous-process enzyme inactivation unit, the cotyledons are blanched for several minutes at atmospheric pressure in boiling water containing a little sodium bicarbonate. The blanch water is drained off and beans are then ground with hot water and a fresh dose of sodium bicarbonate in two sequential colloid mills (made by the Swiss firm Fryma Maschinen AG). A decanter / centrifuge (made by Siebtechnik GmbH) is used to separate the soymilk base (4.7% protein) from the okara fiber. The base is then run though the first deodorizer, which strips away volatile off-flavors using a vacuum, then thru a plate heater to inactivate trypsin inhibitor, and finally into batch formulation tanks. Premixed flavors and/or oil and nutrients are added, and the mixture is run through an homogenizer into storage tanks. Then comes the UHT (Ultra High Temperature) plant, followed by a second deodorizer, aseptic homogenization, and into an aseptic buffer tank before the final aseptic packaging.

"SC: What are the features of the STS system that you feel make it preferable to other competing systems?

"STS: First, the quality of our product. Second, the turnkey concept: we offer the whole system, from storage of soybeans to packaging of soymilk, from one source company. We are the only company that does that. Our prices seem to be about the same as our competitors.

"In terms of the process, the Alfa Laval system does not dehull the soybeans. we think dehulling makes a better quality product, but it takes additional equipment, which costs more money. For liquid soymilk, Alfa uses indirect UHT treatment with plate heat exchangers, whereas we prefer direct UHT using steam injection, which we feel gives longer production hours, less protein precipitation and scaling, and better flavor. Alfa talks of its oxygen-free, vacuum grinding; our process is similar, but we don't feature it.

"SC: What was of interest on your recent world trip?

"STS: Many things. At the World Congress on Food and Nutrition in Singapore I was amazed to see how many presentations were on soyfoods. And roughly a third of the booths at the Expo were soy-related.

"SC: Anything else?

"STS: Yes. Ownership of our company recently changed hands. As you know, Danish Turnkey Dairies, our parent, was owned by the Danish Sugar Corporation, which also owned Pasilac, a dairy equipment manufacturer. In March 1986 DTD and Pasilac were merged.

"Now APV is a huge British food engineering company, active worldwide. In February they bought Baker, a big British baking equipment company, to form APV-Baker. There is also APV-Crepaco. In May l987 Pasilac-DTD and its subsidiaries (including STS) were taken over by APV-Baker. The new firm may be called APV-Pasilac. A major purpose of this trip to the U.S. is to meet APV people involved with soy." Address: STS, Singapore.

2669. Beilin, L.J.; Armstrong, B.K.; Margetts, B.M.; Rouse, I.L.; Vandongen, R. 1987. Vegetarian diet and blood pressure. *Nephron* 47:37-41. Supplement 1. Oct. [34 ref]
• ***Summary:*** *Webster's Dictionary* defines nephron, a term first used in 1932, as a single excretory unit especially of the vertebrate kidney. Address: Univ. Dep. of Medicine, Royal Perth Hospital and the NH and MCR Epidemiology Unit, Univ. of Western Australia, Perth, Australia.

2670. *East West.* 1987. Natural Foods: The best and worst. 2nd annual awards. Oct. p. 32-36.
• ***Summary:*** Only packaged natural foods with nationwide distribution are judged. Best soymilk: Edensoy, but the Tetra Brik package doesn't biodegrade, burn, or recycle. Best sandwich spread: Nasoyanaise by Nasoya Foods. Worst shoyu: Natural shoyu from Erewhon. So heavy it is best dispensed with an eye dropper. Best Tamari: San-J. Worst line of fake meat products: Worthington Foods. Worst beans: Honey Baked Style Vegetarian Beans with Miso from Health Valley. Best Miso: Miso Master Mellow White Miso by American Miso Co. for Great Eastern Sun.

2671. Fraser, Gary E.; Dysinger, W.; Best, C.; Chan, R. 1987. Ischemic heart disease risk factors in middle-aged Seventh-day Adventist men and their neighbors. *American J. of*

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Epidemiology 126(4):638-46. Oct. [33 ref]
Address: Dep. of Medicine, School of Medicine, and the Epidemiology Program, School of Health, Loma Linda Univ., Loma Linda, California 92350.

2672. Shultz, Terry D.; Leklem, James E. 1987. Vitamin B-6 status and bioavailability in vegetarian women. *American J. of Clinical Nutrition* 46(4):647-51. Oct. [45 ref]
Address: Dep. of Foods and Nutrition, Oregon State Univ., Corvallia, Oregon 97331.

2673. LeBailly, Cecile. 1987. Lait: Attention, voila l'ersatz. L'invasion des matières grasses végétales menace les produits laitiers européens [Milk: Watch out for substitutes. The invasion of vegetable oils threatens European dairy products]. *Nouvel Economiste* (*Le*) No. 616. p. 100. Nov. 6. [Fre]
• ***Summary:*** There are 3 major soymilk producers in Europe: (1) In Belgium, Alpro, an affiliate of the Vandemoortele Group, has a plant that produces 10,000 tonnes/year of "soy juice" (*jus de soja*). Alpro's head, Philippe Vandemoortele, is head of the European Soyfoods Association. (2) In France, Cacoja, affiliate of the agricultural cooperative of Colmar, has recently had an ultramodern plant constructed at Issenheim in Bas-Rhin. A good photo shows the soymilk production system. (3) In West Germany, DE-VAU-GE is expected to soon produce as much soymilk as Alpro.

Also discusses the Edensoy venture in the USA. Most of these companies are run by young men, average age 35.
Address: France.

2674. Praskin, Laurie. 1987. Recent developments with soyfoods in Guatemala (Interview). *SoyaScan Notes.* Nov. 30. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** El Centro de Soya, the soy dairy at Solola, is up and running as a commercial enterprise. They are making tofu, most of which is sold to Seventh-day Adventist vegetarian restaurants that cater to tourists in Panajachel, Guatemala City and Antigua (a big tourist center and the former capital of Guatemala). In the community of Solola, they spend a lot of time teaching people how to cook with the products, which they offer at a discount to community members. This has spurred a big increase in sales of tofu and soymilk to the community. A new product in 1987 is Paletas de Soya (Soy Sticks or soymilk popsicles) made with their own popsicle machine. The only flavor is chocolate. Two employees and one independent broker with carts sell them. Agostine Xoquic is manager of the dairy. Amado Del Valle is project coordinator of the whole program, including the agricultural parts, the demos, and the dairy. They make soymilk but only for those who bring a container to the dairy.

Amado and his partner Felipe are making tempeh, which is sold to restaurants. The business is still subsidized; Plenty pays the salaries of Amado and Augustine, and also buys new equipment. But profit from the sale of soy products pays dairy employees' salaries and operating expenses. And they do make a little "profit." They are also now running a soyfoods training center/demo program. In Quiche they have a home demo program, and women grow soybeans and make soymilk and tofu at home. The main thing is adding ground soybeans to corn to make tortillas.

After Plenty had to leave Guatemala in 1980, the Soy Dairy continued making tofu and soy ice cream, without outside funding, until 1983. Larry McDermott visited in April 1985 and production started again in mid-1985.
Address: 17969 Oak Dr., Los Gatos, California 95030. Phone: 408-353-2649.

2675. Bailie, Ira E. 1987. The First International Congress on Vegetarian Nutrition. *J. of Applied Nutrition* 39(2):97-105. Fall.
• ***Summary:*** "Many studies have shown that vegetarian diets meeting the recommended dietary allowances for nutrients lead to decreased risk for many diseases, including breast, colon and prostate cancer, hypertension, cardiovascular disease, diverticular disease, osteoporosis, gallbladder and renal calculi, arthritis, and diabetes mellitus. Lacto-ovo-vegetarian diets can easily supply all nutritional needs. Absolute vegetarian diets with no animal products run a significant risk of vitamin B-12 deficiency. Omnivorous diets low in cholesterol and saturated fat and high in complex carbohydrates and fiber confer benefits similar to vegetarian diets.

"The first International Congress on Vegetarian Nutrition was held in Washington, DC, March 16-18, 1987. Co-sponsored by several Seventh-Day Adventist institutions, the meeting was attended by more than 400 registrants and speakers, including over 30 physicians, representing an international spectrum. Many attendees, both speakers and registrants, were not Seventh-Day Adventists." Johanna Dwyer delivered the keynote address. Address: Turlock Medical Clinic, 105 E. Main St., Turlock, California 95380.

2676. **Product Name:** Solait Creme d'Soy (Powdered Soy-Based Creamer).
Manufacturer's Name: Miller Farms Food Co.
Manufacturer's Address: 314 Main St., Cedar Falls, IA 50613. Phone: 319-277-8600.
Date of Introduction: 1987 November.
Ingredients: Premium soybeans, corn oil, rice syrup, sea salt.
Wt/Vol., Packaging, Price: 24 oz (680 gm).
How Stored: Shelf stable.
Nutrition: Per 1 oz. powder or 4 oz. liquid: Calories 220, protein 4 gm, carbohydrates 8 gm, fat 15 gm, sodium 70 mg, calcium 25 mg.
New Product–Documentation: Talk with Harry W. Miller, Jr. 1987. Oct. 21. Leaflet. 1987. "Solait. Powdered Soy

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Beverage." Product is not yet available. Label. 1987. Oct. 14.5 by 6.5 inches. Purple, green, red, yellow, and blue on white. Illustration of sun and rainbow above clouds. "No cholesterol. No lactose. No animal fat." New Product News. 1988. Dec. 9. A shelf-stable creamer.

Talk with Miller Farms. 1991. Dec. 3. Solait and Creme d'Soy are still on the market.

2677. *SoyaScan Notes.* 1987. Chronology of soybeans, soyfoods and natural foods in the United States 1987 (Overview). Dec. 31. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Jan. Westbrae moves the production of Malteds to California from Japan.

Jan. The Soy Plant, a tofu cooperative in Ann Arbor, Michigan, files for Chapter 7 bankruptcy. It is soon purchased by Bruce Rose of Rosewood Products, Inc.

Feb. *Soya Newsletter,* a 12-page, bimonthly publication costing $96/year, is launched by Soyatech of Bar Harbor, Maine. Publishers are Peter Golbitz and Sharyn Kingma, former owners of Island Tofu Works. The publication quickly proves itself to be the world's best English-language publication on soyfoods. By October, paid circulation tops 900 in 20 countries.

Feb. American Soybean Association petitions the U.S. Food and Drug Administration to require food manufacturers to be more specific in labeling food products that contain highly saturated imported tropical fats (palm, palm kernel, and coconut oils). The petition includes results of a supermarket survey of 1,555 foods containing vegetable oils. 43% of the labels list multiple choice or generic vegetable oil ingredients which hides from the consumer the fact that the products contain highly saturated tropical fats. Imported tropical fats displace the equivalent of oil derived from 171 million bushels of soybeans. Herewith begin the great "Fat Wars" of 1987-88.

Feb. Lite Lite Tofutti introduced by Tofutti Brands, Inc. This non-dairy frozen dessert contains only 90 calories per 4-ounce serving. It soon becomes a big hit.

Feb. Ah Soy in Tetra Brik cartons launched by great Eastern Sun.

Feb. Options trading on futures for soybean oil and meal opened on Chicago Board of Trade.

March 4. The Federal Grain Inspection Service rules that soybean oil may be used to control grain dust in elevators. This voids the Barnham patent and opens up a large potential new market for soy oil, which is in surplus.

March. Great Shake soymilk launched by Noble Soya in India. Sold in Tetra Brik cartons in mango, strawberry, and chocolate favors, it is the country's most heavily promoted soymilk to date, but gets off to a slow start.

March 16-18. First International Congress on Vegetarian Nutrition held in Washington, D.C., sponsored by eight Seventh-day Adventist universities and health care organizations, and three SDA food companies, plus S.E. Rykoff/Sexton.

March. *Vitasoy Vitabrations,* a newsletter, starts being published by Vitasoy USA.

March 31. Hong Kong Soya Bean Products Co. Ltd., makers of Vitasoy, move into a large new plant (370,000 square feet costing $20 million) in the New Territories. Sales of Vitasoy in 1987 is projected to be 126 million packs.

April 1. Tempehworks, Inc., America's first major tempeh producer from Greenfield, Massachusetts, changes its name to Lightlife Foods, Inc. In recent years, Tofu Pups have become the company's bestselling product.

April. Stir Fruity, a non-dairy, nonfermented, soy-based yogurt, is introduced by Azumaya Inc. of San Francisco. Shelf life problems cause the product to be withdrawn, causing Azumaya to set aside plans for an $800,000 radio ad campaign in northern California. The product is soon back on the market, but in limited distribution and with little promotion. Yet during this year, Azumaya probably passed House Foods & Yamauchi to become America's largest tofu producer.

April. *Healthy Times,* a bimonthly newsletter, starts being published by Morinaga Nutritional Foods of Los Angeles, makers of Mori-Nu long-life silken tofu, for members of the Mori-Nu Health for Life Club. By Aug. 1988 circulation is up to 10,000; A subscription costs $3 a year.

May 26. Tofutti Brands Inc. and Coca-Cola launch Cheater's Delite, a major joint promotion featuring a 90-calorie scoop of Lite Lite Tofutti and a 1-calorie glass of Diet Coke, special labeling and couponing on 3 million bottles of Diet Coke, 5 weeks of heavy advertising in New York, New Jersey and Connecticut, and a Caribbean cruise sweepstakes.

June. Dr. Jane Gleason of the University of Illinois goes to Sri Lanka to spend a year studying its soybean and soyfoods industries.

July 1. Ralston Purina Co. of St. Louis, Missouri, establishes Protein Technologies International as a wholly-owned subsidiary to focus on sales of soy protein for food uses. The company's sales of soy protein products were $139.8 million in 1986.

July. Victor Food Products in Toronto, Canada's largest tofu manufacturer, declares bankruptcy. The main cause: Overexpansion, trying to grow too fast.

Aug. The Barat Bar, an upscale chocolate bar containing spray-dried tofu instead of dairy products, is launched by Legume Inc. and extensively promoted. It soon becomes a big hit.

Aug. Brightsong Foods of Petaluma, California, ceases operations. Richard and Sharon Rose resign to found a new company, Rose International, which will be a tofu development, marketing, and consulting company, rather than a manufacturer.

Sept. 24. San-J International of Richmond, Virginia,

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dedicates the first tamari brewery ever built outside of Japan. The 40,000 square foot facility with a capacity of 1 million gallons a year is located in Varina, Virginia. San-J tamari was first imported to America in 1979.

Sept. 28. Plenty Soya Centre, run by Plenty Canada, opens in Kandy, Sri Lanka. They will sell as many soyfood products as possible at a reasonable cost.

Oct. 6. Anti-cholesterol campaign starts. The U.S. Federal Government and more than 20 health organizations issue the nation's first detailed guidelines for identifying and treating people whose blood cholesterol levels are more than 200 mg per deciliter. The guidelines signal the beginning of a nationwide health promotion campaign designed to reduce blood cholesterol to safer levels. This signals exciting new opportunities to market cholesterol-free soy-based alternatives to meat.

Nov. *Kikkoman Taste*, a stylish full-color "quarterly intercultural forum for the exchange of ideas on food," published by Kikkoman Corp. in Tokyo. Its focus is on shoyu in international cuisine.

* During this year of the great vegetable oil wars, the ASA launched an all-out no-holds-barred campaign to educate Americans of the health dangers of tropical fats (palm and coconut oil; which succeeded) and to require such products to be clearly labeled (which failed).

* This year the world's population passed 5 billion. It is increasing by a record 80 million people a year, so that every 3 years the equivalent of one United States' full of people is added to the population of planet Earth. Continued.

2678. Scholfield, Daniel J.; Behall, K.M.; Bhathena, S.J.; Kelsay, J.; Reiser, S.; Revett, K.R. 1987. A study on Asian Indian and American vegetarians: indications of a racial predisposition to glucose intolerance. *American J. of Clinical Nutrition* 46(6):955-61. Dec. [50 ref]
Address: Carbohydrate Nutrition Lab., Beltsville Human Nutrition Research Center, Agricultural Research Service, U.S. Dep. of Agriculture, Beltsville, Maryland.

2679. Shultz, Terry D.; Wilcox, R.B.; Spuehler, J.M.; Howie, B.J. 1987. Dietary and hormonal interrelationships in premenopausal women: evidence for a relationship between dietary nutrients and plasma prolactin levels. *American J. of Clinical Nutrition* 46(6):905-11. Dec. [49 ref]
Address: Dep. of Biochemistry, School of Medicine, and the Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California 92350.

2680. *Vegetarian Times.* 1987. A look back at 1987. Dec. p. 7-8.
• ***Summary:*** This was the year of the calcium pill and the fish oil supplement. In March, nutritionists from all over the world met in Washington, DC, at the first international vegetarian congress sponsored by Loma Linda University. Junk foods continued to proliferate as Coca-Cola bottlers teamed up with Tofutti to create "Cheater's Delite," a 91-calorie dessert combining Lite Lite Tofutti and Diet Coke (Ugh!). The beef industry sponsored a $30 million ad campaign "Beef. Real food for real people." Cybill Shepherd, one of the stars, was quoted by Family Circle as saying, "I've cut down on my fatty foods and I'm trying to stay away from red meat." Rock star Chrissie Hynde of the Pretenders formed the vegetarian/animal-rights organization Reprieve! with British author Peter Cox. Obis adds in interview on Oct. 28: Cox, as head of Reprieve!, is very flashy and excellent at promoting a cause. His goal is to eliminate meat from the British diet by the year 2,000. In the U.K. the vegans and the vegetarians fight one another and have lots of hostility toward each other.

2681. **Product Name:** Granose Vegetable Margarine (Dairy Free; Low in Salt).
Manufacturer's Name: Granose Foods Ltd. (Marketer-Distributor). Made in England by Eilers & Wheelers.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1987.
Ingredients: Soyabean oil (minimum 65%), vegetable oils partly hydrogenated, water, salt, emulsifiers, soya lecithin, mono and di-glycerides extracted from palm oil, flavouring, citric acid, vitamin A, colour, beta-carotene, vitamin D (vegetable source).
Wt/Vol., Packaging, Price: 250 gm plastic tub.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Energy 750 kcal (calories), oils, partly hydrogenated, minimum 80 gm, polyunsaturates min. 36 gm–45%, saturates max. 16 gm–20%, salt max 1 gm.
New Product–Documentation: Form filled out and Label sent by Adrian Peck of Granose Foods Ltd. 1990. June 13. States that the product, made by Eilers & Wheelers, was introduced in 1987. "Soya" is not mentioned on front panel. Label. Green on ivory. "High in polyunsaturates. Low in saturates. Low in cholesterol. Contains no animal products. Lactose free. Low in sodium."

2682. King, C. 1987. Factors associated with clinical gall bladder disease among Seventh-day Adventist women. DrPH (Doctor of Public Health) thesis in Epidemiology, Loma Linda University, California. *

2683. **Product Name:** Loma Linda Vegetein Taco Mix (Textured Wheat and Soy Protein).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515. Phone: 800-442-4917 or 714-687-7800.
Date of Introduction: 1987.
Ingredients: Soy protein concentrate, wheat gluten, partially hydrogenated vegetable oil (cottonseed, soybean),

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natural (vegetable) flavors, whole wheat flour, artificial color.
Wt/Vol., Packaging, Price: 7 oz paperboard box.
How Stored: Shelf stable.
New Product–Documentation: See next page. Talk with Iris Ram. 1988. Sept. 27. This product was introduced in 1987. This is a Mexican taco filling like chorizo.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1987.

2684. **Product Name:** Loma Linda Unflavored Vegetein (Textured Wheat and Soy Protein).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515. Phone: 800-442-4917 or 714-687-7800.
Date of Introduction: 1987.
Ingredients: Soy protein concentrate, wheat gluten, partially hydrogenated vegetable oil (cottonseed, soybean), caramel color, whole wheat flour, artificial color.
Wt/Vol., Packaging, Price: 7 oz paperboard box.
How Stored: Shelf stable.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1987.

2685. **Product Name:** Loma Linda Chorizo Flavor Vegetein (Textured Wheat and Soy Protein).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515. Phone: 800-442-4917 or 714-687-7800.
Date of Introduction: 1987.
Ingredients: Soy protein concentrate, wheat gluten, vegetable shortening, natural (vegetable) flavors, whole wheat flour, spice, artificial color.
Wt/Vol., Packaging, Price: 7 oz paperboard box.
How Stored: Shelf stable.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1987. "Basic preparation instructions: Add ½ cup water to 1 cup Chorizo Flavored Vegetein and allow to set for 10 minutes."

2686. **Product Name:** Loma Linda Chicken Flavor Vegetein (Textured Wheat and Soy Protein).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515. Phone: 800-442-4917 or 714-687-7800.
Date of Introduction: 1987.
Ingredients: Soy protein concentrate, wheat gluten, natural (vegetable) flavors, vegetable shortening, whole wheat flour, artificial flavors, spices, artificial color.
Wt/Vol., Packaging, Price: 7 oz paperboard box.
How Stored: Shelf stable.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1987.

2687. **Product Name:** Loma Linda Spicy-Chik Mini-Drums (Meatless).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1987.
Ingredients: Mini-Drums: Soy protein concentrate, soy protein isolate, water, corn oil, wheat gluten, egg whites, potato flakes, spices, artificial flavors, salt, whole wheat flour, natural (vegetable) flavors, dextrose, dried yeast, onion powder, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). Breader: Bleached wheat flour, salt, yeast, sugar, oleoresin paprika, leavening (sodium acid pyrophosphate, monocalcium phosphate, sodium bicarbonate), hydrogenated soy oil, mono and diglycerides, nonfat milk, whey. Batter: Water, corn flour, modified food starch, leavening (sodium acid pyrophosphate, sodium bicarbonate), spice.
Wt/Vol., Packaging, Price: 4-oz. packet contains 20 pieces.
How Stored: Frozen.
Nutrition: Per approximately 5 pieces (3.0 oz–85 gm): Calories 230, protein 14 gm, carbohydrate 15 gm, fat 13 gm, cholesterol 0 mg, sodium 640 mg, potassium 180 mg.

New Product–Documentation: Chicken flavored.

Label sent by Loma Linda Foods. 1988. Oct. 5. This product was introduced in 1987.

2688. **Product Name:** [Nutana Soja Drink].
Foreign Name: Nutana Soja Drik.
Manufacturer's Name: Nutana (Distributor). Made in West Germany by DE-VAU-GE.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1987.
Ingredients: Water, soybeans, cane sugar (3%), salt (0.1%), natural aromas.
Wt/Vol., Packaging, Price: 500 ml Tetra Brik Aseptic carton.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 100 gm: 53 calories, protein 3.6 gm, fat 2.1 gm, carbohydrate 4.9 gm.

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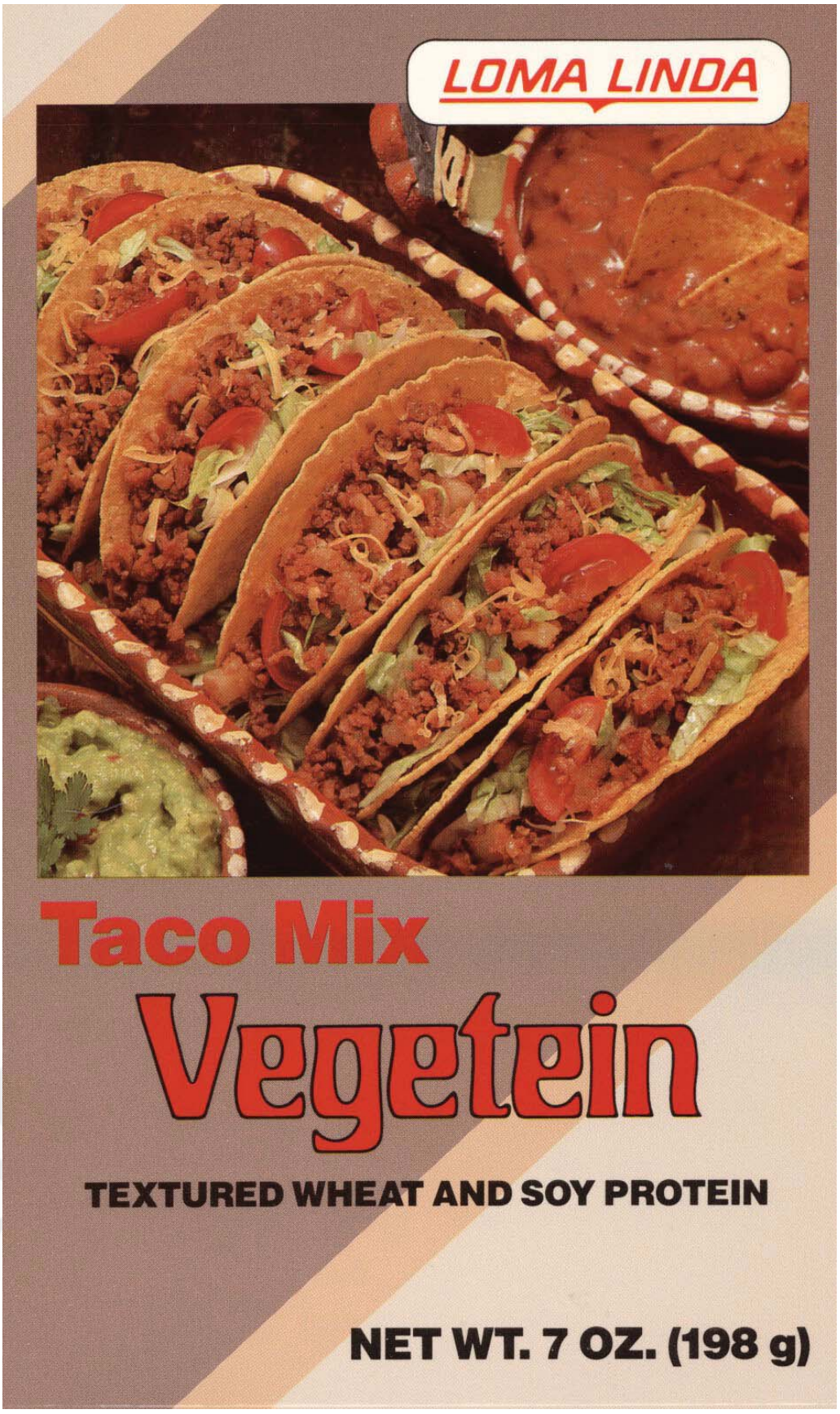

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New Product–Documentation: Label. 1987. Red and green on white. "Pure vegetarian."

2689. Sellers, E.E.B. 1987. A prospective longitudinal study of psychosocial variables associated with the incidence of cancer among Seventh-day Adventists. PhD thesis, University of Michigan. *

2690. **Product Name:** Westico Tofu.
Manufacturer's Name: Westico Foods.
Manufacturer's Address: West Indies College, Mandeville, Jamaica.
Date of Introduction: 1987.
New Product–Documentation: Form filled out by Westico. 1990. June 28.

2691. **Product Name:** Westico Soya Sausage.
Manufacturer's Name: Westico Foods.
Manufacturer's Address: West Indies College, Mandeville, Jamaica.
Date of Introduction: 1987.
Ingredients: Gluten, soya pulp (okara), soya flour, vegetable oil, salt, onion powder, garlic powder, sausage flavoring, soya sauce.
Wt/Vol., Packaging, Price: 19 oz can.
How Stored: Shelf stable; refrigerate after opening.

New Product–Documentation: Form filled out and Label sent by Westico. 1990. June 28. Westico Foods is a Seventh-day Adventist institution. This product was introduced in 1987.

2692. Beilin, Lawrence J.; Margetts, Barrie M. 1987. Vegetarian diet and blood pressure. *Bibliotheca Cardiologica* 41:85-105. [84 ref]
Address: Univ. Dep. of Medicine, Royal Perth Hospital and NH and MCR Research Unit in Epidemiology and Preventive Medicine, Univ. of Western Australia, Perth, Western Australia.

2693. Cody, George. 1987. History of naturopathic medicine. In: Joseph E. Pizzorno and Michael T. Murray, eds. 1987. A Textbook of Natural Medicine. Vol I. Seattle, Washington: John Bastyr College Publications. 24 p. [50* ref]
• ***Summary:*** Contents: Introduction. A brief history of early American medicine with emphasis on natural healing: 1800-1875, professional medicine (College of Philadelphia [Pennsylvania], Benjamin Rush), Thomsonianism (Samuel Thomson), the eclectic school of medicine, Wooster Beach (a person) and the eclectic school (Worthington, then Cincinnati, Ohio), the hygienic school (Sylvester Graham and William Alcott), homeopathy, rise and fall of the non-allopathic sects, American influence, Russell Trall, Holbrook, Sylvester Graham. The beginnings of "scientific medicine:" Foundations with monies from Carnegie and Rockefeller foundations, medical education in transition, Flexner report, pharmaceutical industry, the new "sects" (osteopathy, chiropractic, Christian science). The founding of Naturopathy: Benedict Lust arrives in USA in 1892 from Germany, Lust purchases term "naturopathy" from Scheel in 1902, the Germanic influence (Vincent Priessnitz, Johann Schroth, Father Sebastian Kneipp, Arnold Rickli, Louis Kuhne, Henry Lahman, F.E. Blitz, Adolph Just, Theodor Hahn), the convergence with American influences (A.T. Still, B.J. Palmer, Henry Lindlahr, John H. Tilden, Elmer Lee, John Harvey Kellogg, Sidney Weltmer, Bernarr McFadden [Macfadden], Shelby Riley). Twentieth century medicine: The metamorphosis of orthodox medicine (comparing 1875 and 1920), the halcyon years of naturopathy (progressive health era, 1900 to 1920, Morris Fishbein, Gaylord [sic, Gayelord] Hauser healed by Lust in 1920s, death of Lust in Sept. 1945 at Yungborn in Butler, New Jersey, emerging dominance of AMA medicine, osteopathy, chiropractic, Jethro Kloss and *Back to Eden*). Modern rejuvenation (counter-culture of the late 1960s, alternative medicine gains respect but naturopathic educational institutions dwindle to one, the National College of Naturopathic Medicine, John Bastyr College formed in 1978). The book has two bibliographies: General (21 refs), and naturopathic (29 refs).

Concerning Hauser (p. 20): "During the 1920s, Gaylord [sic, Gayelord] Hauser, later to become the health food guru of the Hollywood set, came to Lust as a seriously ill young man. Lust, through the application of Nature Cure, removed Hauser's afflictions and was rewarded by Hauser's lifelong devotion. His regular columns in *Nature's Path* became widely read among the Hollywood set." Address: Faculty Member, John Bastyr College, Jurisprudence.

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2694. Numbers, Ronald L.; Butler, Jonathan M. eds. 1987. The disappointed: Millerism and millenarianism in the nineteenth century. Bloomington, Indiana: Indiana University Press. xxiv + 235 p. Illust. selected by James R. Nix. Index. 25 cm. [300+* ref]
• ***Summary:*** This is an edited collection of scholarly essays on the history of the Millerite movement in America. The Seventh-day Adventists grew out of the Millerites. References are given at the end of each chapter. Prof. Numbers organized a conference in the mid-1980s and this book grew out of that conference. Dedication: "To Vern Carner from his friends."

Contents: 1. Foreword. Acknowledgments. Introduction. 1. Millerites: A shadow portrait. 2. William Miller: Disappointed prophet. 3. Joshua V. Himes and the cause of Adventism. 4. The Millerite Adventists in Great Britain, 1840-1850. 5. The Millerite use of prophecy: A case study of a "striking fulfilment" [fulfillment]. 6. Millerism and madness: A study of "religious insanity" in nineteenth-century America. 7. Millerism and evangelical culture. 8. The abolitionist-Millerite connection. 9. "The wind sweeping over the country": John Humphrey Noyes and the rise of Millerism. 10. Had prophecy failed? Contrasting perspectives of the Millerites and Shakers. 11. The making of a new order: Millerism and the origins of Seventh-day Adventism. Appendix: The Disappointment remembered: The recollections of Luther Boutelle, Hiram Edson, and Henry B. Bear. Contributors. A portrait (illustration, painting) shows William Miller. Address: 1. Prof. of the History of Medicine and the History of Science, Univ. of Wisconsin, Madison; 2. Riverside, California.

2695. Ringstad, J.; Fønnebø, V. 1987. The Tromsø Heart Study: Serum selenium in a low-risk population for cardiovascular disease and cancer and matched controls. *Annals of Clinical Research* 19(5):351-54. [32 ref]
• ***Summary:*** "High serum selenium concentration may protect against cardiovascular disease and cancer." Address: Inst. of Community Medicine, Univ. of Tromso, Box 417, N-9001 Tromso, Norway.

2696. Shurtleff, William; Aoyagi, Akiko. 1987. Soymilk industry and market: Updates from 1984 to 1987. Lafayette, California: Soyfoods Center. 17 + 59 p. Index. 28 cm. [165 ref]
• ***Summary:*** This 1987 update to the Soyfood Center's two-volume 1984 *Soymilk Industry and Market* has two parts: (1) Year in Reviewing, describing key events and trends each year from 1984 to 1986. (2) A bibliography of soymilk from January 1987 to late 1987, based on records in the SoyaScan database; at the end is a 10-page index. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2697. World Neighbors. 1987. Soybeans: Part 1, Let's grow them. Part 2, Let's eat them (Color filmstrips). 5116 North Portland Ave., Oklahoma City, OK 73112-2098. Accompanied by a 6-page narration.
• ***Summary:*** The filmstrips ($20 for 2) were photographed in East Africa and developed with the cooperation of Ilonga Research Center, Tanzania, and Kawanda Research Center and Africa Basic Foods Inc., Uganda. They show techniques being used at that time by World Neighbors' assisted programs in the area. Part 2 shows how to make soy flour from soybeans boiled for 10 minutes, and to use it in unleavened bread or snacks (1 cup soy flour with 3 cups wheat flour), or porridge. The leaflet also describes how to make soy sprouts and cook whole dry soybeans (with salt for several hours; poor technique). Address: Oklahoma City, Oklahoma.

2698. Morgan, J. 1987? Case-control study of vitamin A intake and colorectal cancer in Seventh-day Adventists. Thesis, Loma Linda University, California. *

2699. Worthington Foods, Inc. 1987? Worthington: Building for a healthier tomorrow. Worthington, Ohio. 12 p. Undated.

• ***Summary:*** Includes a concise history of the company (p. 4-5): "Worthington Foods began operations in 1939 with the introduction of two peanut-based products to meet a growing demand for convenient, flavorful vegetarian foods.

"Today Worthington Foods is recognized worldwide as a leader in the development and production of foods and beverages for health-conscious consumers.

"Launched under the name of Special Foods, Inc. by Dr. George T. Harding, Sr., the company grew within two years to annual sales of $20,000.

"Dr. Harding hired current Worthington Foods chairman James L. Hagle in 1941 to manage the fledgling vegetable protein business. Sales jumped to $80,000 during the 29-year-old manager's first year.

"Choplets, one of the company's early products, was so much in demand during the meat rationing of World War II that shipments were made to customers even before cans had a chance to cool after production.

"By the end of the war, annual sales neared $500,000, and Special Foods had become Worthington Foods, Inc. Production facilities were moved from a small two-story, wooden house (see photo) to a new concrete block building across the street.

"Allan R. Buller, now president, came to Worthington

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Foods in 1945 after completing a tour of military duty. He soon became general manager.

"A short time later, Warren E. Hartman joined Buller and Hagle to expand the company's product development and quality control. The Worthington line was broadened, and sales continued to climb.

"In the early 1950s, Worthington Foods accomplished a major technological breakthrough which revolutionized the manufacture of vegetable protein products. Robert Boyer, a former researcher for the Ford Motor Company, introduced Hartman, Hagle and Buller to the process of spinning soy protein fibers.

"Actually Boyer had been trying to produce a synthetic fiber resembling wool. Although he was not able to develop a suitable synthetic wool, Boyer did produce a vegetable protein substance similar to muscle fiber. His work resulted in the development of meat-like products resembling lamb, beef and chicken.

"Boyer's new materials did not lend themselves to processing under high temperatures normally used in canning. This led to the manufacture of frozen vegetarian products.

"Since many of the small health food stores selling Worthington products were not equipped with freezers, the company provided these stores with frozen food cabinets. This bold marketing stroke vaulted Worthington Foods years ahead of its competitors to become the first company offering frozen meet analogs.

"Worthington Foods also grew during the 1950s and '60s through the acquisition of other food companies. First came the wheat protein products of Dr. Harry Miller. Miller's Cutlets later became known as Vegetarian Cutlets.

"Worthington Foods next purchased the Battle Creek Food Company founded in 1869 by world-famous Dr. John Harvey Kellogg. This acquisition–including its line of Kaffree Teas–pushed Worthington's sales over $1 million in 1960. Four years later, Worthington took over the Madison Foods plant in Madison, Tennessee.

"By the late 1960s, interest in soy protein products heightened as the nation faced a meat shortage and meat prices spiraled upward. Recognition of Worthington Foods as a leader in the development of meat analogs led to take-over inquiries from a number of major companies.

"Company directors decided in early 1970 that Miles Laboratories offered the best blend of financial resources and management philosophy. After the merger, Worthington Foods became the center of protein research, development and production for the parent company's worldwide operations.

"Under Miles Laboratories, the Morningstar Farms brand of cholesterol-free foods was introduced. This marked the first time textured vegetable protein products had been marketed nationally through supermarkets.

"During its 12 years as a division of Miles Laboratories, Worthington Foods doubled the size of its research and development facilities; and construction of a new plant tripled production capacity.

"On October 15, 1982, Worthington Foods once again became an independent operation. The company was repurchased from Miles Laboratories by a group of Seventh-day Adventist investors, including its founder, Dr. George T. Harding, Sr.

"The reacquisition and financial restructuring of Worthington Foods was organized primarily by three men who had been instrumental in the early years of the company–James Hagle, Allan Buller and Dr. George Harding, Jr.

"Worthington Foods continues to emphasize the process technology and product innovation that has distinguished it from its competitors for nearly half a century. In recent years, the company has broadened its base to encompass a variety of health-oriented food and beverage products.

"In 1983 Worthington Foods launched its third brand line, Natural Touch. Developed to be free of any artificial additives, preservatives or colors, the Natural Touch line represents a major thrust into the all-natural foods market.

"Food science and technology have advanced remarkably over the past four decades to allow even more convenient, healthful and flavorful products. Capitalizing upon these advances, Worthington Foods has remained steadfast in its heritage of promoting good health through better nutrition."

Photos show: (1) The 2-story home which became the first Worthington Foods factory in 1939. (2) Ground-level view of the front of Worthington Foods factory in 1950. (3) One can each of Choplets, Instant Soyamel, and Worthington Burger. (4) An inside view of part of the Worthington factory.

Two pages (p. 6-7) show various Worthington products and their packages. One page each is devoted to: New management (with photos). Photo of operating staff. Brief bios of operating staff. Directors and officers (portrait photos and bios).

Note: An earlier edition of this booklet was published in 1984. The cover title was "Worthington: Building for a healthier tomorrow." Address: Ohio.

2700. Hosken, Bob. 1988. Adventists and longevity. *Record* (*Warburton, VIC, Australia*). Jan. 16. p. 4-5.
• ***Summary:*** This journal is published by Signs Publishing Co., Warburton, Victoria 3799, Australia. Address: Dep. of Home Economics, Newcastle College of Advanced Education, New South Wales, Australia.

2701. Chollet, Laurence. 1988. Magic beans: Soy foods multiplying. *Record* (*Hackensack, New Jersey*). March 7. p. B-3, B-4.
• ***Summary:*** This story is based on a news release from Soyfoods Center showing the number of new soyfoods

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products introduced each year. According to Bill Shurtleff, who compiled the report: "In 1976, 78 new products were introduced; last year, 330 products were introduced, making it by far the biggest year for soy food products,..."

Bonnie Liebman, director of nutrition for the Center for Science in the Public Interest, says that "all fats have been implicated in breast and colon cancer." Soy foods are free of cholesterol and generally low in saturated fats, but they are often high in unsaturated fats.

"Soy foods tend to be a little more expensive than their meat and dairy counterparts"–whether hot dogs, entrees, ice cream, or cheesecake. Mentions: Tofu Entrees from Legume, Inc, Lite Lite Tofutti, Tofutti's Better than Cheesecake. A large photo shows packages of Tomsun Tofu, Jofu, Ice Bean, Legume Classic Lasagne, and five Worthington meatless products: Luncheon Slices, Prosage Links, Vegetarian Pie, Wham (meatless ham), and Meatless Chicken.

2702. Abersold, Vance. 1988. New developments in soymilk, Stephen Story, and Great American Foods in Salt Lake City (Interview). *SoyaScan Notes.* March 10. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** His soymilk was launched in Feb. 1987. It is selling very well to the people who are allergic to dairy products and to vegetarians. Its features are the best taste (because of a new process, and the lowest price, since it is sold dry primarily by direct mail). He got interested in 1981 when he was involved with Roy Brogue at the company Meadowfresh Farms (no longer in existence) in Salt Lake City, Utah, developing whey-based milks. The company was Mormon and the products used in food storage programs because they last far longer than powdered milk. But he grew interested in soymilks because whey-based milks are high in lactose and because of a big breakthrough in tofu and soymilk development made by Steven Story, a student of Dr. Clayton Huber at Brigham Young University, Dept. of Food Science and Nutrition. Huber was the head food nutritionist on the NASA Space Program. Huber fought the dairy industry when Meadowfresh was launched, and prevailed in every suit in every state. Story also made breakthroughs on whey-based milks. He is a genius at food development, and is now a consultant in Salt Lake City (Tel. 801-298-0188) doing developmental work for food companies. Vance got into this because of long-time undiagnosed serious allergies to milk products.

Story was a one-third owner of Great American Foods which started in about 1986 in Salt Lake City, as a division of Magic Mill (which makes stone mills), which is in turn a part of the SSI corporation. They produce the product (plus many other products, such as whey-based diet drinks/liquid meals), and presently sell it to Abersold and to Sovex. Sovex retails it for about twice as much as Abersold under the brand "Better than Milk." Magic Mill also sells its own Magic Mill Soy Milk. Steve is presently dissolving his partnership. He does not know of anything that Story has published. His product Sno-e contains a small amount (about 1%) of sodium caseinate, but in the extraction process all of the allergens are removed so it can be called "non-dairy." One of his goals is to develop a second product that does not contain any sodium caseinate. Yet the sodium caseinate in the present product is a key to the flavor. Address: 2730 Morley Way, Sacramento, California 95864.

2703. Davis, Bob. 1988. Light Foods and the tofu hot dog market in America (Interview). *SoyaScan Notes.* March 26. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** There are three major companies making tofu hot dogs for the U.S. market (not including Loma Linda and Worthington, which use isolates rather than tofu): Light Foods, Bob's company which originated the idea, has about 40% of the market, especially the West Coast. Lightlife Foods (formerly Tempehworks) has about 40%, especially East Coast, and Yves (from Canada) has about 20% nationwide.

Bob still has bad feelings about the way Lightlife Foods took away his East Coast market. Originally, Tempehworks was Light Foods' master distributor for tofu hot dogs on the East Coast. Then for about 6 months Tempehworks stopped paying for the product they were receiving. (They eventually paid later). Suddenly they dropped the Light Foods tofu hot dogs and came out with a competing product of their own, named Tofu Pups. It was quite similar except that it was free of egg whites. Tempehworks told many distributors and retailers that Light Foods was going or had gone out of business, as a way of getting them to switch products. Davis received letters from 35-40 stores and many customers asking why he went out of business or why he started making Tofu Pups. Shortly thereafter Tempehworks changed its company name to Lightlife Foods, not much different from Light Foods. This combination of events destroyed the market for Light Foods' tofu hot dogs on the East Coast. They had no East Coast distribution for 6 months. Light Foods considered litigation, but didn't have the money. Now Light Foods is coming out with a new meatless hot dog containing no egg whites. Address: 12125 East Brookview Dr., Grass Valley, California 95945. Phone: 916-273-2218.

2704. Nordquist, Ted. 1988. New developments with tofu and soymilk in Sweden (Interview). *SoyaScan Notes.* March 26. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Ted is working with three of Sweden's largest food companies: (1) Semper AB, the country's largest milk company, used to be an independent milk research company. Semper now makes an infant formula, and two flavors of soy drink for adults, both from soy protein isolates. The later is poor tasting. Semper is now wholly owned by Arla, the Swedish milk company. (2) Karlshamn Oliefabrik, Sweden's largest oils and fats company, that is also the

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largest manufacturer of ice cream and margarine. They used to be a soybean crusher, but now they import their oil. Karlshamn has the Swedish franchise for Ralston Purina. They have a newsletter The Soybean Magazine that they use to market Ralston's products. They import isolates, which Semper buys for use in their infant formula (Soja Semp) and adult soymilks. (3) Trensums Musteri, a juice company owned by Mark Jungstrum, who owns the only 3 Combibloc machines in Sweden. He packages Knorr soups in them. The resources are unlimited. The present focus is on developing a natural soy base free of beany flavor and evaluation the economics of the product. From this base they will make a line of products, including dairylike products and non-beany tofu. Ted has a contract with Trensums to receive a 2% commission on all soy products made in the new plant, since he basically developed the plant, which is inside the Trensums Musteri juice factory located in the south of Sweden, near Karlshamn. He also has a contract with Semper. Semper supplies Karlshamn with all their milk products. Roughly 12 million crowns ($2-3 million) has already been invested in soy equipment and R&D at this plant in Tingsryd, which produces about 4,000 liters/hour of soymilk.

This project began in 1983, when Luke Lukoskie came to Ted with a proposal to cooperate with Alfa-Laval, since Ted was the only tofu maker in Sweden, where Alfa-Laval is located (in Lund). Luke had a contract with Alfa-Laval to develop tofu and other soy products. He wanted a continuous tofu making process. Alfa-Laval had a plant installed in his former factory, which burned down. At one point Lukoskie was considering a lawsuit against Alfa-Laval. In 1984 Alfa-Laval began moving the soy development operations from Lund to Singapore. At the time they had sold one plant to China, with plans to sell 2 more if the first proved successful.

Ted met with the people from Talmo Gordon, who were planning to build a soymilk plant in Ludvika, funded with government money, but dropped the idea after Semper and Ted showed them that their concept was not feasible. The owner of the plant in Tingsryd is an expert at product development, including foods such as mushroom soups in German Combibloc that cannot be done in Tetra Pak. So Ted left his cooperation with Alfa-Laval and started developing with him in Tingsryd. They signed a contract. Ted goes there for 3 days a week. The sales of Aros grew 70% last year, in part because of new labels. All products are doing well. He makes an average of 2,000 kg (4,400 lb) of tofu per week. By vacuum packing his tofu then pasteurizing it at 95ºC for 45 minutes, then quick cooling it in water at 4-6ºC, he gets a shelf life of 85 days at 4ºC under ideal conditions vs. 30 days shelf life if it is not vacuum packed. None of Sweden's three big supermarket distributors carry his tofu, so he distributes to supers himself. The three distributors that serve the country's 65 health food stores do not have refrigeration. There are no tofu companies yet in Norway, Denmark, or Finland. Of all of Aros sales, 55% is regular tofu, followed by marinated tofu (*Tofu Marinerad*) 15%, then three other products. Nutana makes a canned tofu (made entirely from isolates) in cubes in a sauce. Lima Foods sells a bottled tofu. There are 8 million people in Sweden.

Tomsun is trying to register the trademark Jofu (their nonfermented soy yogurt) in Sweden. This may upstage Ted's attempt to trademark Sofu for soymilk and wipe out his trademark on the term "Tofu."

Semper is interested in having the new soy base be low in oligosaccharides so that their infant formula does not cause flatulence. The following oligosaccharide levels have been found in European soymilks: Alfa-Laval's plant in Colmar, France, that uses ultrafiltration 0.02 gm/liter; Alpro in Belgium 0.28 gm/liter; Alfa-Laval's pilot plant in Sweden 0.43 gm/liter; the STS plant built for DE-VAU-GE in Germany 0.58 gm/liter. By using ultrafiltration to make tofu you can both remove the oligosaccharides and reduce the water content. Address: President, Aros Sojaprodukter, Bergsvagen 1, S-190 63 Orsundsbro, Sweden. Phone: 0171-604 56.

2705. Mills, Paul K.; Annegers, J.F.; Phillips, R.L. 1988. Animal product consumption and subsequent fatal breast cancer risk among Seventh-day Adventists. *American J. of Epidemiology* 127(3):440-53. March. [39 ref]
• ***Summary:*** "Seventh-day Adventist women experience lower mortality rates from breast cancer than other white females in the United States... Human breast cancer is characterized by large international difference in incidence and mortality. Mortality rates among the Japanese, for example, are less than one-eighth of the rates among persons in the western, industrialized nations." Address: Dep. of Preventive Medicine, Loma Linda Univ., Loma Linda, California.

2706. Laidlaw, Stewart A.; Shultz, T.D.; Cecchino, J.T.; Kopple, J.D. 1988. Plasma and urine taurine levels in vegans. *American J. of Clinical Nutrition* 47(4):660-63. April. [28 ref]
Address: 1-3. Dep. of Medicine, Harbor-UCLA Medical Center, Torrance, California; 4. The schools of Medicine and Public Health, Univ. of California, Los Angeles, CA, and the Depts. of Biochemistry and Nutrition, School of Medicine, Loma Linda Univ., Loma Linda, CA.

2707. Howell Mountain Distributors. 1988. MGM Brands (list of products): Effective May 1, 1988 (Leaflet). P.O. Box 96, Angwin, CA 94508. 1 p. Single sided.
• ***Summary:*** Made by MGM in Ontario, Canada. Developed by a chef who worked for Worthington Foods about 10 years ago. Address: Canada. Phone: (707) 965-7557.

2708. Crippen, Dave. 1988. Henry Ford and the plastic

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car. John Harvey Kellogg and the Battle Creek Sanitarium (Interview). *SoyaScan Notes*. April, and May 2. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Crippen's main interest is the history of automotive design. Ford R. Bryan is a volunteer who works with him. Crippen visited Robert Boyer and taped 8 hours on the history of the plastic car. He also taped an interview with Lowell E. Overly, the man who designed the car. He died about a year ago and he was quite old at the time of the interview. [Note: Fred Hapgood, author of a 1987 *National Geographic* article on soybeans, said that Overly destroyed the car because both Henry Ford and soybeans proved embarrassing]. Neither interview has been transcribed. The 72 page interview with Bob Smith and Donald Sullivan was done by Don Baut of the Dearborn Historical Museum. Dave also has two books on the Chemurgic movement written by a chemist [William J. Hale] from the Dow Chemical Co.

He grew up in Battle Creek, Michigan. During World War II the U.S. Army took over the Battle Creek Sanitarium and renamed it Percy Jones Hospital. Jones was a hero who was a quadruple amputee, and it became a center for amputee rehabilitation. It is still a center for various U.S. governmental activities. Kellogg died almost penniless. His brother, Will Keith, who built the corn flake empire, never tried to help his brother, John Harvey, in later life.

Update on the 8 hours of interviews conducted by Dave Crippen with Robert Boyer. 1993. Sept. 26. According to Ford Bryan, these tapes have now been transcribed and added to the series of "Reminiscences" now in Acc. 60, at the Research Center of Henry Ford Museum and Greenfield Village. It is Mr. Bryan's impression that Mrs. Boyer, together with her son, plans to have a biography of her husband Robert Boyer published in the near future. Address: Research Center, Henry Ford Museum & Greenfield Village, P.O. Box 1970, Dearborn, Michigan 48121. Phone: 313-271-1620.

2709. Keville, Kathi. 1988. Back to Eden's Jethro Kloss. *Vegetarian Times*. May. p. 67-69.
• ***Summary:*** Soyfoods are an integral part of Kloss' dietary philosophy. He was born in 1863 on a farm (called the Garden of Eden, by the way) near Manitowac, Wisconsin, one of 11 children. A typhoid epidemic spawned Kloss' career as a natural healer. He was firm in his belief that substituting soy products for dairy products is essential to good health.

Back to Eden was published when Kloss was 76 years old.

Move Over, Tofutti–Kloss "began what might have been the first natural foods fast-food stand, based largely on soyfoods. That was in the 1930s when the Kloss family was living in Washington, D.C. To reach influential Washingtonians, Kloss parked a small trailer on Pennsylvania Avenue, by the White House and Capitol buildings. There he sold vegetarian quick lunches to government employees. Soy bread sandwiches were filled with nutmeats, lettuce and sliced tomatoes. Favorite snacks were strawberry, chocolate and vanilla ice creams made directly from raw soybeans. (The beans were soaked and ground, then milk was pressed out of them.) Hot soybean coffee, with soybean cream, was served...

"Jim Taft, vice president of research for Farm Foods, an offshoot of The Farm community in Tennessee and producers of soy-based 'Ice Bean,' said he made his first batch of soy-milk 20 years ago, using the *Back to Eden* recipe. Taft said he was extremely influenced by Jethro Kloss. 'He was very popular among my friends. I read his book from cover to cover. I can't remember where I got my first soy ice cream recipe, but I think it was a combination of *Back to Eden* and *Ten Talents* (by Frank J. and Rosalie Hurd, whose recipes are also based on Seventh-day Adventist principles).'" The recipe for Soy Ice Cream that Taft remembers using is given. It calls for 1 tablespoon agar-agar, cold water for soaking, 2 quarts soymilk, 2 lbs. barley malt sweetener (powdered form), ½ pint soy margarine, and crushed fruit, fruit juice, or vanilla (optional).

2710. Mills, Paul K.; Beeson, W.L.; Abbey, D.E.; et al. 1988. Dietary habits and past medical history as related to fatal pancreas cancer risk among Adventists. *Cancer* 61(12):2578-85. June 15. [46 ref]
• ***Summary:*** In human populations consuming soybeans, the connection between pancreatic enlargement and protease inhibitors observed in animals has not been seen. In fact, incidence of pancreatic cancer is reduced in these groups. Address: Dep. of Preventive Medicine, School of Medicine, Loma Linda Univ., Loma Linda, California 92350.

2711. Fay, Jocelyn. 1988. Loma Linda Foods completes consolidation. *Gleaner* (*Portland, Oregon*). July 18. p. 12.
• ***Summary:*** "With the expansion of its factory in Riverside, California, almost complete, Loma Linda Foods, Inc., plans soon to have all of its employees working under one roof. Infant formula production will move in July or August from Mount Vernon, Ohio, to the Riverside factory, which produces meat analogs. The company has enlarged its Riverside plant, leased additional warehouse space, and made a major investment in new equipment during the past 3 years in preparation for the Mount Vernon closing. 'We are using company profits to finance a good portion of the approximately $5 million our consolidation is going to cost us,' says Alejo Pizarro, Loma Linda Foods president... Most of Loma Linda Foods' $5 million investment has been for equipment."

"Pizarro ways the 82-year-old company is 'actively working on the expansion of current product lines and the introduction of new products.'... The Board may eventually decide to lease the Ohio factory but has no plans to sell it."

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2712. Lease, Carol Ann. 1988. Worthington Foods to move house, create museum. *Dispatch* (*Columbus, Ohio*). July 20. p. 16. Neighbor news section.
• ***Summary:*** "Worthington Foods plans to open a museum in the house in which the company was founded nearly 50 years ago. The city's Municipal Development Commission decided last week to recommend to the City Council that Worthington Foods be allowed to move the house at 811 Proprietors Rd. across the street to what is now a parking lot next to the company's offices." A photo shows the house in which Worthington Foods started.

2713. **Product Name:** [Sahm Yook Soymilk (Plain)].
Foreign Name: Sahm Yook Dou Ru.
Manufacturer's Name: Sahm Yook Korean Foods.
Manufacturer's Address: 320 Panjeong-ri, Jiksan-myun, Chunwon-gun, Choongchungnam-do 333-810, South Korea.
Date of Introduction: 1988 July.
Ingredients: Soy milk, high fructose corn syrup, corn oil, rapeseed oil, salt.
Wt/Vol., Packaging, Price: 200 ml Tetra Brik Aseptic carton. Retails for 220 Won (6/90).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Talk with Eric C. Fehlberg. 1990. March 8. The Seventh-day Adventist food company in South Korea, Sahm Yook Foods, now makes soymilk (only plain, no flavors) packaged in Tetra Brik cartons and foil Doypack/Doynpack. The company was established in about 1978, and it began to make soymilk in May 1985. After launching soymilk, the company began to grow dramatically, as that product grew. Last year they built a very large, new soymilk plant (based on Adventist technology) and they are now about the 2nd or 3rd largest soymilk maker in Korea.

Label (Tetra Brik carton). Sent by Eric Fehlberg. 1990. March 12. 2.5 by 3.25 by 1.5 inches carton. Red, yellow, dark green, and light green on white. Front panel says "Soy Milk" and an illustration shows 3 yellow soybeans in a green pod.

Form filled out by C.Y. Yoon, General Manager, Sahmyook Korean Foods. 1990. June 23. Note that on the envelope the company name is printed Sahmyook Korean Foods, but the brand name is typed 4 times on the form as Sahm Yook. The address on the envelope is 320 Panjung Jiksan Chunwon Choongnam, Korea. The soy milk in a foil retort pouch was introduced in April 1985. The same product with the same ingredients was launched in a Tetra Brik carton in July 1987.

2714. Euler, Gary L.; Abbey, D.E.; Hodgkin, J.E.; Magie, A.R. 1988. Chronic obstructive pulmonary disease symptom effects of long-term cumulative exposure to ambient levels of total oxidants and nitrogen dioxide in California Seventh-day Adventist residents. *Archives of Environmental Health* 43(4):279-85. July/Aug. [67 ref]
Address: 1. Epidemiologist, Kern County Health Dep., Bakersfield, California; 2. Prof., Depts. of Biostatistics and Preventive Medicine, Loma Linda Univ., Loma Linda, California 92350.

2715. Schnell, Hannelore. 1988. Kleine Bohne, ganz gross [Small bean, very big]. *Natur* (*Munich, West Germany*). Aug. p. 75-83. [3 ref. Ger]
• ***Summary:*** Discusses soymilk, tofu, soy sauce, miso, tempeh, Soyastern, Svadesha Tofurei, Alpro, and DE-VAU-GE. Concludes with a detailed discussion of newly recognized potential dangers with HVP products. Vegetable seasonings made by companies such as Maggi may contain carcinogenic chloropropanols, such as dichloro propanol. Maximum limits on these are now being established.

2716. *Adventist Review* (*Hagerstown, Maryland*). 1988. Division notes 100 years of German literature ministry. Sept. 8. p. 20 (p. 972).
• ***Summary:*** The Hamburg area contains two important Adventist institutions: the Hamburg Publishing House, established in 1895, "and the well-known De-Vau-Ge health food factory, launched almost 90 years ago.

With 300 employees and a turnover (sales) of DM80 million ($47.2 million) in 1987, the food factory is the largest institution of the Euro-Africa Division. Director M. Makowski says the company's goal is to reach a turnover of DM 100 million ($59 million) in 1990.

"One thousand different food products are made at De-Vau-Ge, 500 of which are sold under the label 'GranoVita.'

"The food factory also produces 4,228 quarts (3,844 liters) of soymilk every hour. a European record. De-Vau-Ge holds an 11 percent share of the market, making it the most important one in the 'Neuform' health food stores association."

2717. Schwartz, Jack. 1988. History of the health foods industry in America (Interview). *SoyaScan Notes.* Sept. 25. Conducted by William Shurtleff of Soyfoods Center. [1 ref]
• ***Summary:*** Jack founded the magazine *Health Foods Retailing* in about 1938 in New York. But the real expert on the history of this industry is Frank Murray, who lives in Manhattan (Business: 212-613-9700; Home 212-924-0063). He has done extensive research in the field and has written a book on the history of this industry [*More than One Slingshot*], published in 1984. He has copies of back issues of magazines and many records. Frank worked for Jack at Syndicate Magazines. They published *Better Nutrition* starting in about 1939, then *Today's Living* in about 1948; both are still published. In 1981 he sold the company to a large British firm, a subsidiary of British General Electric. They discontinued or ruined many of the best publications.

Another early and important health food publication was

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Nature's Path, published by Benedict Lust in New York City, starting in 1925.

Early and important soy products were Joyana, Bob Hoffman's Protein Powder and about 10 years later a similar product from Joe Weider, and a line from Battle Creek Foods.

Another pioneer to talk with is Sam Reiser, who founded Balanced Foods, the largest natural food distributor in America. A cousin, he was in the industry since about 1939 and was a major pioneer. Phone: 201-944-4639 in Fort Lee, New Jersey. Address: 27 Highland Ave., Larchmont, New York. Phone: 914-967-7556.

2718. Boff, Vic. 1988. University of Texas Library's Todd & McLean collection on health and fitness. Health food pioneers (Interview). *VegeScan Notes.* Sept. 26. Conducted by William Shurtleff of Soyfoods Center. [5 ref]
• ***Summary:*** The University of Texas at Austin has one of the largest collections of periodicals, books, papers, and memorabilia on the health foods movement and industry in America. It is in the Todd & McLean Collection, occupying 8,000 square feet. Contact Dr. Terry Todd in Austin (Phone: 512-471-4890. Gregory Gym 33, Univ. of Texas, Austin, TX 78712). The library is on the third floor of the gym. Prof. McLean is no longer living. They have an especially good collection of Bernarr Macfadden's publications.

Vic is an old timer in the health food industry. He worked closely with Dr. Benedict Lust (he wrote for him starting in 1936) and knew Bernarr Macfadden. Lust was an M.D. (licensed in Florida), ND, and DC. Coming to America from Germany, he was the founder of Naturopathy in America, located on Lexington Ave. in New York. He died in 1942. Lust published *Nature's Path* (a popular periodical that started in the early 1900s and was continued by his nephew or son, John Lust, who passed away recently), and *Naturopath*, a professional publication for naturopathic physicians, starting in the 1930s until he died. Lust had two sanitariums in Florida and New Jersey, doing hydropathy and chiropractic. He was a major figure, a great man, but had constant opposition for the local medical associations and societies. Macfadden was tremendous in the advancement of natural foods and natural healing in this country. Boff has all Physical Culture magazines from 1898 to the 1940s. Macfadden and Lust were on good terms with each other. Macfadden was more involved with physical fitness; his slogan was "Weakness is a crime." He promoted sunshine and fresh air, physical therapy and hydrotherapy; he was put in jail for trying to do away with bathing suits that covered the whole body. He had a huge publishing operation. Otto Carque was a great natural foods pioneer in California, probably in Los Angeles. He was interested in soyfoods. Even in the early days, many of the health foods pioneers advocated the soybean because many of them were vegetarians and the soybean is a great substitute for meat. Loma Linda and Kellogg were also a major forces. Address: Brooklyn, New York. Phone: 718-648-5254.

2719. Murray, Frank. 1988. History of the health foods movement in America (Interview). *SoyaScan Notes.* Sept. 26. Conducted by William Shurtleff of Soyfoods Center. [5 ref]
• ***Summary:*** Frank entered the health foods industry in 1963, when he went to work for Jack Schwartz at Syndicate Publications, publisher of *Health Foods Retailing* magazine. His book, "More than One Slingshot" (1984) was a history of the NNFA, written for them and not released commercially. But it was also a history of the health foods movement in America. Important health foods publications included *Health Foods Retailing* (founded in April 1936 by Lelord Kordel and sold several years later to Jack T. Schwartz, who remained publisher until Feb. 1982), *Better Nutrition* (now in its 50th year), *Let's Live*, and *Prevention.*

The University of Texas has a large collection of periodicals, books, and memorabilia on health and physical fitness, including figures such as Bernarr Macfadden. For details contact Vic Boff in Brooklyn, an old timer in the industry. Back issues of Health Foods Retailing (in a small, digest format) can be found at Communication Channels Co. in Atlanta, Georgia (Phone: 800-241-9834).

Joe Weider has always been in California, and is still alive. He publishes many weight lifting magazines.

In the 1960s the main soyfoods products he remembers were from Loma Linda Foods, Worthington, and Fearn Soya Foods. Address: New York. Phone: 212-613-9700.

2720. *American J. of Clinical Nutrition.* 1988. First International Congress on Vegetarian Nutrition. 48(3S):707-927. Supplement. Sept.
• ***Summary:*** These are the proceedings of a congress held in Washington, DC, USA, on 16-18 March 1987. This pioneering congress was sponsored by Loma Linda University Medical Center (California); Adventist Health Systems/United States; Seventh-day Adventist Hospital Association; San Joaquin Community Health Center; Loma Linda University; Andrews University; Departments of Health of the North American and South Pacific; Divisions of Seventh-day Adventists; Seventh-day Adventist Dietetic Association.

Program chairpersons were Kathleen K. Zolber, PhD, RD, and Patricia K. Johnston, DrPH, RD. Guest editors were Patricia B. Mutch, PhD, RD, and Patricia K. Johnston, DrPH, RD. Publication of these proceedings was made possible by Pacific Health Education Center, Bakersfield, California.

This congress received support from SE Rykoff/ Sexton, plus three Seventh-day Adventist food companies (Worthington Foods, Loma Linda Foods, and Sanitarium Foods). Many of the individual papers are cited separately.

Contents: Introduction. Plenary sessions. Panel sessions: Vegetarian dietary practices and colon cancer. Impact of

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vegetarian dietary practices on steroid and polypeptide hormones. Vegetarian dietary practices and hypertensive disorders. Impact of vegetarian dietary practices on growth of children. Impact of vegetarian dietary practices on ischemic heart disease. Vegetarian dietary practices and bone density. Vitamin nutriture of vegetarians. Nutrient availability from vegetarian diets. Mineral utilization of vegetarians. Dietary recommendations. Poster session abstracts (p. 920-927).

2721. Beilin, Lawrence J.; Rouse, I.L.; Armstrong, B.K.; Margetts, B.M.; Vandongen, R. 1988. Vegetarian diet and blood pressure levels: incidental or causal association. *American J. of Clinical Nutrition* 48(3S):806-10. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [23 ref]
Address: Univ. Dep. of Medicine, Univ. of Western Australia Medical School, Perth Hospital, Perth, and the NHMRC Research Unit in Epidemiology and Preventive Medicine, Univ. of Western Australia Queen Elizabeth II Medical Centre, Nedlands, Western Australia. Both: Australia.

2722. Blankenship, J.W.; Jenks, R.; Boucek, R. 1988. Prostacyclin production in abdominal aortic tissues of 30-day-old rats as influenced by dietary vegetable oils compared to olive oil (Abstract). *American J. of Clinical Nutrition* 48(3S):920. Supplement. Poster session abstracts. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC.
Address: Depts. of Nutrition and Cardiology, Loma Linda Univ., Loma Linda, Loma Linda Foods, Riverside and San Joaquin Community Health Center, Bakersfield. All: California.

2723. Connell, Bert C. 1988. Quantity vegetarian meal patterns. *American J. of Clinical Nutrition* 48(3S):910-12. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [2 ref]
Address: Dep. of Nutrition and Dietetics, School of Allied Health Professions, Loma Linda Univ., and Nutritional Services, Loma Linda Univ. Medical Center, Loma Linda, California.

2724. Craig, W.J.; Fraser, G.E. 1988. New serum lipid measurement for predicting risk of heart disease (Abstract). *American J. of Clinical Nutrition* 48(3S):920. Supplement. Poster session abstracts. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC.
Address: 1. Univ. of Massachusetts, Amherst, Massachusetts; 2. Loma Linda Univ., Loma Linda, California.

2725. Crane, Milton G.; Zielinski, R.; Aloia, R. 1988. *Cis* and *trans* fate in omnivores, lacto-ovo-vegetarians, and vegans (Abstract). *American J. of Clinical Nutrition* 48(3S):920. Supplement. Poster session abstracts. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC.
Address: Dep. of Medicine, Loma Linda Univ., Pettis Memorial V.A. Hospital, Loma Linda and Weimar Inst., Weimar. Both: California.

2726. Fraser, Gary E. 1988. Determinants of ischemic heart disease in Seventh-day Adventists: A review. *American J. of Clinical Nutrition* 48(3S):833-36. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [23 ref]
Address: Epidemiology Program, School of Health, Loma Linda Univ., Loma Linda, California.

2727. Fønnebø, V. 1988. The Tromsø Heart Study: diet, religion, and risk factors for coronary heart disease. *American J. of Clinical Nutrition* 48(3S):826-29. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [15 ref]
Address: Inst. of Community Medicine, Univ. of Tromso, Tromso, Norway.

2728. Gailliard, F.M.; Williams, A.C. 1988. Factors influencing the selection of a vegetarian or non-vegetarian dietary pattern among Seventh-day Adventists (Abstract). *American J. of Clinical Nutrition* 48(3S):920. Supplement. Poster session abstracts. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC.
Address: Home Economics Dep., Andrews Univ., Berrien Springs, Michigan.

2729. **Product Name:** Granose Soya Yogert (Soymilk Yoghurt) [Peach Melba, Blackcurrant & Apple, Apricot, and Strawberry].
Manufacturer's Name: Granose Foods Ltd. (Marketer). Made in southern England by Bridge Farm Dairies. Made since late 1990 in Clwyd, Wales, by Genice Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1988 September.
Ingredients: Peach melba: Soya milk (Water, dehulled soya beans, sea salt), Mauritian raw cane sugar, peaches, raspberries, stabilisers, maize starch, guar gum, pectin, Bulgarian cultures, natural flavouring.
Wt/Vol., Packaging, Price: 125 gm plastic cup with foil lid.
How Stored: Refrigerated.

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Nutrition: Per 100 gm.: Energy 73 Kcal (calories) or 288 k.J., protein 3.0 gm, carbohydrate 11.45 gm, fat 1.8 gm, cholesterol 0.0 gm.

New Product–Documentation: The Vegan. 1988. Summer. p. 16. The product launch has been delayed until early July by a change of name–from Soya Yogart–following a challenge from a competitor. A black-and-white photo shows the label of Granose Soya Yogart.

Form filled out and four Labels (cups & tops) sent by Granose Foods Ltd. 1990. June 13. States that the product (spelled Yogert), made by Bridge Farm Dairies, was introduced in Sept. 1988. It has never been made by DE-VAU-GE. It is Ultra Heat Treated The shelf life is 15 weeks. The product is sold mainly to the health food trade. It now comes in the four flavors shown above. A color illustration on the foil lid shows the main fruit used in a white square with a blue border against a pastel background. The name of the fruit is written along the bottom of the square. A "Best before" date is stamped atop each lid. The front of the cup contains a similar but more elaborate drawing. "Best served chilled."

Talk with Ray Pierce of Genice Foods Ltd. 1994. Feb. 4 and 8. Granose Soya Yogert was made by Genice starting in late 1990 in 4 flavors–peach melba, strawberry, apricot, and blackcurrant & apple. Granose became part of the Haldane Foods Group in Jan. 1991.

2730. Hubbard, Richard W.; Filler, K.M.; Sanchez, A. 1988. Plasma amino acid response to three different test meals in normocholesterolemic and hypercholesterolemic male subjects (Abstract). *American J. of Clinical Nutrition* 48(3S):920. Supplement. Poster session abstracts. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. Address: Depts. of Nutrition and Pathology, Loma Linda Univ., Loma Linda, California.

2731. Hunt, Isabelle F.; Murphy, N.J.; Henderson, C. 1988. Food and nutrient intake of Seventh-day Adventist women. *American J. of Clinical Nutrition* 48(3S):850-51. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [8 ref]
• ***Summary:*** "No correlation between dietary intake and bone mineral content was observed. These findings are compared with those in a study on Oregon vegetarian women." (Shultz & Leklem 1983). Address: School of Public Health, UCLA, Los Angeles, California 90024.

2732. Johnston, Patricia K. 1988. Counseling the pregnant vegetarian. *American J. of Clinical Nutrition* 48(3S):901-05. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [16 ref]
• ***Summary:*** Suggests a simple and respectful ten-step approach. 1. Establish rapport. 2. Reinforce positive nutrition practices... 9. Simplify the information given. 10. Follow up nutrition practices and status. Address: Dep. of Nutrition, Loma Linda Univ., Loma Linda, California.

2733. Johnston, P.K.; Hunt, I.F.; Murphy, N.; Baylink, D.J.; Clemens, R.A. 1988. Plasma osteocalcin (OC) and bone mineral content (BMC) in postmenopausal vegetarian women (Abstract). *American J. of Clinical Nutrition* 48(3S):920. Supplement. Poster session abstracts. Sept. Proceedings of the First International Congress on Vegetarian

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Nutrition. Held 16-18 March 1987 at Washington, DC. Address: UCLA School of Public Health, Los Angeles, Jerry Pettis Memorial Veterans Administration Hospital, Loma Linda, and Calreco, Inc., Van Nuys. All: California.

2734. Kelsay, June L.; Frazier, C.W.; Prather, E.S.; Canary, J.J.; Clark, W.M.; Powell, A.S. 1988. Impact of variation in carbohydrate intake on mineral utilization by vegetarians. *American J. of Clinical Nutrition* 48(3S):875-79. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [21 ref]
Address: 1. Carbohydrate Nutrition Lab., Beltsville Human Nutrition Research Center, Agricultural Research Service, USDA, Building 307, BARC-East, Beltsville, Maryland 20705.

2735. Marsh, Alice G.; Sanchez, T.V.; Michelson, O.; Chaffee, F.L.; Fagal, S.M. 1988. Vegetarian lifestyle and bone mineral density. *American J. of Clinical Nutrition* 48(3S):837-41. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [18 ref]
Address: 1. Prof. of Home Economics, Emeritus, Andrews Univ., Berrien Springs, Michigan 49104.

2736. Mutch, Patricia B.; Johnston, Patricia K. 1988. Foreword and dedication. *American J. of Clinical Nutrition* 48(3S):707. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [1 ref]
• ***Summary:*** "Vegetarian diet patterns and their effects on health have been the subject of increasing scientific interest in recent years. From a limited state of knowledge reviewed in 1962 by Hardinge, Crooks, and Stare (1) that covered virtually all known research, we have reached a significantly more sophisticated level of understanding. Being a vegetarian today is not automatically suspect of producing malnutrition as it often was only three decades past. Evidence for specific health advantages of vegetarian diets in reducing risks of chronic disease has accumulated especially in the past decade. Yet concerns for certain types of vegetarian diets have also been well-documented...

"The second keynote speaker for the congress was to have been Roland L Phillips, whose careful epidemiologic studies on vegetarian populations and chronic diseases alerted nutrition scientists of the potential health benefits associated with some vegetarian dietaries. Tragically, just before the opening of the congress, Dr Phillips died in a sailplane accident. In recognition of the major contribution that he made to the study of vegetarian populations, these proceedings are dedicated to the memory of Roland L Phillips. His brilliant approach to complex research questions and his steadfast objectivity were traits that will be sorely missed by the research community." Address: 1. Dep. of Home Economics, Andrews Univ., Berrien Springs, Michigan; 2. Dep. of Nutrition, Loma Linda Univ., Loma Linda, California.

2737. Mutch, Patricia B. 1988. Biographical sketch of Roland L. Phillips. *American J. of Clinical Nutrition* 48(3S):708. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC.
• ***Summary:*** A photo shows Dr. Roland L. Phillips (1937-1987). He received his MD degree in 1964 from Loma Linda University. "After receiving his Doctor of Public Health degree from Johns Hopkins University [in Baltimore, Maryland], he served from 1971 to 1987 as Professor of Epidemiology at Loma Linda University [in California]. Here he was principal investigator and director of the Adventist Health Study that began in 1974... Roland was, in the view of his colleagues, one of the foremost cancer epidemiologists in this country, best known publicly for his research in cancer and lifestyle." He died tragically on 8 March 1987 in a sailplane accident. Address: 1. Dep. of Home Economics, Andrews Univ., Berrien Springs, Michigan.

2738. Mutch, Patricia B. 1988. Food guides for the vegetarian. *American J. of Clinical Nutrition* 48(3S):913-19. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [24 ref]
Address: PhD, RD, Dep. of Home Economics, Andrews Univ., Berrien Springs, Michigan 49104.

2739. Nieman, David C. 1988. Vegetarian dietary practices and endurance performance. *American J. of Clinical Nutrition* 48(3S):754-61. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [82 ref]
• ***Summary:*** Contains an interesting history of early research in this field, starting with the ancient Greek belief that good athletes should eat a lot of meat. During the mid-1800s, Liebig, the preeminent physiological chemist of his time, promoted the concept that energy for all muscular movement was produced by the oxidation of protein. But from the mid-to-late 1800s on, vegetarians repeatedly showed their superiority in endurance exercise, from bicycling to walking. The key to endurance for an athlete is to consume 70% of calories in the form of carbohydrates. Address: Dep. of Nutrition, School of Health, Loma Linda Univ., Loma Linda, California 92350.

2740. Nutter, R.L.; Kettering, J.D.; Gridley, D.S.; Shultz, T.D.; Ng, S.W.L. 1988. Sprague-Dawley rats fed milk or beef protein: Differences in response to 1,2 dimethylhydrazine

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(DMH) carcinogenesis (Abstract). *American J. of Clinical Nutrition* 48(3S):920. Supplement. Poster session abstracts. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC.
Address: Depts. of Microbiology and Biochemistry, Loma Linda Univ., Loma Linda, California.

2741. Ringstad, J.; Fønnebø, V. 1988. The Tromsø Heart Study: Selenium in a low-risk population for cardiovascular disease and cancer. *American J. of Clinical Nutrition* 48(3S):925 (Abst. #P21). Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC.
Address: Inst. of Community Medicine, Univ. of Tromso, Tromso, Norway.

2742. Sanchez, A.; Hubbard, R.W.; Loder, C.; Sabaté, J. 1988. Plasma insulin and glucagon response to dietary protein in men (Abstract). *American J. of Clinical Nutrition* 48(3S):920. Supplement. Poster session abstracts. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC.
Address: Program in Nutrition School of Health, Loma Linda Univ., Loma Linda, California.

2743. Shultz, Terry D.; Rose, David P. 1988. Effect of high-fat intake on lactogenic hormone bioactivity in premenopausal women. *American J. of Clinical Nutrition* 48(3S):791-94. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [42 ref]
Address: 1. Dep. of Biochemistry, School of Medicine, Loma Linda Univ., Loma Linda, California 92350.

2744. Snowdon, David A. 1988. Animal product consumption and mortality because of all causes combined, coronary heart disease, stroke, diabetes, and cancer in Seventh-day Adventists. *American J. of Clinical Nutrition* 48(3S):739-48. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [35 ref]
• ***Summary:*** Adventists are prohibited from using tobacco, alcoholic beverages, and pork. They are discouraged from consuming other meats, fish, eggs, hot spices, pepper, and caffeine-containing beverages. Address: Div. of Epidemiology, School of Public Health, Univ. of Minnesota, Minneapolis, MN.

2745. Thomas, E.C. 1988. Consumption of sodium, iron, and zinc by vegan and lacto-ovo-vegetarian Seventh-day Adventist college students (Abstract). *American J. of Clinical Nutrition* 48(3S):925 (Abst. #P24). Supplement. Poster session abstracts. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC.
Address: Food Science and Animal Industries, Alabama A&M Univ., Normal, Alabama.

2746. Tylavsky, Frances A.; Anderson, John J.B. 1988. Dietary factors in bone health of elderly lactoovovegetarian and omnivorous women. *American J. of Clinical Nutrition* 48(3S):842-49. Supplement. Sept. Proceedings of the First International Congress on Vegetarian Nutrition. Held 16-18 March 1987 at Washington, DC. [42 ref]
• ***Summary:*** Bone mineral content and bone density were determined using a Norland single-beam bone densitometer. Vegetarianism and protein intake were positive contributors to bone health. Phosphorus was a negative contributor. Current calcium was not a significant contributor. Address: Dep. of Nutrition, School of Public Health, Univ. of North Carolina, Chapel Hill, North Carolina 27514.

2747. Freedman, Alix M.; Gibson, Richard. 1988. Brand news–Philip Morris's bid for Kraft could limit product innovation: Consumers and rivals fear dominance of shelf space and advertising media. Don't expect a drop in prices. *Wall Street Journal.* Oct. 20. p. A1, A6.
• ***Summary:*** Three years ago General Foods was acquired by Philip Morris. Now the cigarette giant is bidding $11 billion for Kraft Inc., which owns some of America's best known brands

A pie chart shows 1987 sales for the new company which has two parts and six segments: (1) Kraft Foods $9.9 billion, including: Consumer foods $4.5 billion (Kraft, Miracle Whip topping, Parkay margarine, Velveeta cheese, Breyer's ice cream, Breakstone dairy products, Frusen Gladje, Budget Gourmet frozen dinners, Tombstone pizza), Food service and ingredients $3.0 billion, International Foods $2.3 billion. (2) Philip Morris $27.7 billion, including: Brewing $3.1 billion (Miller, Lite, Matilda Bay wine coolers), General Foods $10.0 billion (Maxwell House coffee, Birds Eye frozen foods, Jell-O, Entenmann's, Oscar Meyer meats, Post cereals, Ronzoni), Cigarettes $14.6 billion (Malboro, Benson & Hedges, Virginia Slims).

A table shows the most profitable consumer food companies, with annual sales (in millions of dollars) and operating profit margin for each, in descending order of operating profit margin (earnings before taxes, interest and depreciation as a percentage of sales), as follows: Kellogg ($3,793, 21.2%), Ralston Purina ($5,868, 16.3%), Heinz ($5,244, 15.7%), Hershey Foods ($2,434, 15.0%), RJR Nabisco (food operations only; $9.420, 13.7%), Campbell Soup ($4,869, 12.7%), Quaker Oats ($5,330, 12.0%), General Mills ($5,179, 12.0%), Borden ($6,514, 11.7%), Pillsbury ($6,191, 11.1%), Kraft ($9,876, 9.5%), General Foods (Philip Morris; $9,946, 8.1%), Sara Lee ($10,424, 7.7%).

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In 1984 Kraft acquired Celestial Seasonings, the herbal-tea company, then aggressively extended the line to include many new flavors, and put the brand on mixed seasonings, salad dressings, and even cosmetics. This proved to be a blunder, so last year Kraft sold Celestial (barely profitable despite $38 million in sales) to a management group. Address: Staff reporter.

2748. **Product Name:** Loma Linda Nuteena (Meatless Luncheon Loaf or Cold Cuts Prepared from Raw, Ground Peanut Butter and Soy Flour).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, CA 92515.
Date of Introduction: 1988 October.
Ingredients: Water, raw peanut butter, soy flour, rice flour, corn flour, natural (vegetable) flavors, salt, onion powder, L-lysine, DL-methionine, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 19 oz (538 gm) can.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: 1988: Per ½ inch slice (2.4 oz–67 gm): Calories 160, protein 8 gm, carbohydrate 5 gm, fat 12 gm, cholesterol 0 mg, sodium 120 mg, potassium 200 mg.
New Product–Documentation: Label sent by Loma Linda Foods. 1988. Oct. 5. The ingredients are now: Water, raw peanut butter, soy flour, rice flour, corn flour, natural (vegetable) flavors, salt, onion powder, L-lysine, DL-methionine, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin). This product was introduced in 1963. But note that a canned product named Nuteena was also available in June 1934. It is not clear whether or not it contained soy in 1934.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27. The ingredients are the same as those shown above. The soy flour is probably textured.

Note: This product was first introduced in 1949, but did not contain textured soy protein at that time.

2749. *Dispatch* (*Columbus, Ohio*). 1988. Worthington Foods to build Zanesville unit. Nov. 12. p. 9D. Business section.
• ***Summary:*** "Worthington Foods Inc. will construct a frozen foods manufacturing plant in Zanesville, Ohio, early next year. The Worthington-based company has signed a letter of intent to purchase 12 acres in the Zanesville Industrial Park, where it will build a 50,000-square-foot plant. The project will cost about $10 million, said Dale E. Twomley, president and chief executive officer at Worthington Foods. Twomley said the company... plans to begin production in the fourth quarter of next year. Initially, the plant will employ 40 to 50 people and manufacture Scramblers, the company's frozen egg product. 'But we may do some future expansion there later,' Twomley said."

2750. Amrit Protein Foods Ltd. 1988. Display ad: An investment in Amrit–an investment in prosperity. *Times of India* (*The*) (*Bombay*). Nov. 21. p. 11.
• ***Summary:*** Amrit Protein Foods Limited, "An exciting new venture," is promoted by Amrit Banaspati Co. Ltd. Amrit Protein equity issue opens 12 Dec. 1988.

"A complete line of fitness foods: Health and fitness are making big headlines these days. And to meet the growing demand for a new generation of fitness foods, Amrit Protein will manufacture a wide range of products–Soya Milk, Soya Milk Beverages, Soya Dessert, and High Quality Soya Paneer."

"Proven technology from world leaders:" Amrit has purchased its soymilk making system from STS–Soya Technology Systems–a division of the world renowned Danish Turnkey Dairies.

"Big success in the West! Products based on this technology have been a phenomenal success in the West. In fact, a plant set up as recently as 1985 near Hamburg has substantially increased its capacity [DE-VAU-GE, Lueneburg, West Germany].

"Products backed by extensive research:" The products are a result of extensive market research; they have been thoroughly tested in consumer taste trials.

"The market is ready and waiting:... Amrit Protein will open up a whole new dimension in the Indian consumer market.

"And you have an opportunity to share our bright future: To meet a part of the finance required for the project, Amrit Protein is making a public issue of 24,70,000 Equity Shares of Rs. 10 each for cash at par." The names and logos of the three Indian companies managing the issue are given.

The bottom half of this horizontal ad is a cartoon illustration with many stylized adults and children admiring the various uses of soy protein products such as tofu cubes on a dish and a dessert in a tall-stemmed glass. Address: Amrit Nagar, G.T. Road, Ghaziabad 201 009 (U.P.) [Uttar Pradesh].

2751. *Washington Post–Health* (*weekly magazine supplement*). 1988. The healthful lives of Adventists. Nov. 22. p. 7.
• ***Summary:*** Seventh-day Adventists are healthier than most Americans according to a study presented last week by Jan W. Kuzma at the American Public Health Association's annual meeting. Kuzma is a professor of vital statistics at Loma Linda University in California. "Kuzma found that a 35-year-old male Seventh-day Adventist was likely to live to be 82, nine years older than the average California white male. For females, the advantage was 7.6 years longer."

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2752. Kloss, Jethro. 1988. Back to Eden: A human interest story of health and restoration to be found in herb, root, and bark. Revised and expanded second edition. Back to Eden Publishing Co., P.O. Box 1439, Loma Linda, CA 92354. xxviii + 1007 + 20 p. Illust. Index. 21 cm. Kloss Family Heirloom Edition. Index.

• ***Summary:*** One of the most creative and original sources of early soyfoods recipes, which include "Soybean Cream" and "Soybean Ice Cream." This revised edition contains all essential material from the original text of this classic work on healing herbs, home remedies, diet, and health, but it has been reorganized, re-typeset and re-indexed to make it easier to use and more contemporary. Three hundred pages of natural health information have been added. Old terms have been explained and updated. There are also 16 pages of photographs and 16 pages of new of family recollections by Jethro Kloss' daughter (especially interesting), son, and granddaughter. These add greatly to the story of his life and work. For example, his daughter, Promise, states (p. xv):

"Next the Klosses became interested in the self-supporting work being conducted in the south and they visited some of the schools in North Carolina and Tennessee. About 1911 they sold the sanitarium in Minnesota and moved to Fountain Head, Tennessee, where their youngest daughter, Naomi, was born in 1913. Here they bought a 250-acre farm, built a large house and barn, and raised many kinds of fruits and vegetables. They also raised Shetland ponies for a time.

"A later development in good health was his creation of a significant health food manufacturing operation in Amqui, Tennessee after receiving a request from the owners to take charge of their food factory. While he was operating this factory he would be up at two, three, or four o'clock in the morning; as early as necessary to build the fires for the steam cooker or the large oven and whatever else needed to be done to have everything in readiness for the workers to begin the day processing, canning, or baking. When that big oven was hot, he would often pop into it some special weekend treat for his family–some delicious health coffee cake or raisin buns like no one else could make, for he was an excellent baker.

"Before this factory was sold to the Nashville Agricultural Normal Institute, he was shipping health foods all over the United States and Canada. It was also during this time and at this place that he originated many new health food recipes. This establishment later became a part of what has since become the well-known Madison College near Nashville, Tennessee."

Photos show: (1) Portraits of Wilhelm and Sofia Kloss, parents of Jethro Kloss. They had 11 children, born between 1848 and 1868. Jethro was the 9th child, born April 27, 1863. (2) Jethro Kloss in 1900 as a young minister, healer, and teacher. (3) Jethro Kloss with Carrie Stilson, his first wife whom he married in 1901. Tragically she died in 1905. (4) Promise Kloss, born to Carrie and Jethro in 1903, shown as a young girl with her father. (5) Amy Pettis Kloss, Jethro's second wife. They were married in 1907. (6) Children of Jethro and Amy: Lucille Kloss (1908-1929). Eden Pettis Kloss (1910-). (7) Naomi Joan Kloss at 17 months of age. Jethro's youngest child, she was born in 1913. (8) In 1907 Jethro and Amy opened this comprehensive health and medical center in St. Peter, Minnesota, which they named The Home Sanitarium. (9) Jethro Kloss giving a hydropathy treatment at The Home Sanitarium; it was open from 1907 to 1912. (10) Amy operating the women's hydropathy treatment room. (11) Manufacturing malta, the great cereal syrup from pure wheat starch and barley. (12) In 1915, from their food factory in Nashville, Tennessee, the Klosses shipped foods throughout the United States and Canada. Here 4 people are seen working at a table. (13) Patients, family and friends enjoyed health foods caned by the Klosses in this outdoor "factory," which was a commercial enterprise as well. (14) This interesting illustration shows an aerial view of the Nashville Sanitarium-Food Factory with a train and 3 sets of train tracks in front. (15) A 1920 advertisement for utensils (such as 2 hand grinders for flour or nuts) sold by the Jethro Kloss Health Food Company in Brooke, Virginia. (16) Menu for a demonstration vegetarian dinner given by Jethro Kloss at the Dodge Hotel in Washington, DC, on March 27, 1933. "Sprouted soy beans" are on the menu. "The pumpkin pie and strawberry sundae were made with soy milk" (p. xvii). (17) A 1926 photo of Promise Kloss (Moffett) at age 23. (18) A 1935 snapshot of Jethro's only son, Eden Pettis Kloss. (19) Jethro's daughter, Promise, with typewriters won in typing contests during the 1930s. (20) Proud grandfather, Jethro, holding his only grandchild, Doris Joyce, in 1929. (21) Jethro's youngest child, Naomi Kloss Engelhard, mother of Doris Joyce. (22) "Promise Kloss Moffet, Jethro's first child, shares food preparation tips with Doris Joyce, his granddaughter, in 1934. (23) "A group of letterheads dating back to 1904 showing some of the variety of enterprises engaged in by Jethro Kloss during his lifetime." 1922 Feb. 27–Jethro Kloss Health Foods Company (Brooke, Virginia). Undated–Brookside Mercantile Company (Brooke, Virginia). Undated. Branch of the Battle Creek (Mich.) Sanitarium (Superior, Wisconsin). A full line of Battle Creek Sanitarium Health Foods. J. Kloss & Co. Grove Contractors, Farmers and Truck Farmers. Jethro Kloss Publications (Washington, DC). Back to Eden Magazine. Jethro Kloss, Medical Evangelist. (24) Promise Kloss Moffet, with a large, framed photograph of her father, Jethro Kloss, on her 80th birthday, Aug. 16, 1983. (26) Great-grandchildren of Jethro Kloss: Stephen Kloss Gardiner. (27) Nancy Kloss (Bramlett).

The book has been published continuously by the Kloss family since 1946.

Contents: Section I: Natural health. 1. Personal experiences. 2. Soil preparation and farming. Section II: Herbs for healthful living. 1. History of herbal medicine. 2.

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Herbs. 3. General directions for preparation and use of herbs. 4. Tonic herbs. 5. Herbs used to treat disease. 6. Medicinal trees. 7. Specific herbs for various medical problems. Section III: Treating diseases with herbs. Treating diseases with herbs. Special notice. Section IV: Your body and its needs. The digestive section. 1. The importance of good nutrition. 2. Carbohydrates. 3. Fats. 4. Protein. 5. Mineral elements in the body. 6. Vitamins. 7. Water. 8. Fresh air, exercise, and sleep. Section V: Your foods. 1. Fruits. 2. Vegetables. 3. Fiber (to "help keep you regular"). 4. Oatmeal. 5. Nuts. 6. Breads and refined flour. 7. Meat and vegetarianism. 8. Milk. 9. Salt. 10. Garlic. 11. Healthful diets. 12. Obesity. 13. Fasting and healthful eating. Section VI: Food preparation. 1. Useful hints to preserve vitamins. 2. Kloss's favorite health recipes. 3. Cooking under steam pressure. 4. Aluminum cooking utensils. 5. Baking and breads. 6. Preparing wholesome desserts and beverages. Section VII: Effects of polluted and adulterated foods on the body. 1. Adulteration of food. 2. Health-destroying foods. 3. Dangers from disease in animals. Section VIII: Water and good health. 1. History of water cure. 2. Using water to preserve health. 3. Water's effects and use in treatment. 4. Water's effects on sickness. 5. Baths and water treatments. 6. Compresses and fomentations. Section IX: Skills in caring for the sick. 1. Nursing. 2. Massage. 3. High enemas. 4. The value of charcoal. Appendix: Glossary of old-fashioned medical terms. Glossary of medical properties of herbs. General tables.

A press release accompanying the new revised, 2nd edition notes: Back to Eden was written by Jethro Kloss during the 1920s and 1930s, with help from Promise and Eden, his daughter and son. It was first published in 1939, when the author was 76 years old. It has since sold more than 3 million copies. Kloss died in 1946 after retiring to Tennessee. Message Press, a small business in a rural community not far from Chattanooga, continued to publish Back to Eden for more than 25 years after his death, under the direction of Promise, his daughter. Unfortunately in 1967 the copyright expired during the confusion attendant to the illness and death of the book's country publisher. Promise's attempt to renew the copyright in Jan. 1968 was too late. In 1971 other publishers pirated Back to Eden. Address: Loma Linda, California.

2753. *SanCo News* (*Sanitarium Health Foods Co., Australia*). 1988. Now the world thinks we're as good as gold: The Gold Food Oscar for So Good. Dec.
• ***Summary:*** "So Good was honoured at the 1988 AIDA-SIAL International Food Oscars held recently in Paris. As one of only 5 products representing Australia, So Good won a Gold Oscar by winning its category for the world.

"A total of 16 countries participated in the competition. An international panel of judges evaluated hundreds of products based on their uniqueness, appeal and sales performance. So Good won the 'non-alcoholic beverages' category thereby establishing itself as the best new product, in its category, in the world for 1988."

"The international award has created many enquiries about So Good from interested parties around the world." Address: Wahroonga, Australia.

2754. **Product Name:** AdeS (Soymilk) [Natural, Chocolate, Orange, or Apple].
Foreign Name: AdeS {Alimento de Soya Liquido Sabor Natural}.
Manufacturer's Name: Alimentos de Soja S.A. (A de S).
Manufacturer's Address: Plant: La Cocha, Tucuman, Argentina; Offices: Avenida Vélez Sarsfield 1744 (1285), Buenos Aires, Argentina. Phone: 760-0307 or (541) 21-8228 (8964). Fax: (541) 21-9632.
Date of Introduction: 1988.
Ingredients: Spring water, whole selected soybeans, sugar, authorized flavors, pectin (as an emulsifier), and added vitamins A and D.
Wt/Vol., Packaging, Price: 200 ml and 1 liter Tetra Brik Aseptic cartons.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Letter from Monica Kjellker Gimre of Alfa-Laval. 1990. May 30. Alfa-Laval sold a complete soymilk plant to Alimentos de Soja in Argentina. It had a capacity of 4,500 liters/hour and began operation in 1988. Plant: Ruta Prov. 344 Km 7.5, Dto. La Cocha, 4162 Pola. Tucuman, Argentina. Office: Suipacha 570, 3rd floor "B", Buenos Aires 1008, Argentina. Address:

Note: This company is owned by Lic. Alejandro Gutiérrez Herrera, a wealthy landowner who negotiated to buy the Alfa-Laval plant with Italian aid money. When the money never came, he purchased the plant out of his own pocket. Business is said to be good and a second plant is being considered. The sales manager in 1989 was Ricardo Shaw.

SoyaFoods. 1991. Spring. p. 6-7. "AdeS Alimentos de Soja–Soya beverages from Argentina." See in-depth story on the product and company. The earliest product seen containing soymilk and fruit juice.

Product with Label (Natural) brought by Marina Li, from Oaxaca, Mexico. 2004. April 2. Aseptic Tetra Brik carton. Blue, green, white, yellow, red, and black on white. Ingredients: Water, selected soybean seeds, sugar, salt, natural flavors, thickener, soy lecithin, vitamins A & D. The product is now made by Unilever de Mexico, S.A. de CV., Tepalcapa No. 2 Col. Rancho Sto., Domingo, Tutitlán, Edo de México, C.P. 54900. Made in Mexico. Logo: Seal of approval, American Soybean Association.

Color photo brought by Marina Li from Ipanema, Rio de Janeiro, Brazil. 2006. April. Shows many Tetra Brik cartons of AdeS on the shelves of The Natural "a quilo" with lots of vegetarian options–Rua Barao de Torre, next door to Hostel Ipanema. On the same shelves are many cans of Soymix.

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AdeS flavors include uva (grape, berry), maça (apple), chocolate, laraja (orange), and pêssego (peach).

Visit with Carlos Planes (of Buenos Aires, Argentina) at Soyinfo Center in Lafayette, California. 2012. Feb. 23. He brought this colorful sell sheet in a scrapbook. 5 x 6 inches. Written across the bottom: The drink that is full of Energy. A photo shows 10 cartons of Ades–Two sizes with 5 flavors each: Natural, mandarin orange / tangerine, pineapple, apple, and orange.

2755. **Product Name:** [GranoVita Organic Tofu Vegetable Patties {Meatless}].
Foreign Name: GranoVita Bio-Tofu Gemuese Bratling.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1988.
Ingredients: Organic tofu (water, organically grown soybeans, calcium chloride), whole soybean product, vegetable oils and fats in changing amounts, fine bread crumbs (*Paniermehl*), mushrooms, paprika, carrots, leeks, wheat protein [gluten], sunflowerseeds, wheat grits, oat flakes, soy sauce, onions, egg protein, herbs, seasonings (*Wuerzmittel*), spices (*Gewuerze*).
Wt/Vol., Packaging, Price: 125 gm vacuum pack poly bag, 3 pieces per bag. Retails for DM 2.98.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 13.1 gm, fat 10.2 gm, usable carbohydrates 19.5 gm, calories 222. 1 BE (Broteinheit, or diabetic exchange) = 61.5 gm.
New Product–Documentation: Label sent by Anthony Marrese. 2.75 by 5 inches. Red, green, white, and black on yellow. "Contains no flesh. Simply fry on both sides in a pan." A photo shows three ready-to-eat patties on a plate with green peas, potatoes, a tomato, and parsley. Exklusiv Neuform certification symbol.

Label sent by DE-VAU-GE. 1990. June 11. Date for GranoVita Tofu-Gemuesebratling given as 1988.

2756. **Product Name:** [GranoVita Organic Tofu Sausage (Seasoned, or with Vegetables)].
Foreign Name: GranoVita Bio-Tofu (Gewuerzrolle, or Gemueserolle).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1988.
Ingredients: Seasoned: Organic tofu (water, organically grown soybeans, calcium chloride), water, vegetable oil, egg protein, paprika, seasonings, spices.
Wt/Vol., Packaging, Price: 200 gm poly sausage chub, inside a cellophane bag.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 10.1 gm, fat 5.8 gm, usable carbohydrates 20.3 gm, calories 173. 1 BE (Broteinheit, or diabetic exchange) = ca. 60 gm.

New Product–Documentation: Manufacturer's brochure. 1989? "Bio-Tofu for the High Quality Kitchen." p. 4-5. A color photo shows the Labels of both flavors. Form filled out and Labels sent by DE-VAU-GE. 1990. June 11. These products were introduced in 1988. Labels. 2 by 4.75 inches. Self adhesive. Red, green, yellow, black, and peach (or greenish yellow) on white. Each contains an illustration of a pagoda on the front. "Practically cholesterol free. Gluten free. Contains no flesh. To prepare, pan fry or grill." Neuform certification symbol.

2757. **Product Name:** [GranoVita Green Rye & Cheese Patties].
Foreign Name: GranoVita Gruenkern Kaese-Bratling.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk

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GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1988.
Ingredients: Water, vegetable oils and fats in changing proportions by weight, green rye, cheese, fine bread crumbs, onions, egg protein, seasonings (Wuerzmittel), soy sauce, sea salt, spices (Gewuerze).
Wt/Vol., Packaging, Price: 3 patties weigh 125 gm.
Nutrition: Per 100 gm.: Protein 10.9 gm, fat 11.6 gm, usable carbohydrates 29.3 gm, calories 265. 1 BE (Broteinheit, or diabetic exchange) = 41 gm.
New Product–Documentation: Form filled out and Label sent by DE-VAU-GE. 1990. June 11. This product was introduced in 1988. Label: 2.75 by 5 inches. Red, blue, green, white, black and yellow-beige. "Contains no flesh. Simply fry on both sides in a pan." A photo shows three ready-to-eat patties on a plate with Brussels sprouts, potatoes, and parsley. Exklusiv Neuform certification symbol. A new version of this, probably introduced in 1990, is named GranoVita Gruenkern Käsebratling in Champignonsauce mit Gemuese-Reis; the patties come in a mushroom sauce with vegetables and rice.

2758. **Product Name:** Granose Vegetarian Wholefood Kitchen: Soya and Mushroom Burgers.
Manufacturer's Name: Granose Foods Ltd. (Distributor). Made in Denmark by Nutana Helsekost.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1988.
Ingredients: Soya protein, maize oil, mushrooms, water, wholemeal breadcrumbs, egg protein, onions, wheat flour, sea salt, vegetable flavouring.
Wt/Vol., Packaging, Price: 225 gm paperboard box.
How Stored: Frozen.
Nutrition: Per 100 gm.: Energy 250 Kcal (calories), protein 11.5 gm, carbohydrate 23.6 gm, fat 12.8 gm, cholesterol 0.0 gm.
New Product–Documentation: Form filled out and Label sent by Granose Foods Ltd. 1990. June 13. States that the frozen product, made by Nutana, was introduced in 1988 and uses soya flour as the main protein ingredient. Label. 8.5 by 4.25 by 1 inch. Paperboard box. Blue and white on gray. Photo on front panel shows a sliced, ready-to-eat burger on a plate with ketchup, green beans, and fried potatoes. "No artificial colours or preservatives... Do not re-freeze once thawed." Back panel: "Cooking instructions: Direct from freezer, shallow fry in oil for 4 minutes each side or grill for 10 minutes each side. Serving suggestion: Serve with sauteed potatoes and vegetables or garnish in a wholemeal bun."

2759. **Product Name:** Granose Soya Margarine (Dairy Free).
Manufacturer's Name: Granose Foods Ltd. (Distributor). Made in Denmark by Nutana Helsekost.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1988.
New Product–Documentation: Form filled out by Granose Foods Ltd. 1990. June 13. States that the product, made by Nutana, was introduced in 1988.

2760. **Product Name:** Granose Soyagen: Soya Milk Powder (For Adults).
Manufacturer's Name: Granose Foods Ltd. (Importer-Marketer). Made in West Germany by DE-VAU-GE.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England. Phone: 0923-672281/2.
Date of Introduction: 1988.
Ingredients: (1990): Soya proteins (instant), corn oil, malt, starch, calcium carbonate, vegetable emulsifier: lecithin, sea salt, natural flavourings, vitamins E, B-1, B-2, B-12.
Wt/Vol., Packaging, Price: 350 gm box.
How Stored: Shelf stable.
Nutrition: Per 100 gm.: Protein 21 gm, fat 26 gm, carbohydrate 45 gm, calcium 420 mg, phosphorous 200 mg, iron 3.5 mg.
New Product–Documentation: Form filled out and Label sent by Granose Foods Ltd. 1990. June 13. States that product was introduced in 1967. Made by DE-VAU-GE. Address on label is Stanborough Park. Label. 1990. 5.5 by 8 by 1.75 inches. Paperboard box. Black, red, yellow, and dark green on white and light green background."Contains no animal produce. Lactose free. Gluten Free. The vegetable Lactose-free composition of Granose 'Soyagen' Soya Milk Powder makes it easy to digest and suitable for people with an allergy to cows' milk." Illustration on front panel shows a glass of milk in front of green soybean leaves and pods. Side panel: "Preparation: Granose Soya Milk Powder dissolves instantly in hot or cold water. Standard Mix 1 part powder to 6 parts water (40 gm powder to ¼ litre water). Suitable for use in: Puddings, Custard, Yogurts, Soups, Sauces, etc." Note: This was the earliest known soymilk made in Europe for adults that was fortified with calcium.

2761. Linkosalo, E. 1988. Dietary habits and dental health in Finnish Seventh-day Adventists. *Proceedings of the Finnish Dental Society* 84:109-15. *

2762. **Product Name:** Loma Linda Vege-Burger (Meatless Hamburger–With Wheat Gluten and Soy Protein Isolate).
Manufacturer's Name: Loma Linda Foods.
Manufacturer's Address: 11503 Pierce St., Riverside, California.
Date of Introduction: 1988.
Ingredients: In 1988: Wheat gluten, water, soy flour, oat flour, wheat flour, natural (vegetable) flavors, caramel

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color, salt, dextrose, soy protein isolate, onion powder, L-lysine, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).
Wt/Vol., Packaging, Price: 19 oz can. Retails for $2.13 (12/80).
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per ½ cup (3.8 oz–108 gm): Calories 110, protein 22 gm, carbohydrate 4 gm, fat 1 gm, cholesterol 0 mg, sodium 190 mg, potassium 110 mg.
New Product–Documentation: Label for Vege-Burger sent by Loma Linda Foods. 1988. Oct. 5. Ingredients: Wheat gluten, water, soy flour, oat flour, wheat flour, natural (vegetable) flavors, caramel color, salt, dextrose, soy protein isolate, onion powder, L-lysine, vitamins (niacinamide, D-calcium pantothenate, thiamine mononitrate, pyridoxine hydrochloride, riboflavin, cyanocobalamin).

Note: This product was first introduced in 1960. It was reformulated to include wheat gluten in 1971, and soy protein isolate by 1988.

2763. Sumbureru, D. 1988. The influence of lifestyle on longevity among black Seventh-day Adventists in California: An epidemiologic approach. DrPH (Doctor of Public Health) thesis, Loma Linda University, Loma Linda, California. * Address: Loma Linda Univ. School of Public Health.

2764. Alimentos Granix. 1988. Todos los días... Granix [Every day... Granix] (Portfolio). Avda. San Martin 4625 (C.P. 1602), Florida, Buenos Aires, Argentina. Eight inserts. Manufacturer's catalog. [Eng; Spa]
• ***Summary:*** *See next two pages.* Granix, founded in Argentina in 1938, manufactures healthful and natural foods. Today the company employs over 700 people and is expanding rapidly. It has two food plants in Argentina–in Florida and Bradero–with a combined surface area of 11,000 square meters. A fleet of 65 vehicles distributes the products.

The company's food product lines include: Crackers and biscuits, breakfast cereals, textured soy proteins, packed grains, spaghetti, and bakery products.

The 8 documents enclosed in this portfolio include: Great Plain crackers (*Granagua*). Unsalted crackers (*Sin Sal*). Bran Plus crackers (*Salvado*). Wheat Plus crackers (*Integrales*). Granix (in Spanish and in English). Address: Buenos Aires, Argentina. Phone: 760-0307.

2765. Walton, L.R.; Walton, J.E.; Scharffenberg, J.A. 1988. How you can live six extra years. Santa Barbara, California: Woodbridge Press Publishing Co. 121 p. No index. 22 cm. [93 endnotes]
• ***Summary:*** Health and longevity secrets enjoyed by the Seventh-day Adventists for a century could add six to twelve years or more to your own life. Based on university research. You can use these health practices to reduce your risk from killer diseases. Contains recipes and tables.

This is an unusual book, in that Chapter 1 (for example) contains page after page of statistics about the superiority of the diet and lifestyle of Seventh-day Adventists without citing the sources for these statistics. Moreover the contents of the 1988 edition appears to be the same as that of the 1981 edition.

Figure 2 is titled "Coronary death rate for Adventist men with various dietary habits compared with the general population." Total vegetarian Adventists (vegans) have only 14% the general coronary death rate, lacto-ovo vegetarians have 39% the general rate, and Adventists who eat meat have 56% the general rate."

Table 1 shows that Adventist men have a life expectancy of 77 years versus 71 years for California men. Adventist women have a life expectancy of 80 years versus 77 years for California women. Table 24 summarizes the Adventist lifestyle: No tobacco or alcohol. Vegetarian diet (which may include milk and eggs). No pork or pork products. Avoid caffeine, spices and spicy foods, hot condiments. Emphasize: Whole grains, fruits, nuts, vegetables, as fresh and naturally served as possible. Fresh air. Exercise. Enjoyment of nature. Trust in divine power.

Recipes include Scrambled tofu (p. 97). Chicken-style Soyameat with gravy sauce (p. 97). Soyannaise (with Soyagen powder, 107). Tofu salad dressing (p. 112). Address: 1. Attorney at Law, Bakersfield, California; 3. Bakersfield, California–M.D., Assoc. Prof. of Applied Nutrition, Loma Linda Univ., Loma Linda, California.

2766. **Product Name:** [Nutana Tofu with Chili Beans].
Foreign Name: Nutana Tofu Chili Boennegryde.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1988?
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Alfa-Laval. 1988, June. Soyfoods: Old traditions with new potentials. p. 9. Shows a color photo of the front of the can. Yellow and white on a red background.

2767. **Product Name:** [Nutana Tofu Stew].
Foreign Name: Nutana Kinesisk Tofugryde.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1988?
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Alfa-Laval. 1988, June. Soyfoods: Old traditions with new potentials. p. 9. Shows a color photo of the front of the can. Yellow and white on a red

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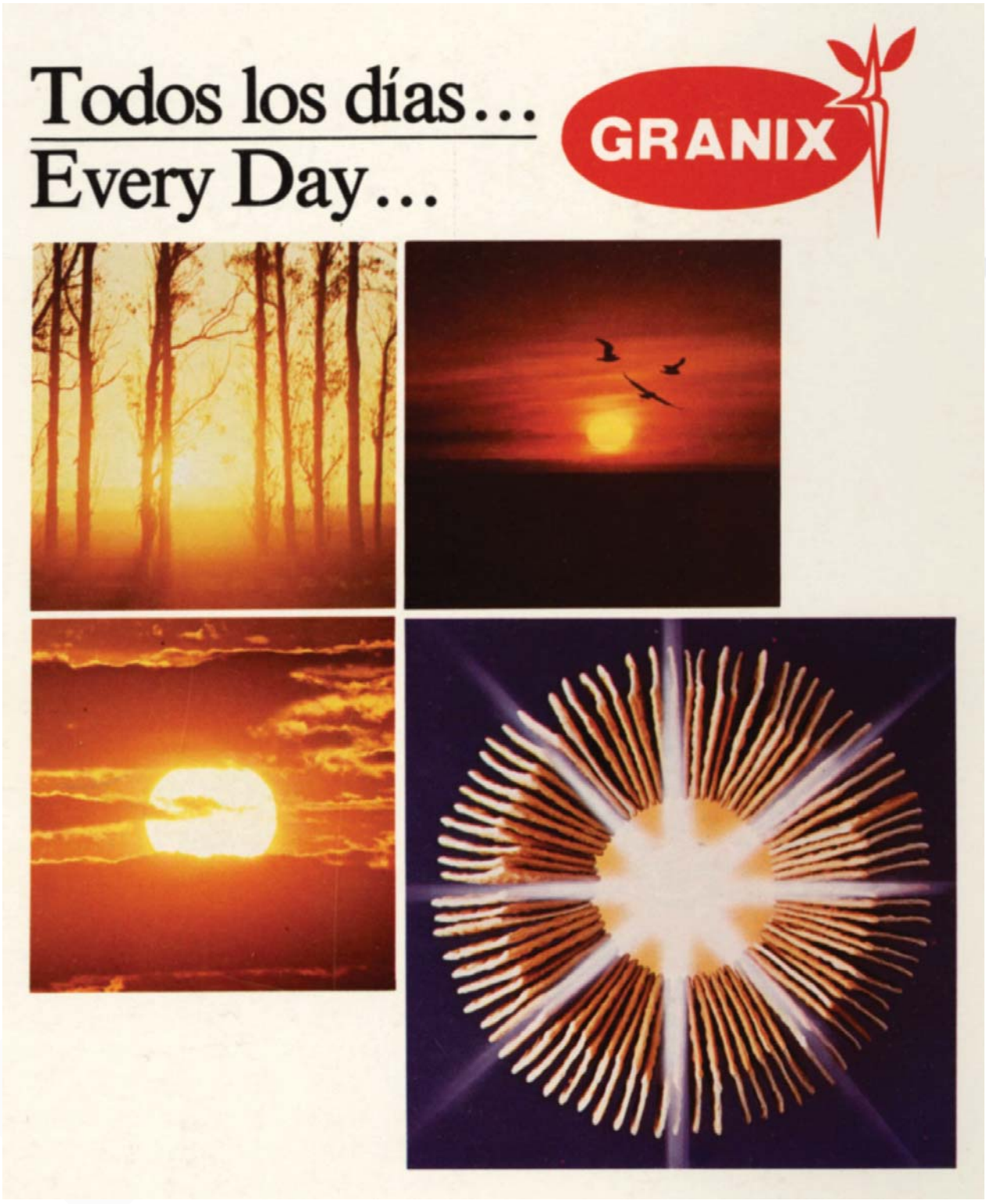

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background.

2767a. **Product Name:** . Morningstar Farms Country Breakfast: Scrambled Egg Product, Buttermilk Pancakes, and Vegetable Protein Links.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085.
Date of Introduction: 1988.
Ingredients: Breakfast Links: Textured vegetable protein (wheat gluten, soy isolate and concentrate), egg whites, soybean and/or corn oil,
partially hydrogenated soybean and cottonseed oil,...
Wt/Vol., Packaging, Price: 6.8 oz (191 gm) tray with plastic wrap..
How Stored: Frozen.
New Product–Documentation: Package with Label sent by Dr. Walter Wolf. 2000. Aug. 5. Copyright date is 1988. "Ready in just 3 min. Microwavable."

2768. Madden, Stephen. 1989. Have a heart [Phil Sokolof and National Heart Savers Assoc. denounce tropical oils]. *Fortune.* Jan. 16. p. 117.
• ***Summary:*** "Phil Sokolof, the multimillionaire owner of Phillips Manufacturing Co., a building supply manufacturer in Omaha, Nebraska, is giving food company executives a bad case of angina. Sokolof serves as president, and bankroller, of the National Heart Savers Association, an organization committed to lowering America's cholesterol. The group recently took out full-page ads in several big newspapers–including the New York *Times* and the *Wall Street Journal*–to pressure food companies to eliminate coconut and palm oils from their products. Such oils are linked to high cholesterol levels, which in turn can lead to heart disease.

"Sokolof's ads weren't subtle. They named ten products he says are "poisoning America" with their high concentrations of the two tropical oils. The offenders included Sunshine's Hydrox cookies, Nabisco's Triscuit crackers, Carnation's Coffee-mate, Procter & Gamble's Crisco [shortening], Kellogg's Cracklin' Oat Bran, and Pepperidge Farm's Goldfish crackers. Goldfish too? Say it ain't so, Phil.

"Sokolof, 66, began his cholesterol-busting crusade 22 years ago, after he had a heart attack. He has spent more than $2 million of his own money to publicize the dangers of cholesterol and to persuade food companies to use healthier ingredients like corn and soy oil."

2769. *LEC Newsletter.* 1989. Whole raw soybeans texturized. 13(1):7-8. Jan.
• ***Summary:*** Until now, the manufacture of textured plant proteins has required the use of defatted oilseed flours which have received little or no heat treatment. Some years ago Hank and Mark Sterner, while employed by Meals for Millions, developed an innovative LEC, the design of which was subsequently taken over by the Korean Inst. of Science and Technology [KIST] in Seoul. Paul Allred, of Riverside, California, is a retired Seventh-day Adventist who has worked extensively on extrusion processing with Wenger equipment in Mexico. He directed a project in Navojoa, Mexico, which now uses several X-25 extruders to make standard textured soy protein products. Recently Mr. Allred observed that the Sterner screw design permits texturization of oilseeds without removal of the oil. The resulting product has a typical textured soy protein structure and a pleasant roasted soy flavor. The extra oil in the product makes it much more palatable directly from the extruder. Allred recently made parts for a Wenger extruder located at Africa Basic Foods in Uganda. He believes these will enable that machine to texturize whole (undefatted) soybeans. Address: Colorado State Univ., Ft. Collins, Colorado.

2770. Worthington Foods, Inc. 1989. History of Worthington Foods: 50th anniversary banquet, 22 Jan. 1989 (Color videotape). 900 Proprietors Rd., Worthington, OH 43085-3194. 45:10 minutes. VHS.
• ***Summary:*** A fascinating and professionally-done story of this pioneering company's first half century.

Note: This is based on a 12-minute video into which historical slides and live speeches were integrated. The banquet was held in Worthington, with all the company's employees. Don Davenport's company in Southern California did most of the video production, in conjunction with the Adventist Media Center in Thousand Oaks, California. The latter has a TV program titled Lifestyles Magazine, which showed the video as a feature on Worthington. All shared the cost, with Worthington paying about $17,000, plus an additional $10,000 to get the expanded version. Address: Worthington, Ohio. Phone: 614-885-9511.

2771. Boeddeker, Ralph. 1989. Mit Tofu 100 Millionen Mark Umsatz: Das Reinheitsgebot fuer Deutsche Wurst ist gefallen–Naturkost-Hersteller rechnen mit Zuwachs [With tofu, sales of 100 million German marks: The standard of purity for German sausage has fallen–Natural-foods producers count on growth]. *Welt am Sontag* No. 7. p. 33. Feb. 12. Sunday. [Ger]
• ***Summary:*** Describes the very successful soymilk plant sold by Soya Technology Systems (DTD) to DE-VAU-GE in Lueneburg, West Germany. Michael Makowski, healthy looking, in his 50s, and managing director of the company, introduces a meatless banquet and explains that he has been a vegetarian for 30 years. The future for this producer of vegetarian foods looks very bright. Meatless sausages or those extended with soy are seen as becoming increasingly popular. The company is now approaching the 100 million

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mark sales level and employs 350 men and women. It is in the top 10 of the 70 manufacturers of natural foods in Germany, with a market share of about 10%. Each year it ships about 15,000 tons of natural foods from Lueneburg to the country's roughly 2,700 Reformhaeuser (natural/health food retail stores). The company makes an assortment of 300 vegetarian food products, mostly from cereal grains and soybeans. The latter, grown in the USA, Brazil, and China, offer many possibilities. They can be fashioned into spread for bread, milk, or tofu.

Makowski sees the market for tofu, which resembles Quark, as especially promising. It can be nicely seasoned with spices such as paprika, curry, soy sauce, and/or herbs, and made into meatless sausages. The Reformhaeuser pioneered in introducing non-dairy margarine, whole-grain bread, and Muesli to Europe. Makowski sees the next wave as being tofu boom products. A photo shows the company's 3-level soymilk plant that produces 20 million liters a year in 500 ml and 1 liter containers.

Note added by Anders Lindner, head of STS: Up to now the plant has produced soymilk and desserts. Soon they will also start to produce tofu sausages, yogurt, and pâtés.

Mr. Makowski, eyeing the big potential market for tofu products, is a bit worried that the big food heavyweights such as Unilever, Nestlé, Kraft, etc. might enter this market. When the sale of tofu products begins, DVG's sales are expected to exceed DM 100 million. Address: Lueneburg, West Germany.

2772. Stanton, Russ. 1989. Loma Linda Foods sold to Dutch firm but plans to return to health products. *Press-Enterprise* (*Riverside, California*). Feb. 22. p. F-1, F-3.
• ***Summary:*** "The company employed about 140 workers at its plant across from Loma Linda University's La Sierra Campus in southern Riverside [California], and had annual sales of about $20 million. The acquisition by N.V. Verenigde Bedrijven Nutricia (United Nutrition Cos.) of Amsterdam was completed earlier this month, but not announced until yesterday." A photo shows the Loma Linda Foods building in the La Sierra area of Riverside.

2773. Loma Linda Foods, Inc. 1989. [Loma Linda Foods acquired by Nutricia N.V. of the Netherlands] (News release). 11503 Pierce St., Riverside, CA 92505. 1 p. Feb. 23.
• ***Summary:*** "As of February 9, 1989, Loma Linda Foods, Inc., manufacturer of Soyalac products was acquired by Nutricia N.V. Verenigde Bedrijven. Nutricia is an international company specialized in medical nutrition and Infant Formulae. Presently they are marketing leader in clinical nutrition in Europe and are the second largest manufacturer of Infant Formula in Europe.

"Loma Linda Foods, Inc., expects that the affiliation with Nutricia will benefit the present line of Soyalac products." Address: Riverside, California. Phone: 714-687-7800.

2774. **Product Name:** Naturally Tofu Ice Cream (Frozen Dessert Mix) [Vanilla, or Carob].
Manufacturer's Name: Sovex Natural Foods, Inc.
Manufacturer's Address: 9104 Apison Pike, Box 310, Collegedale, TN 37315. Phone: 800-227-2320 or 615-396-3145.
Date of Introduction: 1989 February.
Ingredients: Vanilla: Crystalline fructose, soy oil, maltodextrin, corn syrup solids, tofu, sodium caseinate, natural vanilla and vanilla bean, sea salt, soy lecithin, cellulose, guar, xanthan and carrageenan gums.
Wt/Vol., Packaging, Price: 16.7 oz can. Retails for $4.99 (4/89).
How Stored: Shelf stable.
New Product–Documentation: See next page. Talk with Sovex. 1989. Feb. 28. The product was first sold commercially in mid-Feb. 1989. The name is Naturally Tofu Ice Cream. There are 2 flavors. Leaflet. 1989. April. "Sovex–The granola people. New items introduction: Naturally Tofu Ice Cream." Lists the ingredients for both flavors.

Products with Labels (Vanilla, and Carob) and leaflet sent by Sovex. 1993. Oct. 12.

2775. Widmer, Myron. 1989. GC sells LLF [Loma Linda Foods] infant formula division for $21 million. *Adventist Review* (*Hagerstown, Maryland*). March 2. p. 6-7 (p. 214-15).
• ***Summary:*** "In a move that radically alters the shape of Loma Linda Foods of Riverside, California, the General Conference Corporation has sold LLF's Infant Formula Division for $21.5 million to the Holland-based company of N.V. Verenigde Bedrijven Nutricia, a diverse food company with annual sales of $350 million and Europe's second-largest producer of milk-based infant formula.

"The sale, effective February 10, 1989, culminated months of negotiations and gave Nutricia ownership of the Soylac [Soyalac] and I-soylac [i-Soyalac] patents, all production facilities in both Mount Vernon, Ohio, and Riverside, and the name 'Loma Linda Foods.'

"The church continues to own patent rights, on-hand inventories, and the equipment for all other LLF products, from meat analogs to its soymilk and gravy mixes."

"The church already has formed a new company–LaLoma Foods, Inc.–that will concentrate solely on producing vegetarian health foods."

"The new LaLoma Foods is renting office space (about 2 miles from its former headquarters) where the staff operates under the continuing leadership of Alejo Pizarro, former president of Loma Linda Foods... The sale contract includes a provision requiring Nutricia-owned Loma Linda Foods to return the name Loma Linda back to the church without charge if LLF chooses a new company name.

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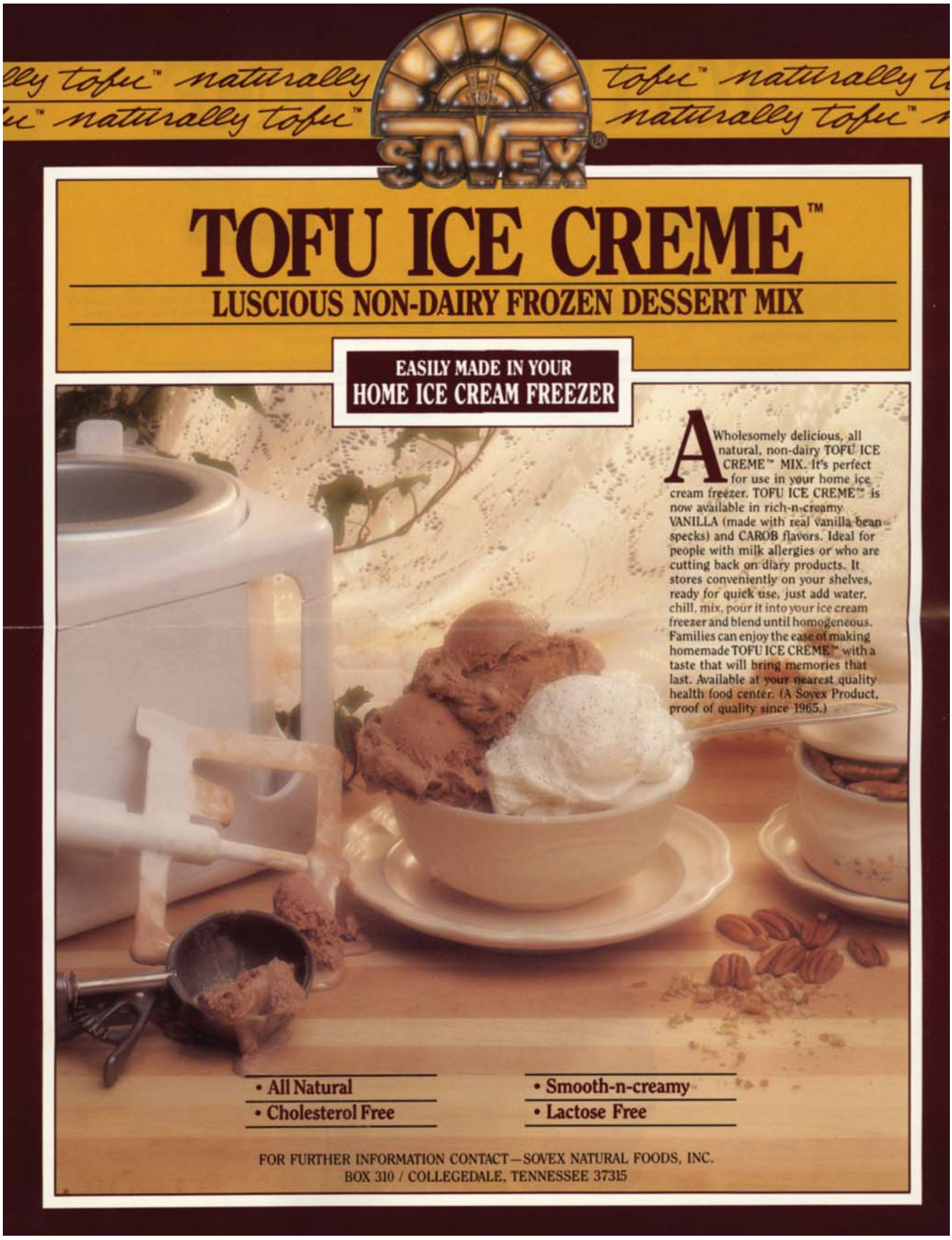

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"The sale of the Soyalac division brings to a close 38 years of infant formula production by the Adventist Church at the Mount Vernon site. Nutricia's plans for the Mount Vernon plant are not clear at the present, as the newly constructed $5 million infant formula plant at the Riverside site will begin production soon.

Why sell? 1. Competition: LLF's market share has been declining for several years and now stands at less than 1%. 2. Product Liability": LLF has been unable to purchase the $100 million product liability policy recommended by legal consultants. LLF recently has carried a $20 million policy. 3. Stringent (Government) Regulations. 4. Retirement Plan: LLF began to turn the corner on profits in the past 4 years (with a cumulative gain of approximately $4 million), and thus was being forced to create a new retirement plan for its employees. 5. Technical Personnel: LLF has had difficulty in attracting technically and scientifically qualified personnel in both its Research and Development and Marketing departments because of the denominational wage scale. 6. Unique Contribution Gone.

"Of the $21.5 million realized from the sale,... $5 million will be used to pay off LLF's indebtedness (primarily accrued from the construction of the new infant formula plant at Riverside), and the remainder will be available to fund the cost of the new production facility for LaLoma Foods." LaLoma's new address is 12155 (9B) Magnolia Ave., Riverside, CA 92505; phone 714-351-4300.

Photos show: (1) The tall Loma Linda Foods plant in Riverside, California. (2) William Murrill (of the Adventist General Conference, and former LLF board chairman), and Alejo Pizarro.

2776. Stanton, Russ. 1989. Dutch firm to expand Loma Linda Foods. *Press-Enterprise* (*Riverside, California*). March 11. p. H-1, H-3.
• ***Summary:*** "The Dutch company that acquired Riverside-based Loma Linda Foods last month plans to greatly expand the size of the health-food maker beginning next year, the company's new president [43-year-old Cornelis Rumpff] said yesterday... Nutricia acquired Loma Linda Foods for its soybean-based infant formula operations, which accounted for about 60% of the company's $20 million in sales last year. Loma Linda Foods' liquid and powder formula are sold under the Soyalac and I-Soyalac labels... The Dutch company's first order of business, Rumpff said, is to complete a $5 million infant formula processing line that the company's previous owner, the General Conference of the Seventh-day Adventist, started in 1987 but didn't complete."

"In Europe, Nutricia sells infant formula, baby foods and cereals, Chocomel, a chocolate milk drink popular among teenagers, and clinical nutrition products to hospitals for patients with special dietary needs. In 1988, Nutricia earned $24 million (U.S.) on sales of $430 million (U.S.)"

2777. *Pacific Union Recorder* (*Westlake Village, California*). 1989. Loma Linda Foods sells infant formula division. Continued availability of meat analogs assured while company seeks new manufacturing site. March 20. p. 5. [1 ref]
• ***Summary:*** "The company was turned over to N.V. Verenigde Bedrijven Nutricia (United Nutrition Cos.) of Amsterdam in early February. Most of the 100 workers who served at the plant will continue working under an agreement which allows for conditions similar to those that they already had. The company will not operate on Saturdays. Including sales representatives and staff at Mr. Vernon, Loma Linda Foods had employed about 170 people."

"Loma Linda Foods was one of Riverside's largest private companies, according to the Riverside *Press-Enterprise.* It was established in 1906 in Loma Linda and moved to Riverside in 1938."

2778. Danish Turnkey Dairies, Soya Technology Div. 1989. Brief description of some of the projects established or being establish. 2 Europaplads (P.O. Box 146), DK-8100 Aarhus C, Denmark. 2 p. Unpublished manuscript. [Eng]
• ***Summary:*** 1985. DE-VAU-GE, Lueneburg, West Germany. 4,000 liters/hour soymilk plant. Products: Long life beverages and desserts.

1988. Pacific Foods, Tualatin, Oregon, USA. 3,000 liters/hour soymilk base plant with ultrafiltration unit. Products: Concentrated soymilk for the processed food industry.

1989. Amrit Protein Foods Ltd., Ghaziabad, India. 6,000 liters/hour soymilk plant. Products: Fresh and long life beverages, soy ice cream mix, soy-lassi.

1989. Gitic, Guangzhou, China. 3,000 liters/hour soymilk base plant. Products: Vacuum dried soymilk/cane sugar crystals. Address: Aarhus, Denmark. Phone: (06) 12 4155.

2779. Knight, Viola. 1989. Re: Last school building of Madison College is to be torn down. Letter to Alumni and Friends of Madison College, March. 1 p.
• ***Summary:*** "As you may know, the last school building of Madison College, the Library, is to be torn down." Please make a donation. Address: Treasurer, Madison College Alumni Association, Box 325, Ridgetop, Tennessee 37152.

2780. **Product Name:** Better Than Milk? (Liquid Soymilk Made with Spray Dried Tofu and Casein) [Natural, Chocolate, Carob, Natural Light].
Manufacturer's Name: Sovex Natural Foods, Inc.
Manufacturer's Address: 9104 Apison Pike, Box 310, Collegedale, TN 37315. Phone: 800-227-2320.
Date of Introduction: 1989 March.
Ingredients: Spring water, soy oil, cereal solids (from corn), spray dried tofu, calcium carbonate, sodium caseinate, sea

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salt, carrageenan, vitamin B-12 (cyanocobalamin), natural flavor.
Wt/Vol., Packaging, Price: 8 oz or quart Tetra Brik Aseptic cartons, 27 or 12 to a case.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Talk with Sovex. 1989. Feb. 28. The company plans to launch this product in late March 1989.

Letter to *Veggie Life* by Genevieve Gowman. 1993. Nov. p. 6. "Unfortunately I didn't realize how deceitful the term 'non-dairy could be. This drink contains casein, which is a milk protein... Please inform your readers of this." The magazine answers: "According to FDA guidelines, a product can contain up to 2 percent casein and still be labeled 'non-dairy.'" The Natural flavor contains only 0.37% casein; the Chocolate, Carob, and Natural Light flavors do not contain casein.

Note: In response to this concern about caseinate, by March 1995 Sovex had removed caseinate from their product.

2781. Spitzler, Andrew C. 1989. Tasty tofu tailored to tempt trier's tongues: Silver Spring pair test market new dishes for national campaign. *Washington Business Jouranl* (*McLean, Virginia*). April 3. p. 1, 33.
• ***Summary:*** Edward H. Walker and Andrew J. Wilks (shown in a photo) of Tofoods hope to make tofu into a household and institutional dietary staple. "Tofu is often ridiculed as being rubbery, tasteless and just plain unappetizing...

"Tofoods is seeking about $2 million in venture capital to market its products to retailers and institutions such as hospitals and elderly service organizations. So far, the two partners have commitments for $500,000... The idea for Tofoods came to Walker and Wilks while they were co-managing a restaurant at a health resort in the Catskills...

"The pair raised $300,000 from friends, family and themselves, relocated to Silver Spring and formed Tofoods in 1986. During 1986 and 1987 they test-marketed the frozen dinners they had developed. People responded well to such frozen entrees as sweet and sour tofu, tofu teriyaki and barbecued tofu. Tofoods sold $100,000 of their products in 44 states, mostly in kosher and natural food markets." One company watching Tofoods progress is 50-year old Worthington Foods Inc. of Worthington, Ohio, the largest manufacturer and distributor of soyfoods in the USA, with $50 million is sales last year.

2782. Hartman, Warren E.; Leiss, Richard S.; Updegraff, Robert S. Assignors to Worthington Foods, Inc. (Worthington, Ohio). 1989. Fiber/tofu food product and method for making the same. *U.S. Patent* 4,818,558. April 4. 4 p. Application filed 4 Aug. 1987. [6 ref]
• ***Summary:*** Monofilament proteinaceous or polysaccharide fibers are dispersed in an aqueous vegetable protein extract from which is coprecipitated a fibrous tofu curd. Address: 1-2. Worthington, Ohio; 3. Powell, Ohio.

2783. **Product Name:** Granose Sweet Sensation (Soy Ice Cream) [Vanilla, Raspberry Ripple, Tutti Fruitti, Black Cherry].
Manufacturer's Name: Granose Foods Ltd. (Marketer). Made in Clwyd, Wales, by Genice Foods Ltd.
Manufacturer's Address: Howard Way, Newport Pagnell, Buckinghamshire, MK16 9PY, England. Phone: (0908) 211311.
Date of Introduction: 1989 April.
Ingredients: Organic soya milk (water, dehulled organic soya beans); raw can sugar; corn syrup; vegetable oil; vanilla bean extract; emulsifier; vegetable mono-diglycerides; Stabilisers: locust bean gum, guar gum, xanthan gum; Natural colour: Annatto.
Wt/Vol., Packaging, Price: 750 gm paperboard box.
How Stored: Frozen.
New Product–Documentation: See next page. Form filled out and 4 Labels sent by Granose Foods Ltd. 1990. June 13. In Jan. 1989 Granose's entire factory and offices were moved from Stanborough Park in Watford, to Howard Way in Newport Pagnell. The frozen product, made by Genice Ltd., was introduced in 1989. Label. 7.5 by 5 by 2.5 inches. Paperboard box. Photo of product in a wavy-edged glass next to fruit or flowers on front panel. The box background is white printed with diagonal colored lines. "A delicious non dairy frozen dessert, made with organic soya milk and other natural ingredients." Side panel: "Contains no artificial colours or preservatives." Talk with Neil Rabheru of Unisoy. 1990. July 2. Much of Genice's success comes from products sold under brands other than its own.

Talk with Ray Pierce of Genice Foods Ltd. 1994. Feb. 4 and 8. In April 1989 Sweet Sensation, another non-dairy frozen dessert, was launched for Granose Foods in a 3/4 liter pack composed of a rectangular plastic tub in a cardboard sleeve, in 4 flavors–tutti fruitti, black cherry, raspberry ripple, and vanilla. Genice made this product for Granose before and after Granose was acquired by the Haldane Group.

2784. Kingma, Sharyn. 1989. FDA proposal allowing health related claims on food labels in limbo: Many companies take advantage of agency's slow pace. *Soya Newsletter* (*Bar Harbor, Maine*). Jan/April. p. 13.
• ***Summary:*** Since 1938 the rules for regulating information concerning health or disease on food labels has come from the Federal Food, Drug and Cosmetic Act (21 U.S.C. 321 et seq.), which states that it is illegal to make therapeutic claims about food products.

In 1984, FDA had to deal with its first health-related claim on the label of a food product from a major manufacturer. The Kellogg Co. was advertising label claims

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for a bran cereal, saying that the product could reduce the risk of certain cancers. The claims were supported by both scientific evidence and the National Cancer Institute. Because FDA took no legal action against Kellogg, a wave of health-related messages began to appear on food labels.

In Aug. 1987 FDA published proposed rules in the Federal Register. Almost 600 comments were received. The latest draft was submitted in Sept. 1988 to the Office of Management and Budget (OMB).

2785. **Product Name:** Natural Touch Dinner Entrée.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1989 April.
Ingredients: Vegetable protein (wheat gluten, soy protein concentrate), soybean and/or corn oil, egg white solids, calcium caseinate (dairy protein), soy isolate, natural flavor, yeast extract, carob, onion, sea salt, garlic, spice.
Wt/Vol., Packaging, Price: 9 oz box.
How Stored: Frozen.
New Product–Documentation: See next page. Glossy color leaflet (single sided). 1989. April. 8.5 by 11 inches. Shows the carton on a cutting board and the entree on a plate with a baked potato and succotash. "All natural goodness."

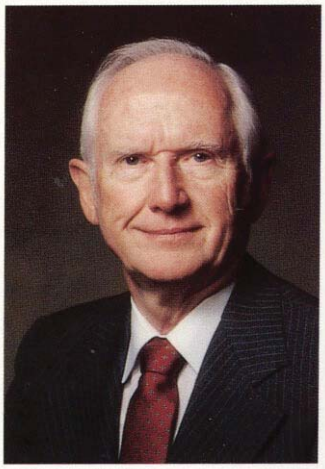
2786. Worthington Foods, Inc. 1989. The tradition of healthy choices. 900 Proprietors Rd., Worthington, OH 43085. 29 p. 29 cm. Undated.
• ***Summary:*** See page after next. This document was published to celebrate Worthington Foods' 50th anniversary. It contains the best history of the company seen to date.

Contents: Mission statement. A tradition of excellence. Mainstream America eats healthier. Southern fried flavor... zero cholesterol: The story of Morningstar Farms Country Crisps from soybeans to shoppers. The "heart-wise" choice. Good taste plus good nutrition (A graph shows that the number of vegetarians in the USA has increased from 1 million in 1978 to 6.2 million in 1986 a six-fold increase). The good taste of natural living (the Natural Touch line, launched in 1984). Directors and officers. A history of Worthington Foods (p. 13-27).

Black-and-white photos show the following early Worthington canned products: Proast, Choplets, Choplet Burger, Worthington Veja-Links (Vegetarian, Smoke Flavor, Skinless), Miller's MC Vegetarian Main Course, Worthington Soyamel.

"The breakthrough" Spun soy fiber (p. 21): Perhaps the single most innovative development in the history of the company started the day Robert Boyer paid an unannounced visit to Worthington Foods. He walked into Buller's office, introduced himself and opened an attache case full of samples wrapped in tinfoil. Buller almost jumped out of his chair. Remembering that day, he says, 'I imagine my eyes got pretty big, because he had several products there that looked very much like meat, and I realized they weren't meat.' One looked like ham, one like beef and one like lamb. When he tore one apart, it looked like the fibers of meat. Then he put it in his mouth and chewed it. Although it had the texture of meat, it tasted 'horrible.' But Buller got excited about the possibilities of what he was seeing and called Hagle in to have a look. After chewing a piece, Hagle asked Boyer, 'Can you make it taste like anything?' Boyer assured them that he could and that it was the alcohol used to extract the protein that had given it the horrible taste. A different extraction method could produce a different product."

James L. Hagle


Allan R. Buller

"Boyer was invited to work in the Worthington laboratory with Kelly Hartman, and Worthington eventually licensed his patents and hired Boyer as a consultant. Out of this relationship, a whole new line of products developed. Worthington was too small to go into the business of crushing soybeans and disposing of the oil, or of purchasing the protein extrusion or spinning equipment. So Boyer negotiated with Ralston-Purina to set up a pilot plant to make the protein for Worthington. As it turned out, Ralston-Purina made the protein, did the spinning, and Worthington bought the output and put it into new products.

"When the new Ralston-Purina plant was operational, it had the capacity of 10,000 pounds a day. Worthington was not ready for this kind of volume, but working out these difficulties involved Jim Hagle in further negotiations with executives of a large corporation. Finally, Worthington agreed to take all the production, and sales took off. The products–White Chik, Beeflike, Prosage, Stripples, and Holiday Roast (with a plastic wishbone)–were all hits.

"Hartman remembers those days as his most exciting and challenging with the company. It was a delicate problem getting other companies, like Ralston-Purina, to do a part of the research and production cycle without stealing Worthington's thunder. Many corporations got involved

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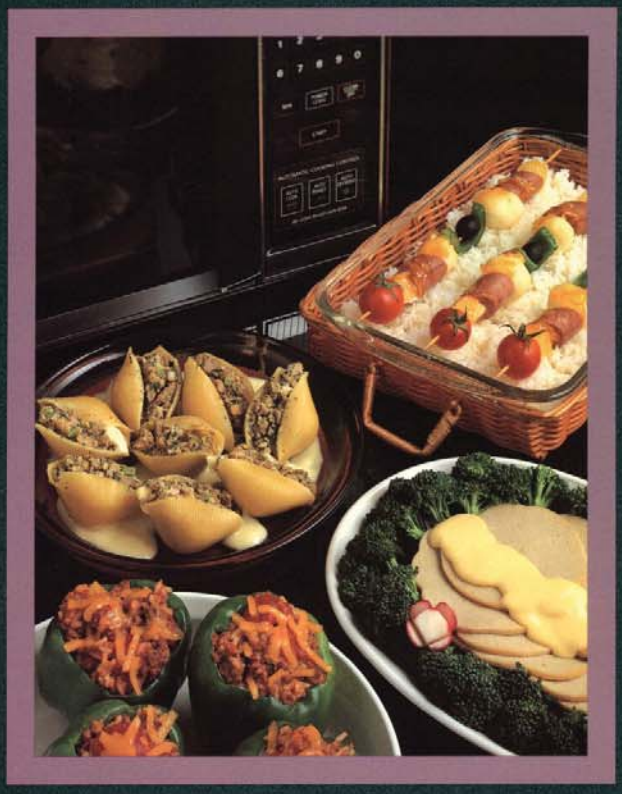
The Tradition of Healthy Choices

Worthington Foods



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A History of Worthington Foods

Worthington 50 1939 Fifty Years In Good Nutrition 1989

Special Foods turned a burned-out, two-story house into its first manufacturing site.

Worthington Foods, Inc. began production in a burned out two-story house in 1939. Although the hole in the center of the roof had been repaired, the blackened beams still showed. The front room on the first floor had been replastered, but in the other rooms the lath remained exposed. The tangle of pipes overhead in the basement made the 7-foot clearance even more unmanageable. Under foot, the floors were uneven.

Whoever happened to be handy lugged 125-pound bags of peanuts up and down stairs of that house. The boiler in the basement and the roaster on the second floor exposed workers to debilitating heat. Gluten was rinsed with a garden hose and gluten steaks were ladled out of kettles by hand. Cans were packed and labels brushed on one can at a time, by hand.

MORE THAN JUST A FOOD COMPANY

The company's founder, Dr. George T. Harding III, then 34, was a psychiatrist, and medical director of the Harding Sanitarium in the central Ohio community of Worthington. Why would he start a food company? It was not primarily to make a profit. He had two other concerns in mind.

The first was nutrition. At the sanitarium—opened by Seventh-day Adventist George T. Harding II in 1919 to provide total care of the body, mind and spirit—nutrition was emphasized and vegetarianism encouraged. The kitchen baked and sold whole wheat bread to the community. The sanitarium also purchased "health foods" from Battle Creek Foods in Michigan and Madison Foods in Tennessee. These included soy and peanut-based meat substitutes, called "nut meats," developed originally by Dr. John Harvey Kellogg, brother of the Battle Creek cereal magnate, to provide a completely balanced non-meat diet. But these foods were expensive for the sanitarium to provide for its patients. Harding also believed they could be made more appealing to non-vegetarians.

His second concern was the growth of the Seventh-day Adventist community in Worthington. Since most of the employees of the sanitarium were unmarried nurses, the church-operated elementary school had only eight students. Harding and other parents wanted to attract young families to the community so that the church school, in particular, would flourish.

Returning from a visit to Madison Foods in 1938, Harding said, "There is no reason we can't have a food company here in Worthington." And in 1939 when the company had begun to operate, he and his wife, Mary Virginia, "felt like we had really accomplished something. Finally, we had young families moving to the community and enlarging the church and the school. At that time, these were bigger goals than making money. We thought if we could just make the company exist, we would be doing real missionary work."

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Directors Back Row: Donald G. Orrick, George T. Harding, IV, Warren E. Hartman; Middle Row: Ashley T. McCarter, Allan R. Buller, Theodore A. Hamer, Dale E. Twomley; Seated: Barbara L. Slonaker, James L. Hagle.

and took a license because they wanted to be on the cutting edge of technology. Hartman says, 'We had vice presidents sticking out our ears, coming here trying either to buy us or get in on the know-how.'

"Almost every major university in the country was interested in what was going on. Hartman says the experimental products were called a lot of good things and a lot of bad things, too. The products were called 'phony-bologna,' 'fake steaks' and 'sham ham.' Government agencies also became interested, including the Agency for International Development and the United Children's Fund."

"The first to offer frozen meat analogs." One of Worthington's new products that contained spun soy fiber was named Wham. The company that manufactured a meat product named Spam sued Worthington for infringing on their product name. A skillful presentation by Jim Hagle before the company's officers and attorneys at their headquarters in Chicago, Illinois, led to the withdrawal of the lawsuit. "Another problem with the new line of products was that they did not can well. The products deteriorated in flavor and texture under high temperatures. Freezing was the obvious answer, but this required big changes. The company had to purchase trucks for frozen delivery. In addition, at that time many stores were not equipped for frozen foods, so Worthington supplied these stores with food freezers. It was a costly but profitable venture because it increased sales volume tremendously. Thus Worthington Foods became the first company to offer frozen meat analogs. And in October, 1963, a series of television, radio and newspaper advertisements featuring the new frozen foods was introduced. All these developments caught the attention of a number of major food companies." Address: 900 Proprietors Road, Worthington, Ohio 43085. Phone: (614) 885-9511.

2787. Worthington Foods, Inc. 1989. 50 award-winning recipes. 50 years in good nutrition. 900 Proprietors Rd., Worthington, OH 43085. 97 p. Illust. Index. 18 x 26 cm. Spiral bound.

• ***Summary:*** This book was published to commemorate Worthington's 50th anniversary. The first 10 pages contain nutritional information. The rest of the book is meatless recipes, most from the individual homemakers (whose names, city, and state are given), some from the kitchens of Morningstar Farms. Each recipe uses at least one product made by Worthington Foods. The most widely used product is Scramblers (cholesterol-free egg substitute based on egg whites, 18 recipes), followed by Vegetarian Burger (7 recipes), and Chic-Ketts (5 recipes). A nutrition analysis is

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given with each recipe, and many recipes are accompanied by a color photo of the finished dish. Other products used in the book are Choplets, Crispy Chik Patties, Diced Chik, Fri-Chik, FriPats, GranBurger, Meatless "Beef" Style, Meatless "Chicken" Style, Meatless Corned "Beef" Slices, Meatless Smoked "Turkey" Slices, Numete, Prime Stakes, Prosage, Stakelets, Super-Links, Tuno, Vegetable Skallops, Vegetable Steaks, Veja-Links, Wham (like ham), Natural Touch Spicy Chili, Breakfast Links, Breakfast Strips, and Grillers. Address: Worthington, Ohio.

2788. Snowdon, David A.; Kane, R.L.; Beeson, W.L.; Burke, G.L.; Sprafka, J.M.; Potter, J.; Iso, H.; Jacobs, D.R.; Phillips, R.L. 1989. Is early natural menopause a biologic marker of health and aging? *AJPH* [*American J. of Public Health*] 79(6):709-14. June. [33 ref]
• ***Summary:*** Note: Dr. Phillips, Prof. of Epidemiology at Loma Linda University, died on 8 March 1987. Address: 1-2. Div. of Epidemiology, School of Public Health, Univ. of Minnesota, Minneapolis, MN; 3. Loma Linda Univ., School of Public Health.

2789. Skain, Betty; Bacha, Sarah Miles. 1989. Healthy expansion planned: Worthington Foods appoints 2. *Dispatch* (*Columbus, Ohio*). July 17. p. 8C. Business section.
• ***Summary:*** "Product development and expansion are on the agenda at Worthington Foods Inc., which has named two new vice presidents, William T. Kirkwood and Ronald L. McDermott, to assist with the projects. As vice president of finance and chief financial officer, Kirkwood will be responsible for financing Worthington Foods' expansion into Zanesville, Ohio, where a new plant is under construction. It will open in June 1990. The manufacturer of cholesterol-free foods will produce its egg substitute product at the plant, Kirkwood said.

"McDermott, vice president of scientific affairs, will be responsible for Worthington Foods' research and development and its quality control departments... McDermott previously was in charge of product development for pediatric nutritionals at Ross Laboratories. He earned a doctorate in food science and nutrition from The Ohio State University."

2790. Rumpff, Barbara; Rivera, Esther. 1989. Loma Linda Foods' infant formula line sold to N.V. Nutricia of the Netherlands. New company, La Loma Foods, soon to be sold (Interview). *SoyaScan Notes*. July 19. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Loma Linda Foods wanted to start marketing a cow's milk based infant formula, and they were discussing marketing a product made by Nutricia, a Dutch company, which already made Nutri-Soja and Nutri-Soja Plus, two soy-based infant formulas. Nutricia is the second largest infant formula company in Europe behind Nestlé and one of the world's largest companies in clinical nutrition.

In Feb. 1989 the tables were turned and Nutricia ended up buying Loma Linda's infant formula line (Soyalac) as well as both the Riverside and Mt. Vernon, Ohio food factories. Loma Linda decided to sell because of liabilities and stiff competition. Cornelius Rumpff came to head the Nutricia operation in Riverside. The General Conference (GC) of Seventh-day Adventists (the Church, which owns and operates Loma Linda Foods), spun off a new company named La Loma Foods, to market Loma Linda's food line (mostly meat analogs), which was to be made by Nutricia for 18 months until La Loma could build a new plant. But by July 1989 the GC had decided that instead of building a new plant (an expensive project), it would sell La Loma Foods and its food line. Bids would be open during the month of July. It was hoped that another Adventist company would buy the company; both Worthington Foods and Australia's Sanitarium Foods (which had managed Loma Linda Foods for 4-5 years and saved the company from going under) were expected to bid. The infant formula business had been roughly 75% of Loma Linda's total business. The takeover has been low key, not widely publicized. All the formulas and liquids had been made in Ohio. But at one time Loma Linda had made a decision to consolidate the two plants. The Mt. Vernon, Ohio, plant was shut down then reopened because the Riverside plant was not finished in time. Address: 1. Loma Linda Foods, Div. of Nutricia N.V., Riverside, California; 2. La Loma Foods, 12155 Magnolia Ave., Suite 9-B, Riverside, CA 92503. Phone: 714-351-4300 (LLF).

2791. *Adventist Review* (*Hagerstown, Maryland*). 1989. GC seeks buyer for La Loma Foods. July 20. p. 6 (p. 758).
• ***Summary:*** "Less than 5 months after the General Conference (GC) sold Loma Linda Foods' (LLF) Infant Formula Division, the GC is now receiving purchase offers for the newly formed meat analogues and soy milk producer–La Loma Foods."

"In May, Worthington Foods, Inc., of Worthington, Ohio, an independent meat analogues producer owned by Adventist businessmen, proposed to purchase La Loma Foods. The multimillion-dollar offer calls for an up-front payment for the assets and an annual royalty payment based on a percentage of sales to Adventist customers over 10 years. If La Loma is sold to Worthington, the La Loma name would be discontinued and all production would be consolidated at Worthington's new plants, currently under construction in Zanesville, OH.

"On June 30 the GC Executive Committee, after a lengthy discussion, decided by a 28 to 19 vote that La Loma Foods should be offered for sale... 'At least 3 other groups are interested in making proposals,' says William Murrill, GC undertreasurer and La Loma Foods board chairman."

"The former meat analogues and soy milk division

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generated between $8 and $9 million in sales for 1988, or approximately 40% of combined sales."

2792. Blix, Glen. 1989. Preparation and use of dry soy products and nutritional beverages. In: T.H. Applewhite, ed. 1989. Proceedings of the World Congress on Vegetable Protein Utilization in Human Foods and Animal Feedstuffs. Champaign, IL: American Oil Chemists' Society. xii + 575 p. See p. 234-36.
• ***Summary:*** "In modern times, the dairy industry has pioneered the techniques of beverage drying. First with drum driers and more recently with spray drying technology." A pioneer in the production of commercial soymilk was Dr. Harry Miller. In the mid-1930s his soy dairy delivered soymilk to customers in Shanghai, China. World War II necessitated his return to the USA, where he set up a soymilk plant in Ohio. "Spray drying equipment was added to the plant in the late 1940's. This produced a product definitely superior to those other experimenters had obtained using soy flour. In the United States, both liquid and powdered soy milks still are being produced using methods which differ little from those originated by Miller...

"In the United States approximately 25% of the 1.1 billion dollar infant formula market is comprised of soy-based products. Of this amount over 17% is in the powdered form. These numbers indicate that soy milk is being utilized by many infants who do not require it to combat allergy since only 7% to 10% of all infants fall into this category... Infants raised on soy milk formulas often find it difficult to make a later transition to cow milk, and thus either refuse to use milk (placing them at nutritional risk) or demand an adult soy beverage substitute. This fact, coupled with a multitude of other factors, has contributed to a proliferation of soy beverages in recent years...

"The market for an adult soy beverage in the United States is difficult to determine but best estimates indicate that it approached 8 million liters in 1987. The bulk of this amount was made up of aseptically packaged ready to drink milk (7.2 million liters) with the balance comprised of reconstitutable powder."

The high fat content of powdered soymilk can lead to problems with oxidation and the resulting off-flavors. Vitamins C, E, and A can be added as antioxidants. Vitamin A should be used with a nitrogen flush to greatly reduce its decline over time.

The most familiar soy powder product is soy isolate. In 1983 the American Soybean Assoc. estimated that 80 million lb of isolate were produced in the USA, and projected that by 1987 usage of isolates would reach 100 million lb. Those projections have proven to be too optimistic. Address: School of Public Health, Loma Linda Univ., Loma Linda, California.

2793. Chen, Steve. 1989. Preparation of fluid soymilk. In: T.H. Applewhite, ed. 1989. Proceedings of the World Congress on Vegetable Protein Utilization in Human Foods and Animal Feedstuffs. Champaign, IL: American Oil Chemists' Society. xii + 575 p. See p. 341-52. Contains 8 tables and 9 diagrams. [41 ref]
• ***Summary:*** Contents: Development & history of soymilk (based on *Soymilk Industry and Market* by Shurtleff & Aoyagi). Problems of soymilk production: beany flavor, trypsin inhibitors, flatulence factors. Basic steps in soymilk production. Methods of soymilk production. Yields of soymilk: Typically 70-80% of the protein and 55-60% of the solids from soybeans are recovered in the soymilk. Soymilk standards and quality control. Cost and price of soymilk production. Soymilk utilization and types. Nutrition of soymilk. A photo shows Steve Chen. Address: American Soybean Assoc., P.O. Box 3512, Taipei, Taiwan ROC 10099.

2794. Natufood B.V. 1989. Prijs-bestelboek [Natufood price list and catalog, July-Sept. 1989]. Fahrenheitstraat 18, 3840 BN Harderwijk, Netherlands. 73+ p. [Dut]
• ***Summary:*** This catalog of a Dutch natural foods distributor lists the farming method (organic or not), wholesale and retail prices for each product: Page 8: Witte Wonder tofu spreads (mushroom, chili, green peppercorn, garlic, paprika, celery), Lima Limapast contains sunflower seeds, miso, and soy flour. Page 30. Joannusmolen roasted soy flour.

\ Note. This is the earliest English-language document seen (Nov. 2012) that contains the term "roasted soy flour."

Page 31. Natufood defatted soy flour (sifted). Ad for the Vetara line of ready-to-eat foods, many of which contain TVP. Page 33. Avita soybeans (Avita Natufood's organic food line). Natufood soybeans. Ad from Nutricia for canned powdered infant foods. Nutri-Soja complete infant food based on soy. Nutri-Soja Plus based on soy for infants that have been weaned. Page 34. Nutricia infant formulas: Nutrisoja in 400 gm or 1000 gm and Nutrisoja-Plus in 900 gm. Page 35. Avita little soybeans (regular and large, organic).

Page 36. Witte Wonder soybeans in tomato sauce. Ad for Vetara organic tofu, which is produced by Heuschen-Schrouff B.V. in a completely new facility under extremely sanitary conditions. It is made with organic soybeans with a natural coagulant (Serempi) in the traditional way. "Best quality, lowest price." The product label (250 gm) is shown. Page 37. Refrigerated miso products made in Europe. Lima barley miso and rice miso, both unpasteurized. Page 38. Meat replacers. Seitan is sold by Vetara, Witte Wonder, Yakso, and Manna. Vetara herb tofu, Napolitan tofu, rice tofu, bali tofu, rames tofu, rames tempeh, Tjap Tjoy. Witte Wonder tofu in curry/pineapple sauce, and in peanut sauce. Ad for Vetara vegetarian burgers, frankfurters, and schnitzels.

Page 39. Soya meat replacers and vegetarian mixes: Lists 11 Vetara products based on or containing TVP

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(textured soy flour) or HVP (hydrolyzed vegetable protein). Nutana meat replacers (9 products). Jonathan natural tofu. Cenovis and Huegli bouillon tablets (14 types, probably contain miso). [Sjon Welters adds that Huegli, a multi-million dollar Swiss food company, owns a major part of Natufood B.V.]. Western bouillons (Miso): Lima barley and rice misos. Heiwa Hatcho miso and instant miso soup. Huegli ad.

Page 42. Vegetarian refrigerated products: Vetara smoked tofu, natural tofu (EKO mark), saté tofu, vetaburgers with pineapple, with cheese & onion, natuburgers. Soyadrinks and desserts: Provamel (8 drinks and 6 desserts [puddings]). Lima (3 drinks).

Page 43. Seasonings: Vetara sweet soy sauce (Ketjap zoet). Yakso sweet soy sauce (Ketjap manis). Soy sauce. Lima shoyu (orange label) and tamari (blue label). Heiwa shoyu and tamari. Vetara shoyu. Page 44. Witte Wonder organic tofu dressings (Italian, Mexican, Garden herbs, or Natural). Mayonnaise and Tofunaise: Witte Wonder organic tofunaise (regular or with lemon).

Page 52. A. Vogel products: Vogel Sojaforce. Page 67. Natufood non-organic soynuts (natural, paprika, curry, or onion). A photo of the soynuts is given at the bottom of the page. Page 69. Non-organic soynuts in bulk (same 4 flavors as page 67). Page 73. Bulk defatted soy four, and soybeans (organic or non-organic). Ad for Vetara Vegetable Bouillon, which probably contains soy. Address: Harderwijk, Netherlands. Phone: 03410-23240.

2795. Stanton, Russ. 1989. Adventists seek buyer for La Loma Foods. *Press-Enterprise* (*Riverside, California*). Aug. 1, Tuesday. [1 ref]

• ***Summary:*** "The owner of La Loma Foods Inc. [The General Conference of Seventh-day Adventist] has decided to sell the Riverside [California]-based maker of meat substitutes and other health food products after receiving an unsolicited offer for the company from its largest competitor... The move comes about 2 months after Ohio-based Worthington Foods Inc. made an undisclosed offer for La Loma. Worthington, which sells its products under the Morningstar Farms and Worthington labels, is the nation's largest maker of meat substitutes and other health food products."

"La Loma, which has about 70 employees, has seen sales improve 15 to 20% this year, [company president Alejo] Pizarro said. The non-meat business had 1988 revenue of about $9 million. Pizarro said the church was hoping La Loma will fetch around $10 million."

"The church sold La Loma's parent, Loma Linda Foods Inc., to a Dutch company last Feb. In the interim, N.V. Verenigde Bedrijven Nutricia (United Nutrition Cos.) has allowed La Loma to continue making its more than 70 non-meat products at the La Sierra area plant. Nutricia purchased Loma Linda Foods for its soybean-based infant formula operations."

2796. Laboyrie, David. 1989. The Australian soymilk market and Australian Natural Foods Holdings Ltd. (Interview). *SoyaScan Notes.* Aug. 17. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Approximately 8 million liters/year of soymilk are presently sold in Australia. His company, Australian Natural Foods, has 3 basic soymilk products. The first, sold to the health food market, is Aussie Soy, which was launched in June 1987 and now has about 60% of the health food market, around 2 million liters a year. It is in a Tetra Pack container. The other two (Excel and VitaFresh) are designed as milk alternatives, and are fortified with vitamins and calcium. But after about 3 months, calcium fortification (with calcium phosphate and calcium chloride) has an definite undesirable thinning effect on most of the soymilk with the formation of a thick layer of sediment settling to the bottom. They sell through supermarkets, and have a much smaller market share. Sanitarium Foods dominates that market, producing about 100,000 liters/week, or 5.2 million liters/year. David's company makes their soymilk from whole soybeans rather than isolates, and promotes it as such.

Excel was originally launched in Aug. 1987 as a fresh product but it was discontinued in June 1988 due to distribution problems and short shelf life. It is now sold in supermarkets in a UHT pack in plain flavor only. They also make another product (similar to Excel) under another brand for another company. It is called VitaFresh. It has the same settling problem. The existing formula does not contain tri-polyphosphate. They think there is still a big market for fresh soymilk in Australia, but they need either a dairy distributor or a 28-day shelf life. Address: Australian Natural Foods Holdings Ltd., 80 Box Rd., Taren Point, NSW 2229 Australia. Phone: 02-526-2555.

2797. Rivera, Esther. 1989. La Loma Foods, formerly Loma Linda Foods, purchased by Dr. Lin Martin (Interview). *SoyaScan Notes.* Aug. 21 and 28. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** On August 10 the board of directors of La Loma Foods announced that Dr. Martin, a dentist from Riverside, a Seventh-day Adventist, and an owner of Health Food Express (a direct mail company in Fresno, California), won the bidding with an offer of $9 million to purchase La Loma Foods. He must make a down payment $1 million by Oct. 1 at which time the final transition period should end. He beat out Worthington Foods (which came in third) in the bidding. The deal should be finalized by the end of September. He intends to proceed with the company's former plans to stay in the Riverside-San Bernardino area and to move into a 60,000 square foot food processing plant there. With this sale, La Loma has become a private company with no connection to the Seventh-day Adventist (SDA) church. The

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SDA General Conference had decided to sell the company. Address: La Loma Foods, Riverside, California.

2798. Beeson, W. Lawrence; Mills, P.K.; Phillips, R.L.; Andress, M.; Fraser, G.E. 1989. Chronic disease among Seventh-day Adventists, a low-risk group: Rationale, methodology, and description of the population. *Cancer* 64(3):570-81. Aug. [31 ref]
Address: Dep. of Preventive Medicine, Loma Linda Univ., Loma Linda, California.

2799. Brown, Peter J. 1989. From bean to bun: The saga of the soy dog. *Soya Newsletter* (*Bar Harbor, Maine*). July/Aug. p. 1, 12-15.
• ***Summary:*** A look at the tofu hot dog market in America–but with no statistics on the market size or individual products. The major players are Light Foods Inc., White wave Inc., Lightlife Foods Inc., and Northern Soy. An estimated $2 billion worth of meat- or poultry-based hot dogs (1.5 billion lb in 1987) are sold in America. America's first tofu hot dog, Tofu Light Links, was introduced in 1983 by Robert Davis of Light Foods in St. Louis, Missouri. White Wave, which sells Healthy Franks made by a co-packer and aimed at the mainstream market, has just moved into a 24,000 [actually 23,000] square foot plant with almost 50 employees. Company sales are expected to top $3 million in 1989. Lightlife sells to the kosher/pareve market. Last fall East West Journal picked Northern Soy's Not Dog as the best meatless hot dog in America. The keys to success are flavoring, use of vegetable gums, retention of juiciness, and pricing.

Worthington Foods, with more than 350 employees and $75 million is sales, has been marketing meatless meatlike products for decades. They now have 120 such products and the basic goal is to be a close as possible to the real thing. Earlier this summer the *New Bedford Standard-Times* conducted a taste test among young children at a summer camp. The soy hot dog was the second most expensive of the entrants and the kids disliked it, describing it with terms such as "sooooo gross." Address: Contributing editor.

2800. Mills, Paul K.; Beeson, W.L.; Phillips, R.L.; Fraser, G.E. 1989. Dietary habits and breast cancer incidence among Seventh-day Adventists. *Cancer* 64(3):582-90. Aug. [22 ref]
Address: Dep. of Preventive Medicine, Loma Linda Univ. School of Medicine, Loma Linda, California 92350.

2801. Mills, Paul K.; Beeson, W.L.; Phillips, R.L.; Fraser, G.E. 1989. Prospective study of exogenous hormone use and breast cancer in Seventh-day Adventists. *Cancer* 64(3):591-97. Aug. [28 ref]
Address: Dep. of Preventive Medicine, Loma Linda School of Medicine, Loma Linda, California 92350.

2802. Mills, Paul K.; Beeson, W.L.; Phillips, R.L.; Fraser, G.E. 1989. Cohort study of diet, lifestyle, and prostate cancer in Adventist men. *Cancer* 64(3):598-604. Aug. [43 ref]
Address: Dep. of Preventive Medicine, Loma Linda School of Medicine, Loma Linda, California 92350.

2803. Nieman, D.C.; Sherman, K.M.; Arabatzis, K.; Underwood, B.C.; Barbosa, J.C.; Johnson, M.; Shultz, T.D.; Lee, J. 1989. Hematological, anthropometric, and metabolic comparisons between vegetarian and nonvegetarian elderly women. *International J. of Sports Medicine* 10(4):243-51. Aug. [46 ref]
• ***Summary:*** Healthy elderly vegetarian women, compared with closely matched non-vegetarian peers, have several benefits, especially lower blood glucose levels and lower blood lipid levels, less body fat, and lower heart rates on a treadmill, but the same functional capacity as measured by the maximum amount of oxygen processed by their lungs (VO_2max). Address: Dep. of Health Science, School of Public Health, Loma Linda Univ., Loma Linda, California 92350.

2804. Franklin, Peter D. 1989. Worthington Foods chooses New York ad agency. *Dispatch* (*Columbus, Ohio*). Sept. 26. p. 6C. Business section.
• ***Summary:*** Out of 25 agencies that sought the company's advertising account, Worthington Foods has selected Partners & Shevack, Inc. (of New York), which has total billings in the $150 million range. Since 1986 Worthington's $2.5 million account has been with Fahlgren & Swink.

"Partners will begin work Sunday on new consumer, trade and professional advertising campaigns that will concentrate on the print media, particularly magazines."

2805. *Adventist Review* (*Hagerstown, Maryland*). 1989. Granose Foods opens new factory: Growth from bakery to Britain's major health food manufacturer. Sept. 28. p. 20-21 (p. 1036-37).
• ***Summary:*** The brand new factory is at Newport Pagnell, Buckinghamshire, England–30 miles away from its former location at Stanborough Park, on the outskirts of London, near Watford, Hertfordshire. The founder is said to be J. Heide, who, a hundred years ago, came to London from Germany to start a new life. With help from his uncle, he became a master baker. He soon joined the small group of members of the Seventh-day Adventist Church. "In 1899 John Hyde (as he soon became known) was living over his bakery at 332 Portbellow Road in east London with his wife" and four children. He worked hard to make bread that tasted better and was fresher than anyone else. He and his brother delivered their loaves late at night or early in the morning.

"John soon learned about health foods and the church's teaching that God is honored in a healthy body as well as in a healthy mind and spirit. Samples from the Sanitarium Health

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Food Company in Battle Creek, Michigan, found their way to Britain, and in 1899, with the blessing of the church, John went to the United States to learn how to make the foods. He spent six months with Dr. John Harvey Kellogg, who was president of the medical college in Battle Creek, superintendent of the Battle Creek Sanitarium (with its health food company) and member of more than a dozen medical societies and associations,..."

"Kellogg created the formula for a gluten biscuit. The Battle Creek Sanitarium Health Food Company also produced Granola, a cooked preparation of wheat and oats to be used as a breakfast food. Granose flakes, Granose biscuits, Protose, and Bromose were among their strangely named products.

"Imported know-how: John Hyde took the production know-how back to Britain, where he put it into operation. Adventists purchased a flour mill at Salford, near Redhill, Surrey, and formed the International Health Association Ltd. Hyde imported used plant equipment from Battle Creek and purchased other items locally.

"But the road to success was not to be easy. Before the advent of electricity, candles were used for lighting. This practice led to a fire that burned down the factory in 1900.

"In 1907 the association moved to Stanborough Park, an idyllic 75-acre estate on the outskirts of London, near Watford, Hertfordshire. In 1926 it became Granose Foods Ltd."

John Hyde, the baker, worked many years for Granose Foods. He eventually had 13 children–a baker's dozen. The name of each is given. "Almost all his children became employees of the Adventist Church."

Why did the factory move? Over the years, the SDA church leadership sold off portions of the valuable estate surrounding the Granose food factory; as new houses were built, the factory became a "noncoforming user" in a residential zone. Income from a recent sale of 10 more acres at Stanborough Park helped to pay for the new plant and the 3 acres of land on which it was built.

A photo shows the ribbon-cutting ceremony on July 9. Present were: (1) "Eric Fehlburg, who coordinates the activities of 52 Adventist health food companies worldwide, with $300 million in receipts, from church headquarters in Washington, D.C." He believes that Granose has a bright future but believes that, since the 3 acres is already too small, Granose should purchase 20 acres somewhere else. Note: Why did they not buy more land on which to build the new factory? Apparently for lack of money. (2) Peter J. Archer, age 50, who left school at age 16 and got a job sweeping the yard for Granose. He has been the manager of Granose since 1984, and he and his team have turned the company around (after years of indifferent sales) and appear to be on a path of continuing growth. "Granose is my life," says Archer. A small photo shows Archer and Fehlberg shaking hands.

Granose products include "Ravioli, Nuttolene, Vegecuts, Mock Duck, Burger Mix, Sausfry, Soya Wieners, a variety of soymilks, and more than 100 other products. The latest, Sweet Sensation, is a soy ice cream. With the assistance of De-Vau-Ge in Germany, Granose supplies a tremendous demand for nondairy products. The company sells 656,000 gallons (2.5 million liters) of soymilk a year. From the Nutana factory in Denmark, Granose imports and distributes five different packs of nondairy margarine containing oils, but no whey. Tue Westing and marketing manager Inge Kjeldal of Nutana were present at the opening."

2806. **Product Name:** [Tofu Line Chili Con Tofu].
Foreign Name: Tofu Line Chili Con Tofu.
Manufacturer's Name: Aros Sojaprodukter KB. Distributed in Sweden exclusively by Nutana.
Manufacturer's Address: Bergsvagen 1, 190 63 Orsundsbro, Sweden. Phone: 0171-604-56.
Date of Introduction: 1989 September.
Ingredients: Incl. tofu & chili.
Wt/Vol., Packaging, Price: 500 gm.
How Stored: Frozen.
New Product–Documentation: Talk with Ted Nordquist of Aros in Sweden. 1990. May 18. This product was introduced in Sept. 1990. Starting about 2 years ago, all the company's products are sold under the "Tofu Line" brand.

Manufacturer's leaflet. 1990. At gott och må bra (Eat well and feel good). Shows color photos of the labels of the company's 5 main entrees (including this new one) plus natural tofu.

2807. Blix, Glen. 1989. Vegetarianism in the United States of America. In: E.W. Lusas, D.R. Erickson, and Wai-Kit Nip, eds. 1989. Food Uses of Whole Oil and Protein Seeds. Champaign-Urbana, IL: American Oil Chemists' Society. vii + 401 p. See p. 395-401. Chap. 24. Proceedings of the Short Course on Food Uses of Whole Oil and Protein Seeds held at Makaha, Hawaii, May 11-14, 1986. [20 ref]

• ***Summary:*** "Definitions. Rather than attempting to categorize vegetarians on the basis of what is included in the diet, it may be more meaningful to group them on the basis of the major reason which has provided the impetus for elimination or reduction of animal products from their regular dietary pattern. This allows vegetarians to be placed in 3 rather broad categories: economic/ecological, religious/philosophical and health oriented."

"The modern religious vegetarian movement was born through the efforts of William Cowherd in Manchester, England, in 1809. Under his leadership, his congregation pledged themselves to abstain from alcohol and flesh food. This vegetarian movement was soon brought to America. In 1817, the Reverend William Metcalfe and a group of his parishioners landed in Philadelphia [Pennsylvania], bringing with them their belief in a vegetarian lifestyle. This movement was aided by converts such as Sylvester Graham

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and John Harvey Kellogg. A New York convention, called by Metcalfe in 1850, laid the framework for the American Vegetarian Society."

"In the Western industrialized world, by far the largest reason for choosing a vegetarian diet is health concerns... In a recent survey, the USDA determined that 80% of the American public felt a vegetarian life style to be more healthy and that 40 to 50 million Americans had actually reduced their consumption of red meats for that reason. In a just completed random sampling of 100 college and university food service directors in the United States, 62% indicated that a conscious effort was made to provide a vegetarian alternative at each meal. Forty-six percent stated that this policy had been adopted within the last 5 years. An additional 37% indicated that it was their practice to provide at least occasional vegetarian meals. Only 11% said that they did not make any attempt at accommodation."

"Total sales of meat analog products in the United States in 1985 amounted to some 50 million dollars. This... does not take into account the textured vegetable proteins used to extend the more traditional meat products." Address: Loma Linda Foods, Inc., 11503 Pierce St., Riverside, California 92515.

2808. Hunt, Isabelle F.; Murphy, N.J.; Henderson, C.; Clark, V.A.; Jacobs, R.M.; Johnston, P.K.; Coulson, A.H. 1989. Bone mineral content in postmenopausal women: comparison of omnivores and vegetarians. *American J. of Clinical Nutrition* 50(3):517-23. Sept. [31 ref]
Address: Nutritional Sciences, Biostatistics, and Epidemiology Divisions, School of Public Health, UCLA, Los Angeles, California 90024; Food & Drug Administration, San Francisco, California.

2809. Lombard, Kenneth A.; Mock, Donald M. 1989. Biotin nutritional status of vegans, lactoovovegetarians, and nonvegetarians. *American J. of Clinical Nutrition* 50(3):486-90. Sept. [23 ref]
Address: Divisions of Nutrition and Gastroenterology/ Hepatology, Dep. of Pediatrics, Univ. of Iowa College of Medicine, Iowa City, IA.

2810. Shurtleff, William; Aoyagi, Akiko. comps. 1989. Bibliography of soy protein isolates, concentrates, and textured soy protein products: 2,528 references from 1883 to 1989, partially annotated. Lafayette, California: Soyfoods Center. 328 p. Subject/geographical index. Author/company index. Printed Sept. 8. 28 cm. [2528 ref]
• ***Summary:*** Although the Chinese had produced a type of isolated soy protein product (tofu) since the tenth century A.D., western research on the isolation of soy proteins began in Germany 1883, when Meissl and Boecker introduced the terms soy casein and soy albumin. Similar work was published in 1898 by Osborne and Campbell at the Connecticut Agricultural Experiment Station in the USA. In 1903 Oscar Nagel of New York described in detail how he produced "soy casein" and discussed it potential applications as a commercial product. Since that time, the United States has been the world leader in soy protein research and production.

The world's earliest known commercial food product made from isolated or concentrated soy protein was Albusoy, introduced in 1939 by the Soya Products Division of the Glidden Co. in Chicago. This was an enzyme-modified isolated soy protein product used as a whipping agent. Many of the earliest soy protein products were used like Albusoy in whipping applications. Soyco, launched in 1944 by Soybean Products Co. in Chicago, was a hydrolyzed soy protein whipping agent used as an egg white substitute. Rich's Whip Topping, introduced in March 1945 by Rich Products Corporation in Buffalo, New York, was used as an alternate for whipped cream. In 1947 Archer Daniels Midland Co. introduced Nutriwhip, the Borden Company debuted Soyco, and Central Soya Co. launched Soy Albumen, all whipping agents.

In 1951 the first patent for spun soy protein fibers was issued to Robert Boyer, formerly a soy researcher at the Ford Motor Co. In 1952 the first soymilk based on soy protein isolate, Soyamel, was introduced by Worthington Foods. Isolates soon replaced soy flour in non-dairy infant formulas worldwide. In 1959 the first food-grade soy-protein concentrates were introduced by Griffith Laboratories.

The 1960s put modern soy protein products on the map. In 1960 the Boyer patent and its 1954 revision started the high- tech meat analog industry when Worthington Foods launched Fri-Chik, a meatless drumstick. In 1961 and 1966 conferences on soy protein foods were at the USDA Northern Regional Research Center in Peoria, Illinois. Many of the 276 attendees at the second conference were pioneers in the field. A major theme at both was that protein malnutrition was the world's most widespread deficiency disease. In 1966 General Mills introduced Bac*O's, meatless fried bacon bits made from spun soy protein fiber. At a May 1968 Conference on Protein Rich Food Products from Oilseeds held by the USDA in New Orleans, Louisiana, oilseed proteins were increasingly seen as the answer to the "protein crisis." Also that year International Action to Avert the Impending Protein Crisis, a United Nations publication, recommends soybeans as the single most promising protein source to close the "protein gap." In Nov. 1969 General Mills launched its second bacon analog, Bac-o-Bits, this time made from textured soy flour. Frozen Bontrae meat analogs were sold to the foodservice trade. This pioneering work nationwide by one of America's largest food companies indicated to the U.S. food industry that the time for soy protein foods of the future had arrived.

In 1971 Dr. K.K. Carroll at the University of Ontario, Canada, published the first modern study showing that even

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in fat-free diets, animal proteins raise serum cholesterol and soy proteins lower it. Many subsequent studies worldwide confirmed these important results.

During the 1970s soy protein products entered the mainstream. In Jan. 1970 W.T. Atkinson, assignor to the Archer Daniels Midland Co., was issued a key patent for a "Meat-like protein food product," which was soon widely sold under the registered trademark TVP. In Feb. 1971 textured soy protein products were authorized for use as meat extenders in the U.S. National School Lunch program, opening up a huge potential new market for TVP type products. The amount of products used jumped from 8.5 million lb dry weight in 1971-72 to 87.5 million lb in 1976-77. Also in 1971 the Food Protein Council (renamed the Soy Protein Council in Dec. 1981) was established as a trade association for major soy protein manufacturers.

In March 1973, as meat prices skyrocketed, beef-soy blends containing 25% hydrated textured soy flour began to be introduced to U.S. supermarket chains, marketed for their lower price and higher nutritional value. Predictions of huge future markets (which failed to materialize) were published. In Nov. 1973 the first World Soy Protein Conference was held in Munich, Germany, attended by over 1,000 people from 45 countries. In late 1974 Miles Laboratories/Worthington Foods launched the Morningstar Farms line of meat analogs based on spun soy protein fiber nationwide at U.S. supermarkets. In Aug. 1975 Japan Vegetable Protein Food Association was founded to promote modern soy protein products, primarily soy protein isolates. In Oct. 1976 seminars on the use of soy protein for foods and meal for feeds were held in Moscow, sponsored jointly by three U.S. groups. More than 200 Soviet officials attended. In May 1978 The Keystone Conference on Soy Protein and Human Nutrition was held at Keystone Colorado. Sponsored by Ralston Purina Co., it presented a new view of soy protein quality. In Jan. 1978 the International Soya Protein Food Conference was held in Singapore; 400 people from 24 countries participated. And in Oct/Nov. 1978 the World Conference on Vegetable Food Proteins was held in Amsterdam, The Netherlands; More than 1,000 people attended.

In 1980 soy protein products were approved for use as a beef extender by the U.S. Armed Forces. That same year the World Conference on Soya Processing and Utilization was held in Acapulco, Mexico. In Aug. 1980 Archer Daniels Midland Co. entered the soy protein isolate market with its purchase of Central Soya's isolate plant. Then in April 1985 Central Soya bought Griffith Laboratories' line of protein products. And in Feb. 1986 Central Soya purchased the Staley protein line, including Mira-Tex, Procon, and Textured Procon brands. In July 1987 Ralston Purina Co. of St. Louis, Missouri, established Protein Technologies International as a wholly-owned subsidiary to focus on sales of soy protein for food uses. The company's sales of soy protein products were $139.8 million in 1986.

But during the 1980s the total market for soy protein products grew very slowly, if at all. In 1984 Dr. Walter Wolf of the USDA Northern Regional Research Center estimated U.S. production as follows: Soy protein concentrates 36,000 tonnes (metric tons), soy isolates 41,000 tonnes, textured soy flour 43,000 tonnes, and textured soy concentrates 4,000 tonnes. The segment showing greatest growth appeared to be that of soy protein isolates, of which Ralston Purina/Protein Technologies International in the largest manufacturer.

Still there is widespread hope that, with the growing concern over dietary cholesterol, the low cost of soy protein relative to meat protein, the inevitable widening of this cost gap in the years to come, and the increasingly positive consumer attitudes toward soy protein products shown in polls, the market for these products will soon begin to realize its long-forecast potential.

This is the most comprehensive bibliography ever published on modern soy protein products. It is also the single most current and useful source of information on this subject available today, since 53% of all references (and most of the current ones) contain a summary/abstract averaging 68 words in length.

One of more than 40 bibliographies on soybeans and soyfoods being published by the Soyfoods Center, it is based on historical principles, listing all known documents and commercial products in chronological order. Containing 37 different document types (both published and unpublished, including many original interviews and partial translations of Japanese and European works), it is a powerful tool for understanding the development of this subject and related products from its earliest beginnings to the present, worldwide.

Compiled one record at a time over a period of 15 years, each reference in this bibliography features (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English publications together with an English translation, month and issue of publication, and the first author's first name (if given).

It also includes details on 651 commercial soy products, including the product name, date of introduction, manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as references to and summaries of advertisements, articles, patents, etc.) are also given.

Details on how to use the bibliography, a complete subject and geographical index, an author/company index, and a bibliometric analysis of the composition of the book (by language, document type, year, leading countries, states, and related subjects) are also included. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone:

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415-283-2991.

2811. Holzapfel, Robert. 1989. The Farm in Tennessee and seitan made with miso (Interview). *SoyaScan Notes.* Oct. 12. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The Book Publishing Co. at The Farm is planning to publish a book on seitan. There are two ways of making seitan: from wheat flour or from gluten flour. The former method is very wasteful of the nutrients in wheat, befouls the sewage system with wheat starch, takes a long time, and gives a lower yield of final product. The method using gluten flour gives no waste, and is quick and easy. Two companies in America that make or sell gluten flour are Arrowhead Mills (Hereford, Texas) and Nature's Harvest (A Seventh-day Adventist company in Michigan).

To make seitan, mix 3 cups water with ½ cup miso and garlic granules or powder to taste. Stir this into 4 cups gluten flour in a bowl. Mix until it becomes elastic, then knead until a uniform loaf is formed. Tear off chunks and shape into patties. Bake on a tray at 350ºF for about 10 minutes on side, until nicely browned and savory. The resulting product has the texture and taste of meat. Address: President, The Book Publishing Co., P.O. Box 99, 156 Drakes Lane, Summertown, Tennessee 38483. Phone: 615-964-3571.

2812. Lietzke, Ron. 1989. Worthington Foods sues to protect trademark. *Dispatch* (*Columbus, Ohio*). Oct. 21. p. 8D. Business section.
• ***Summary:*** "Worthington Foods Inc. has filed a $6 million lawsuit against Kellogg Co., alleging the Battle Creek, Michigan, company illegally is using its 'Heartwise' trademark for a new breakfast cereal." Worthington contends it has used the term since 1987 to promote a line of cholesterol-free foods sold under Morningstar Farms brand. "Although it has not secured trademark status from the U.S. Patent and Trademark Office, Worthington Foods claims it under a common law provision that is based on its usage over the years, the court documents said...

"Court documents filed by Kellogg said the company is spending $40 million to market Heartwise cereal in the first year...

"Heartwise cereal is being marketed by Kellogg for its reported ability to lower blood cholesterol levels because it contains a grain from India called psyllium."

2813. Kraft, Raymond C. 1989. Remembrances of Dr. Harry Miller and his work with soyfoods (Interview). *SoyaScan Notes.* Oct. 24. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** On 22 April 1990 the Mount Vernon Academy, the Seventh-day Adventist high school that both he and Dr. Miller attended at different times, will celebrate the 50th anniversary of Dr. Miller's return to Mt. Vernon, Ohio, in the fall of 1939, to start the International Nutrition Laboratory, his soymilk plant, with a memorial to Dr. Miller. It may be a bust and/or a plaque, with exhibits. In the fall of 1939 Dr. Kraft was a senior at that school; now a physician who will be age 67 in April (2 generations behind Dr. Miller), he worked for Harry Miller at his Mt. Vernon soyfoods plant from January to September 1941. Dr. Miller bought 140 acres on which to build his plant and house, and to grow soybeans. He grew his own soybeans there from the first spring. In 1940 Dr. Miller's son, Clarence, had just finished college. He went to Mt. Vernon from Takoma Park to get the bookkeeping records for Dr. Miller's business in order.

Dr. Kraft has several strong recollections. "First, when he fired me on the first of September, I asked him if there was anything wrong with my work. He said 'No, not a thing. It's time for you to go back to school.' Second, he was a man who never knew the meaning of the word 'menial.' He would come out to the factory at 3:30 or 4:00 in the morning to do whatever needed to be done; sweeping the floor, grinding beans, cleaning out the spray drier, shoveling coal into the boiler, digging ditches. Then he worked at his medical profession (surgery and hospital) during the day and at 7:00 or 8:00 P.M. he'd be back in the factory again until 10:00 or even midnight. He had an inexhaustible supply of energy. He was a quiet, self-effacing man. He was not a public speaker, and didn't relish publicity–quite like General George C. Marshall."

The 4 main soy products that Dr. Kraft remembers the company selling when he began work there were Soyalac (the principal one, sold mostly for allergenic babies), probably Soyagen for general usage, (both liquid and spray dried; but he is not positive that they were making Soyagen), Soybean Sandwich Spread (made from the mash left over after making soymilk; he does not remember if the product contained additional soybeans), and Canned Green Soybeans.

All this was only 2 years after Dr. Miller started the farm in Mt. Vernon. "He was the first to produce soybeans in Knox County, Ohio, for food use. He had to go out and almost brow-beat the farmers into growing the soybeans for him. They would do it only on the condition that he contracted the entire crop." Address: 500 Cohasset Square, Suite 23, Chico, California 95926. Phone: 916-345-9500.

2814. Fédération Nationale des Syndicats de la Diététique. 1989. DietExpo '89: 10e salon international des produits de diététique, de nutrition et d'hygiène [DietExpo '89: 10th international exhibition of dietetic, nutritional, and hygienic products]. Paris, France. 138 p. Held 21-23 Oct. 1989 at Paris, France (Parc des Expositions, Porte de Versailles). Illust. Index. 21 cm. [Fre]
• ***Summary:*** This book contains ads, an index then alphabetical listing of exhibitors, and a list of brands. The following soy-related companies are listed: Bonneterre (distributor, full-page color ad, inside front cover),

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Lima France (via Bonneterre; full-page color ad, p. 8), Laboratoires Heuprophax (full-page ad, p. 18; Sojacithine), Alré (full-page ad, p. 21; Soja Cao, Soja Fruits, Sojacao Gluten, Soja-Vita. This company, in business since 1934, is a division of Heuprophax Laboratories in Nanterre, France), Aliments de Regime & Alre (p. 30), Bioforce (p. 34-35), Bonneterre (p. 36), Celnat (full-page ad, p. 41-42), Creation (p. 44, Soyalet and Soyavit brands of soyfoods), Diétetique et Santé (p. 50, Gerblé), Heuprophax Laboratoires (p. 64), Innoval (p. 68), Jonathan-France (p. 72), Naturavit (p. 73), Laboratoires Marins (p. 76, Soyal soy lecithin), Lima-France (p. 80), Nature et Progres (p. 88, organic certifiers, their logo looks like a round yin-yang (*t'ai chi*) symbol with one white circle in it), Provamel (p. 98, Izegem, Belgium; 4-page color insert shows products), Société Soy (half-page ad, p. 99; tofu specialists), Pur Aliment (p. 100, Pural brand; Seventh-day Adventist broker of many soyfood products), Soy (Société Soy, p. 112). Address: Paris, France.

2815. Leatherhead Food Research Assoc. 1989. Vegetarianism and the consumer: Implications for the UK food industry. Leatherhead Food Research Assoc., Randalls Rd., Leatherhead, Surrey, England. vi + 118 p. Oct. No index. 30 cm. Price: £2,700. [2 ref]

• ***Summary:*** Contents: Foreword. List of 27 tables. List of 16 figures. Management summary. 1. Introduction: Scope of the research, aims, objectives, research method. 2. Profile of consumers reducing / excluding meat / meat and fish from their diet: Definitions, levels of reduction/exclusion of meat/meat and fish consumption, demographic profile, length of time following current eating pattern. 3. Reasons for reduction/exclusion of meat consumption: Summary of reasons for change amongst adults, reasons for change by demographic profile of adult consumers, summary of reasons for change amongst children, reasons for change by eating pattern of consumers. 4. Future potential of vegetarianism and reduced meat consumption: Consumer intentions, reasons for change. 5. Implications for food consumption habits of the exclusion of/reduction in meat and fish consumption: Changes made to in-home consumption patterns by consumers avoiding meat completely, changes made to in-home consumption patterns by consumers reducing consumption of meat, changes made to out-of-home food consumption patterns by consumers avoiding meat, changes made to out-of-home food consumption patterns by consumers who had reduced meat consumption. 6. Trends in consumption of meat and fish: Introduction, meat, fish. 7. Trends in consumption of meat and fish alternatives: Introduction, vegetables, salad and fruit, alternative protein sources, animal-derivative-free products, overview of vegetarian product introductions to the UK, development of vegetarian products within the catering market, development of novel vegetarian products worldwide. 8. Consumer purchasing criteria for vegetarian food: Introduction, distinctiveness of product, retailer and manufacturer preferences, level of healthy eating concern, level of reaction to food 'scares', level of environmental concern. 9. Conclusions.

In the section on "Alternative protein sources" the subsection on "Meat imitations" states that Realeat Vegebangers, Cauldron Foods Tofu Burgers, Granose Soya Franks and Spicy Links, Protoveg Sosmix, Direct Foods Smokey Snaps, Marks & Spencer Vegetable Cutlets are all on the market (p. 72). Realeat was the pioneer in introducing vegetable burgers (Vegeburgers) and frozen burgers to the health-food trade; they were introduced to supermarkets in about 1986/87. The Vegeburger brand, now owned by Haldane Foods, includes Cheese Vegeburger, Vegebangers, and ready meals. Companies that have introduced vegetable burgers in the last four years include Direct Foods, Vegetarian Feasts, Granose Foods, Tivall, Cauldron Foods, Booker Health Foods, Brewhurst, The Dietburger Company, Realeat, Birds Eye Walls, and supermarket brands. In 1987 Cauldron Foods launched a range of three varieties of tofu burger in vacuum packs; cheeseburgers were launched by both Realeat and The Dietburger Company. In April 1988 Birds Eye Walls launched its Steakhouse vegetable burger and Granose Foods launched four varieties of frozen burgers, incl. Soya & Mushroom, and Nut & Sesame varieties. Tesco introduced a vegetarian burger under its own brand; it was made by Tivall from soya and wheat. In 1989 Realeat (Haldane Foods) introduced a microwaveable Quarter Pounder Burger. In 1985 Granose Foods launched Soya Franks, a meatless sausage. Realeat launched Vegebanger, which includes soya. In 1986 Direct Foods launched a soya-based Sausage Slice and Tivall introduced vegetable protein sausages. In 1987 The Dietburger Company launched an all-vegetable frozen dietbanger and Granose Foods launched Vegetarian Spicy Links. In 1988 Goodlife Whole Foods launched Herb Bean Bangers and Spicy Bean Bangers; Buss Foods introduced a vegetarian sausage, Realeat introduced a frozen Vegebanger, and Granose Foods added a vegetarian sausage to its Wholefoods Kitchen range (p. 76). Address: Leatherhead, Surrey, England.

2816. Mills, Paul K.; Preston-Martin, S.; Annegers, J.F.; Beeson, W.L.; Phillips, R.L.; Fraser, G.E. 1989. Risk factors for tumors of the brain and cranial meninges in Seventh-Day Adventists. *Neuroepidemiology* 8(5):266-75. Oct. [23 ref] Address: 1,4-6. Loma Linda Univ., Dep. of Preventive Medicine, Loma Linda, California 92350; 2. Univ. of Southern California, Los Angeles, CA; 3. Univ. of Texas, Houston, Texas.

2817. New Hope Communications. 1989. The natural products market: A wellspring of consumer trends. Boulder, Colorado: New Hope Communications. 164 p. Price: $975.00.

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• ***Summary:*** Contents: Acknowledgements. 1. Introduction: The roots [history] of the natural products industry. 2. Coming to terms: Definitions of basic concepts. 3. The industry matures: From rebellion to leadership. 4. The impact of legislation and regulation by Peter J. Semper. 5. The role of science: Research, development, and credibility. 6. Product category sales trends (Soyfoods is not listed as a category). 7. Retailing: The interface with the consumer (Health food chains: General Nutrition Centers, Great Earth Vitamins, Nature Food Centres, Fred Meyer Nutrition, Nutrition World). 8. Manufacturing: A multitude of market shares. 9. Distribution: Consolidation, stability, and efficiency. 10. Regions. 11. Factors for the future. Appendix 1. Organic farming labeling legislation. Appendix 2. Examples of advertising.

Gross retail sales for this industry exceeded $3.5 billion in 1988. This study gives a good look at the structure of the market, and contains a brief historical overview of the industry. It contains many tables, graphs, and maps. None of these relate to soyfoods. A graph of "Natural Products Industry Sales" shows total retail sales to have grown from about $250 million in 1970 to $3,550 million in 1988, a 14-fold increase in 18 years. Of the 1988 total, $2,390 million (67%) is sold by independents (natural and health food stores), $679 million (19%) by the mass market (supermarkets), and $477 million (13%) by non-supermarket chains (such as General Nutrition Centers). The major natural products in the mass market (with sales in 1988) are yogurt $1,200 million, bottled water $800 million, granola bars $200 million, and herbal teas $70 million. "These 4 product categories add up to more than $2,200 million, which is more than double the sales we tracked for all grocery products sold through the natural products industry."

History: The notion of natural or health food products has been around for almost as long as the United States. Two of the early pioneers were Sylvester Graham and John Harvey Kellogg. Graham, who admonished Americans to stop eating meat, "gained both fame an notoriety in the early 1800s in claiming that 'a single pound of rice absolutely contains more nutritious matter than 2½ pounds of the best butcher's meat.' Graham died in 1851, at the ripe old age of 57. A year later, John Harvey Kellogg was born. He lived to be 91, and attributed much of his longevity to his [vegetarian] diet based on fruits, nuts and whole grains. From his Battle Creek Sanitarium, Kellogg concocted whole wheat meals, which found their way into the mass market. And subsequently, became more refined and less healthy."

The natural foods industry is based on two basic beliefs, both expressed by Graham and Kellogg. "The first is that certain foods or nutrients can be used medicinally. That is, the right foods can be used to help cure disease or to enhance vitality or performance... The second maxim dear to the natural foods industry is that food is better and intrinsically healthier when eaten most closely to its original state in nature. The ideal food is that which is unprocessed, unrefined, and even uncooked in some instances."

"The industry matures: From rebellion to leadership. Since World War II, food production in America can be explained by the concept of the Hegelian dialectic. One concept or practice (a thesis) inevitably evokes its opposite (an antithesis), and the two interact to form a new concept (synthesis), which in turn becomes a new thesis. "Throughout the 1950s and 1960s, food became ever more mass produced, processed, homogenized and inexpensive... as the power of the food conglomerates reached their peak some 20 years ago, the antithesis was being articulated by such visionaries as Adelle Davis, Gayelord Hauser, and Linus Pauling. "It's probably no accident that this antithesis caught on and became a movement in the late 1960s and early 1970s, when a significant segment of the Baby Boom generation was protesting everything else.

"Through the 1980s, a synthesis has been evolving. The food giants have become more aware of health issues and the natural foods industry has adopted and adapted technologies to allow greater production of food, while retaining its intrinsic values."

During the 1960s and 1970s this industry was divided into two camps, often at odds with each other. One sold "health foods" and the other "natural foods." The health food industry, which had started in the 1930s and focused on the first maximum that food can be used as medicine, focused most of its attention on vitamins, herbs, and some traditional health foods such as wheat germ and brewer's yeast. "In the late 1960s the natural foods faction emerged. Its followers were primarily concerned about food [rather than vitamins or supplements] and its purity... Products were defined essentially by what they did not contain: chemical pesticides, preservatives, food colorings, refined sugars and flours and, frequently, any animal products. Vegetarianism was an important part of the natural foods movement."

During the 1970s the industry was nurtured more by idealism than business acumen. When Natural Foods Merchandiser began surveying industry retailers in 1979, "nearly a quarter of them could not tell us their gross profit margin and a significant number did not even accurately know their gross sales. A high percentage didn't care...

"A decade later, the only thing that remains constant is the idealism, but today it is frequently blended with sound management and creative marketing...

"How did the industry accomplish this transformation? It happened in several evolutionary stages. First and foremost, the impetus for growth came from consumers. Economists use the term *demand pull* when describing conditions in which consumption dictates sales growth and pricing. In this case, the entire natural products industry was virtually dragged kicking and screaming into the mainstream by consumers. They demanded the natural products, and then they began demanding that these products be marketed

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properly.

"Then between 1975 and 1982 a new wave of retailers entered the scene. They ran better, cleaner businesses and broadened the market. "Health" and "natural" principles were integrated. Industry sales grew remarkably during the 1970s, from about $250 million in 1970 to $1,850 in 1980, averaging about 20% a year for the decade. The number of outlets quadrupled. "At the same time, the supermarkets started setting up health food sections. On the west coast, two regional chains–Raley's in northern California and Fred Meyer in Oregon–had successfully introduced health foods as early as 1971. Their continued success, along with heightened media attention, prompted Safeway to begin a program in 1980 (another motivation was that Raley's was generally leading Safeway in market share wherever the two chains competed). Since Safeway at that time was the nation's largest grocery chain, its leadership encouraged other supermarkets to follow suit. Drug stores and discount stores, such as K-Mart, also entered the field.

"Meanwhile, there was strong expansion from the existing health food retail organizations, primarily the major chains such as General Nutrition Centers (GNC), Great Earth International and Nature Food Centres."

By the end of 1982, this expansion had peaked. There was a 4-year shakeout which lasted from early 1983 until late 1986. The industry lost a net of 1,500 health and natural food stores, and the vast majority of these were small health food stores. "The number of segregated natural foods sections declined from a high of 2,700 in 1985 to approximately 1,400 today."

Surviving retailers emerged stronger. A resurgence began in 1987. In the fall of that year Surgeon General C. Everett Koop issued a report stating that cholesterol levels exceeding 200 were associated with a high risk of heart disease. This was considerably lower than the previous acceptable cholesterol limits and immediately plunged a quarter of the American people into a risk group. Consumers began visiting natural foods stores to buy low-fat, low-cholesterol foods, some based on tofu and other soyfoods. Also, foods such as oat bran, canola oil, and niacin were shown to actually lower serum cholesterol levels.

"Probably the biggest boost the industry has ever received... came in March of this year, when CBS '60 Minutes' ran a segment on the potential dangers of apples treated with Alar (daminozide) to young children. Retailers reported being overwhelmed by consumers clamoring for organically-grown foods of all types.

"In many ways, the industry is 20 years old. Many of the leading companies in the industry were formed within the past 20 years, including Tree of Life, Nature's Way, Twin Lab, Celestial Seasonings, R.W. Knudsen & Sons, Mrs. Gooch's, Bread & Circus and Whole Foods Markets." Address: Boulder, Colorado. Phone: 206-642-3586.

2818. Lietzke, Ron. 1989. Hospital has a heart-to-heart. Cereal maker to promote Riverside's health messages. *Dispatch* (*Columbus, Ohio*). Nov. 2. p. 2G. Business section.
• ***Summary:*** The Riverside Methodist Hospitals group in Columbus, Ohio, owns the registered service mark "Heartwise," and has used it for years to promote a variety of programs on how to reduce the risk of heart disease. Now the Kellogg Co. in Battle Creek, Michigan, is spending $40 million to launch Heartwise breakfast cereal, which has a high soluble fiber content from a grain component called psyllium. Kellogg has agreed to print the hospital's health messages on millions of its boxes.

"Worthington Foods, a producer of soy-based foods and meat substitutes, has filed a $6 million lawsuit against Kellogg, alleging the cereal maker is illegally using the 'Heartwise' trademark. Worthington Foods has used it since 1987 to promote a line of cholesterol-free foods sold under the Morningstar Farms label.

"'Our dispute is with a cereal company, Kellogg, and is not with our good neighbor, Riverside Hospital,' Worthington Foods President Dale E. Twomley said yesterday." However Worthington and the Riverside hospital group have been at odds over use of the trademark.

2819. Rivera, Esther. 1989. La Loma Foods, formerly Loma Linda Foods, purchased by Worthington Foods (Interview). *SoyaScan Notes.* Nov. 10. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The General Conference (GC) had accepted the offer by Dr. Martin, who had a given period to come up with the funds and finalize the deal. He was unable to raise the full amount. He asked for an extension but the GC didn't grant him any more time. So the bidding was opened again. The second bidder didn't change his bid, but Worthington Foods came up with a new proposal for all cash up front. The GC accepted Worthington's bid. So on 10 Dec. 1989 La Loma will become Worthington's property. On Dec. 8 the La Loma office in Riverside will close. Their contract with Nutricia expired on Aug. 31. On Dec. 11, Worthington begins their contract with Nutricia, which is making the products now. Nutricia owns both the Riverside and the Mt. Vernon plants. Basically Worthington purchased the food equipment, the product formulas and trademarks, and the potential accounts. The big question is how many of the former Loma Linda products Worthington will be discontinued, since Worthington has many very similar products. La Loma has many concerned consumers and distributors. What will happen to their "Labels for Learning" program? And their archives? They are scheduled to meet with Worthington marketing people on Dec. 20. Worthington or the GC will probably do a news release. Elder Wm. Murriel (pron MUR-ul) at the GC (phone: 301-680-6000) is chairman of board of La Loma. Address: La Loma Foods, Riverside, California.

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2820. **Product Name:** Tofu Salad.
Manufacturer's Name: Cedar Lake Foods.
Manufacturer's Address: P.O. Box 65, Cedar Lake, MI 48812. Phone: 517-427-5143.
Date of Introduction: 1989 November.
New Product–Documentation: Cathy Tardosky. 1989. Whole Foods. Nov. p. 49.

2821. Fraser, Gary E.; Babaali, Hossein. 1989. Determinants of high density lipoprotein cholesterol in middle-aged Seventh-day Adventist men and their neighbors. *American J. of Epidemiology* 130(5):958-65. Nov. [32 ref]
Address: Dep. of Epidemiology, Loma Linda Univ., Loma Linda, California 92350.

2822. Tardosky, Cathy C. 1989. Soyfoods entrees: Nutrition for the '90s. *Whole Foods.* Nov. p. 48-53.
• ***Summary:*** Lists (with photos) many second generation soyfood products. Retailers say that demand for soyfoods is on the rise. Many store owners are quoted, speaking very positively of the category. Worthington Foods is now in its 50th year of vegetarian food production, with a total of 45 different entrees under the Worthington and Natural Touch labels. "The Natural Touch line was developed in the early 1980s as the interest in products went more toward the natural segment of the market."

2823. Nieman, David C.; Underwood, B.C.; Sherman, K.M.; Arabatzis, K.; Barbosa, J.C.; Shultz, T.D. 1989. Status of Seventh-Day Adventist vegetarian and non-vegetarian elderly women. *J. of the American Dietetic Association* 89(12):1763-69. Dec. [46 ref]
• ***Summary:*** 23 SDA vegetarian women (mean age 72.2) and 14 SDA non-vegetarian women (71.1 years) were studied. Results from analysis of 7-day food records showed that the vegetarians consumed significantly less cholesterol, saturated fatty acids, and caffeine, but more carbohydrate, dietary fiber, magnesium, vitamins E and A, thiamin, pantothenic acid, manganese and copper than non-vegetarians. The vegetarians had significantly lower serum glucose, low-density lipoprotein cholesterol, and total cholesterol levels.
Address: Depts. of Nutrition and Health Science, School of Public Health; and Dep. of Biochemistry, School of Medicine. All: Loma Linda Univ., Loma Linda, California 92350.

2824. *SoyaScan Notes.* 1989. Major soy-related company acquisitions and mergers worldwide 1970-1989 (Overview). Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** 1970 March–Miles Laboratories of Elkhart, Indiana (most famous as the maker of Alka-Seltzer) acquires Worthington Foods of Worthington, Ohio (most famous for its Morningstar Farms line of meat alternatives), making it a wholly owned subsidiary.

1973 Jan. 15–ADM acquires 50% of British Arkady Holdings Ltd. and its subsidiary British Arkady Co. Ltd. of Old Trafford, Manchester, England.

1977 (late)–Bayer A.G. of Germany (makers of Aspirin) acquires Miles Laboratories of Elkhart, Indiana; as part of the deal they Worthington Foods, a subsidiary of Miles.

1979–Bunge Corp. acquires Lauhoff Grain Co. of Danville, Illinois.

1982 Oct. 15–Worthington Foods is repurchased from Miles Laboratories by a group of three Seventh-day Adventist investors in a leveraged buyout. During the 12 years under Miles, sales increased five-fold. Sales volume in 1983 was an all-time high. The company employed 250 people.

1983 April 21–Hybritech Seed International, Inc., a wholly-owned subsidiary of Monsanto Company, purchases the Jacob Hartz Seed Co. of Stuttgart, Arkansas.

1983–House Food Industrial Co., Ltd. of Japan purchases 50% ownership in Yamauchi Enterprises (formerly Hinode Tofu Co., owned by Mr. Shoan Yamauchi) in Los Angeles. The company is renamed House Foods & Yamauchi, Inc.

1985 May 31–Barricini Foods Inc. acquires Farm Foods (makers of Ice Bean soy ice cream) of Summertown, Tennessee.

1985 March–British Arkady acquires Direct Foods Ltd.

1986 Feb.–British Arkady acquires Vegetarian Feasts Ltd.

1986 Dec. 1–White Wave acquires Soyfoods Unlimited, Inc. of San Leandro, California. It is White Wave's first acquisition.

1987 Aug.–British Arkady acquires Haldane Foods Ltd. and Regular Tofu Co. Ltd. It also acquires Vegetarian Cuisine Ltd. in 1987.

1987 Oct.–The Ferruzzi Group in Ravenna, Italy, acquires Central Soya Co. in Ft. Wayne, Indiana.

1987 Dec. 31–ADM acquires the rest of British Arkady Holdings Ltd. so that it now owned 100%.

1988 Jan.–The British Arkady Group acquires Haldane Foods.

1988 Feb.–Westbrae Natural Foods (of Berkeley, California, maker of soymilk) is merged with and becomes a wholly-owned subsidiary of Vestro Foods, a publicly traded company in City of Commerce, Southern California. Most of Westbrae's top management decides not to stay with the company.

1988 Sept.–Haldane Foods Group acquires Realeat Foods Ltd.

1989 Feb.–Haldane Foods Group acquires Saucemasters Ltd. It also acquires Genice Foods Ltd. in March 1989.

1989 Feb. 16–Edward Lowe of Michigan, the inventor of Kitty Litter, purchases the majority of shares in INARI Ltd. from Len and Irene Stuttman; but they. kept a minority ownership in the company.

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1989 April–Huegli Naehrmittel A.G. acquires Yamato Tofuhaus Sojaprodukte of Tuebingen, Hirschau, West Germany. Note: This is the earliest record seen (Feb. 2013) that mentions Huegli in connection with soy.

1989 April 22–Lima Foods of Belgium acquires Jonathan P.V.B.A. of Belgium.

1989 Sept.–Lima Foods of Belgium is purchased from Vibec by Euronature (pronounced as in French, YU-ro na-TYUR), a large international food company headquartered in Paris, France.

2825. Abbey, D.E.; Euler, G.L.; Moore, J.K.; Petersen, F.; Hodgkin, J.E.; Magie, A.R. 1989. Applications of a method for setting air quality standards based on epidemiological data. *J. of the Air Pollution Control Association* (*JAPCA*) 39:437-45. *

2826. Beeson, W.L.; Fraser, G.E.; Mills, P.K. 1989. Validation of record linkage to 2 California population-based tumor registries in a cohort study. *DHHS* (*Department of Health and Human Services*) *Publication* No. (PHS) 90-1214. p. 196-201. Proceedings of the 1989 Public Health Conference on Records and Statistics. *
Address: Loma Linda Univ., Loma Linda, California.

2827. **Product Name:** [GranoVita Organic Tofu Spread (With French Country Herbs, Tomato, Vegetables, or Green Pepper)].
Foreign Name: GranoVita Bio-Tofu-Pastete (Kraeuter der Provence, Tomate, Gemuese, Gruener Pfeffer).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989.
Ingredients: Bio-Tofu (water, bio-soybeans*, calcium chloride), water, onions, plant oils and fats in changing proportions, bio-soy flour*, lecithin plant emulsifier, seasonings, provincial herbs. * = Organically grown.
Wt/Vol., Packaging, Price: 160 gm glass Jar. French Country Herbs retails for DM 2.98.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Calories 240, protein 4.4 gm, usable carbohydrate 4.8 gm, fat 22.1 gm.
New Product–Documentation: Label for French Country Herbs sent by Anthony Marrese. 1989. 5 by 8.5 by 1.5 inches. Self adhesive. Green, red, and black on white. Color illustration shows a pagoda and gate. Exklusiv Neuform certification symbol. "French style spread for bread. Made purely from plants." Also received as a tiny (25 gm) package of Granovita Sandwich Pastete: Hausmacher Art. "Sojamehl" (Soy flour) is a minor ingredient in it. It retails for DM 0.75.

Manufacturer's brochure. 1989? "Bio-Tofu for the High Quality Kitchen." p. 4-5. A color photo shows the labels of all 4 flavors. Each contains the pagoda and a color photo. The tomato has a delicate flavor, the vegetable is spicy, and the green pepper is fiery.

2828. **Product Name:** [GranoVita Organic Tofu Patties (Curry, Greek-Style, French Country Herbs, Green Pepper)].
Foreign Name: GranoVita Bio Tofuletten (Curry, Griechische Art, Kraeuter der Provence, Gruener Pfeffer).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1989.
Ingredients: Curry: Organic tofu (water, organically grown soybeans, calcium chloride), vegetable oil, water, egg protein, whole wheat, spices, carob bean meal as a plant-based thicker, honey.
Wt/Vol., Packaging, Price: 125 gm vacuum pack poly bag, 3 patties per bag. Retails for DM 2.98.
How Stored: Refrigerated.
Nutrition: Curry. Per 100 gm.: Protein 10.3 gm, fat 27.1 gm, usable carbohydrates 11.5 gm, calories 331.
New Product–Documentation: Label for Curry sent by Anthony Marrese. 1990. Jan. 2.75 by 5 inches. Red, green, gold, and black on white. "Contains no flesh." An illustration (line drawing) shows a pagoda at the top of the label and a pan containing the patties at the bottom. Exklusiv Neuform certification symbol.

Manufacturer's brochure. 1989? "Bio-Tofu for the High Quality Kitchen." p. 4-5. A color photo shows the labels of all 4 flavors.

Form filled out and original Labels (for Curry, French Country Herbs, and Griechische Art) sent by DE-VAU-GE. 1990. June 11. These products were introduced in 1989.

Form filled out and new Labels sent by DE-VAU-GE. 1990. June 11. The product was introduced in 1989. New Label for curry. 5 by 8.5 by 1.5 inch paperboard box. Black, gold, red, green, and orange on white. A stylish color photo on the front panel shows the dish ready to serve next to rice, garnished with 2 slices of tangerine and a spring of mint. At the top of the front panel: "The whole foods kitchen for the gourmet" (Die Vollwertkueche à la Gourmet). The subtitle is "In curry-fruit sauce with pumpkin seeds & rice. A ready-to-heat menu for 1 person. Enjoy without flesh." The box contains two pouches: one with the tofu cubes and curry-fruit sauce; the other with the rice and pumpkin seeds. The back panel shows how these can be heated in either a water bath, a cooking pot, or a microwave oven. Ingredients: (1) Organic tofu cubes: Organic tofu (water, soybeans*, calcium chloride), vegetable oil, water, egg protein, raisins, spices, wheat, plant thickener (carob seed meal), spices, honey. (2) Curry & Fruit Sauce: Water, milk, fruits (peaches, apricots, pears), cream, paprika, vegetable oils and fats in varying

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amounts, wheat flour, rice flour*, spices, seasonings, sea salt, plant thickener (carob bean seeds). (3) Water, natural rice, pumpkin seeds (Kuerbiskerne), vegetable oil, sea salt. * = certified organically grown (aus anerkanntem kontrolliertem biologischen Anbau). Weight: 350 gm. Per 350 gm portion: Protein 20.3 gm, fat 33.0 gm, carbohydrates 54.2 gm, fiber 6.7 gm, calories 595, 1 BE = 77 gm. Exklusiv Neuform certification symbol.

2829. **Product Name:** So Good Soya Milk [Regular, or Sugar-Free Organic].
Manufacturer's Name: Haldane Foods Ltd. (Importer-Distributor). Made in Australia by Sanitarium Foods.
Manufacturer's Address: 25 Hayhill, Sileby Road, Barrow upon Soar, Leicestershire LE12 8LD, England. Phone: 050981-6611.
Date of Introduction: 1989.
Wt/Vol., Packaging, Price: 1 liter Tetra Brik Aseptic carton. Retails for £0.69.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Haldane Foods Group catalog and price list. 1989. Oct. 2. This product is listed in both documents under the Haldane Foods Ltd. product line. A color photo in the catalog shows the label (1 liter carton). It has black lettering and vertical stripes on a white background. On the front panel is am impressionistic sketch of a snow-capped mountain in the distance with several soybean plants growing in the immediate foreground.

Talk with Philip Marshall of Cauldron Foods. 1990. July 9. Haldane's soymilk used to be called Sojal. They may have lost the fight over the name. It is very likely that the Haldane group has this product made by some company outside of the group. They do not have the equipment needed to make a quality soymilk. There is no connection with Sanitarium Foods in Australia.

2830. **Product Name:** [Nutana Tofu–Oriental-Style].
Foreign Name: Nutana Tofu Oriëntaal.
Manufacturer's Name: Nutana Helsekost.
Manufacturer's Address: Ringstedvej 531, DK-4632 Bjaeverskov, Denmark.
Date of Introduction: 1989.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Black-and-white photo of the can and label sent by Eric Fehlberg. 1990. May 24. A photo on the front panel shows cubes of tofu in a sauce with mushrooms and other vegetables.

2831. Sabaté-Casellas, J. 1989. Anthropometric parameters in public school students and Seventh-day Adventist vegetarian and meat-eating students. DrPH (Doctor of Public Health) thesis, Loma Linda University, Loma Linda, California. *
Address: Loma Linda Univ., Loma Linda, California.

2832. **Product Name:** Sanitarium So Good: Flavoured Non-Dairy Soy Drink [Strawberry, Jaffa {Chocolate & Orange}, Honeycomb, or Caramel].
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, N.S.W. 2076, Australia.
Date of Introduction: 1989.
Ingredients: Jaffa: Water (80.0%), soya isolate (3.7%), sugar (3.7%), vegetable oil 3.2%, maltodextrin 2.8%, fructose (1.7%), mineral salts, vitamins, flavours, food acid, colour.
Wt/Vol., Packaging, Price: 250 ml Combibloc Aseptic carton. Retails for $0.75 (10/93, Walnut Creek, California).
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 250 ml.: Calories 178 (or 750 kJ), protein 8.0 gm, fat 8.0 gm, carbohydrate (total 19.7 gm, sugars 13.7 gm, lactose 0 gm), cholesterol 0 gm, sodium 137 mg, potassium 350 mg. Provides 40% of the Daily Allowance of calcium and 35% of vitamin B-12.
New Product–Documentation: Letter and Labels sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1989.

Sanitarium Nutrition Education Service. 1990. April. "So Good." This 4-page leaflet gives a clear explanation of each ingredient used, plus nutritional and other information.

Product with Label (Jaffa and Strawberry flavors) purchased at Diablo Oriental Foods in Walnut Creek, California. 1993. Oct. 11. Each retails for $0.75. 3 inches by 3 inches by 1.87 inches thick. Jaffa: Brown, reddish brown, orange, pink, blue, and red on white. Illustration of a large glass of pink soymilk with a straw in it. Beside it is an orange and two squares of chocolate. Behind it is the morning sun rising over purple mountains and green fields. Front panel: "Long lasting. No cholesterol. No lactose." Back panel: "So Good is an excellent source of protein. A 250 ml serve of So Good supplies 8g of vegetable protein. Another quality product from the Sanitarium Health Food Company–the people who believe that food should not only taste good, it should be good for you." Side panel: "So Good has no cholesterol, no lactose, and as much calcium as milk. Quality Guarantee: If you are not satisfied with this product, please send the top of the pack with your complaint to SRL Consumer Services... or to the nearest Sanitarium State office." Soyfoods Center taste test. Excellent. No beany flavor at all.

2833. Amato, Paul R.; Partridge, Sonia A. 1989. The new vegetarians: Promoting health and protecting life (Continued–Part II). New York and London: Plenum Press. viii + 282 p. Index. 22 cm. [90 endnotes]
• ***Summary:*** Continued: "Many Christian groups were at the forefront of the burgeoning vegetarian movement. The Bible

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Christian Church, founded by William Cowherd in 1809 in Manchester, England, played a major role in advocating and furthering the cause of vegetarianism. Members believed that Christ's teachings of mercy should be extended to animals as well as to people. They also believed that a vegetarian diet was healthier than one based on meat and that Christians have a duty to maintain good health in order to do God's work. Members of this group later formed the Vegetarian Society in 1847-the first secular vegetarian organization in the West. They disseminated information in the form of essays and lectures and taught that the adoption of vegetarianism would lead to universal brotherhood, an increase in happiness, and a more civilized society. This group still exists and is presently known as the Vegetarian Society of the United Kingdom.

"The movement was carried on into the 20th century by vegetarian societies working at the grass-roots level, religious groups such as the Seventh-Day Adventists, and prominent figures such as George Bernard Shaw and Mohandas Gandhi. Vegetarian organizations formed in most Western countries, and newsletters, books, and other publications promoting the diet became common. In 1908 the International Vegetarian Union was formed, with its main function being to organize conferences at which vegetarians from around the world meet and share information. The union continues to be active today.

"This orderly but gradual progression might have continued indefinitely had it not been for the social upheavals of the 1960s and 1970s. At this point in time, a variety of influences converged that had major implications for the course of vegetarianism: a new awareness of the importance of diet in maintaining health, an interest in Eastern philosophy and religion, a concern over the degradation of the environment through human 'progress,' a politically active stance in support of the rights of oppressed groups, the emergence of the peace movement, and a utopian belief in a perfectible society. All of these social trends provided pathways for new converts to the vegetarian cause. Out of this melange, the modern era of vegetarianism emerged." Address: 1. Dr., Dep. of Sociology, Univ. of Nebraska, Lincoln, NE 68588; 2. San Diego, California.

2834. Bull, Malcolm; Lockhart, Keith. 1989. Seeking a sanctuary: Seventh-day Adventism and the American dream. New York, NY: Harper & Row. 319 p. *
• ***Summary:*** In the opinion of Prof. Ronald Numbers, this is "the best book that has ever been written on Adventism." The authors are ex-Adventists. It is scholarly, yet playful in its challenging interpretations. Address: England.

2835. Kuzma, Jan W.; Lindsted, Kristian D. 1989. Determinants of long-term (24-year) diet recall ability using a 21-item food frequency questionnaire. *Nutrition and Cancer* 12(2):151-60. [7 ref]
• ***Summary:*** 216 people, half of whom were vegetarians, were asked to recall accurately their food habits of 24 years ago. The authors compared 21 key food items reported in 1960 with the same data reported in 1984. Recall ability was highest for persons with stable diets. Vegetarian status, education, and church attendance were the other significant determinants of exact recall. Address: School of Public Health, Loma Linda Univ., Loma Linda, California 92350.

2836. Lindsted, Kristian D.; Kuzma, Jan W. 1989. Long-term (24-year) recall reliability in cancer cases and controls using a 21-item food frequency questionnaire. *Nutrition and Cancer* 12(2):135-49. [73 ref]
Address: School of Public Health, Loma Linda Univ., Loma Linda, California 92350.

2837. Sahm Yook Korean Foods. 1989. [Sahm Yook Soymilk Products (Leaflet)]. Chunwon-gun, Choongchungnam-do, South Korea. 1 p. One sided. 19 x 25 cm. Color photo. [Kor]
• ***Summary:*** A photo on the front shows 5 packages of soymilk and a glass of soymilk surrounded by fresh green vegetables and mikan oranges. The back shows a young lady with a Western-style hairdo holding a Tetra-Brik carton of Sahm Yook Soy Milk. The three foil pouches are displayed nearby. Ways of using the product are described with cartoons below. Other photos show two cans of gluten products, Vegeburger, and Vegemeat. Address: 320 Panjeong-ri, Jiksan-myun, Chunwon-gun, Choongchungnam-do 333-810, South Korea.

2838. *Good Food News* (*Nutrition Education Service, Sanitarium Health Food Company, Australia*). 1989--. Serial/periodical. New South Wales, Australia: Sanitarium Health Food Co. Frequency: Quarterly.
• ***Summary:*** Contains information about healthy (largely vegetarian) eating, with recipes that use products made by Sanitarium Health Food Co. The format changed in Sept. 1997 (vol. 9, no. 3) by adding 2 more pages and including a "New Products" section.

Some new soy products and the dates mentioned: Sept. 1997–Crispy Nuggets, Country Burgers, Seafarers Patties, Potato Pockets. Dec. 1997–So Good Now (chilled soy beverage in gable-top cartons, regular and low-fat), Weet-Bix Hi Bran with Soy & Linseed. March 1998–So Good Smoothie (Mango, or Banana). June 1998–Soyaccino (cappuccino-style So Good soy drink), Up & Go (Liquid Breakfast). Sept. 1998–Today's Gourmet: Cacciatore Kiev. Dec. 1998–Fat Free So Good. March 1999–So Good Plus (calcium + linseed oil). SoyHealthy: Eight chilled (incl. Original Soy Slices) and five frozen (incl. Tender Soy Schnitzels, Country-Spiced Burgers). Sept. 1999–So Good Ab+ (Soy Yoghurt with Acidophilus and Bifidus, in Strawberry, Apricot & Mango, and Passionfruit flavors). Address: 146 Fox Valley Road, Wahroonga, NSW 2076,

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Australia. Phone: (02) 487-1711.

2839. Alimentos Granix. 1989? Granix por excelencia [Granix for excellence]. Av. San Martin 4625 (C.P. 1602), Florida, Prov. de Buenos Aires, Argentina. 8 p. Undated. Manufacturer's catalog. 25 x 19 cm. [Spa]
• ***Summary:*** This full-color undated catalog describes the Granix line of health foods, and many color photos show the inside and outside of the plant plus individual products in their packages. Soyfoods include: Galletitas con Soja (crackers with soya), Nutrisoja (TVP granules), Nutrisoja para Milanesas (TVP in Italian/Milano Sauce), and Porotos de Soja (soybeans). On the cover of the 1990 edition of this brochure is a special seal that states: "Granix, 50 years of excellence with foods." Address: Buenos Aires, Argentina. Phone: 760-0307/7292/5676.

2840. **Product Name:** [GranoVita Soya Mignon].
Foreign Name: GranoVita Soja-Mignon.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Ingredients: Soy protein, water, onions, rolled oats, corn germ oil, egg whites, modified starches, seasonings, yeast, salt, spices, sesame, sugar, fines herbs, smoked spices, carob flour (thickener), caramel. Sauce: Water, modified starches, seasonings, wheat flour, soy sauce, salt, sugar, flavor intensifier (MSG?), onions.
Wt/Vol., Packaging, Price: 375 gm can. Retails for DM 6.65.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 100 gm.: Calories 169, protein 11 gm, usable carbohydrates 11 gm, fat 9 gm.
New Product–Documentation: Label sent by Anthony Marrese. 1989. 9 by 4 inches. Green, red, white and black on yellow-green. Color photo on front panel shows the hamburger-like patties on a plate with vegetables. Neuform certification symbol. "Vegetarian. Contains no flesh. Four vegetarian ground steaks in a piquant sauce."

2841. **Product Name:** [GranoVita Fine Soya Spread {Meatless} (Delikat, and one other type)].
Foreign Name: GranoVita Feiner Soja-Aufschnitt (Delikat).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Ingredients: Whole soybean preparation (Soybean puree), soy oil, mushrooms, water, egg protein, onions, soy protein, salt, seasonings, wheat protein, dextrose, celery, thickeners (carob bean flour and guar seed flour), spices.
Wt/Vol., Packaging, Price: 250 gm cellophane bag. Retails for DM 4.25.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 14.4 gm, fat 22.9 gm, usable carbohydrates 5.9 gm, calories 288. 1 BE (Broteinheit, or diabetic exchange) = 203 gm.
New Product–Documentation: Label sent by Anthony Marrese. 1989. 2 by 3.25 inches. Self adhesive. Green, red, and white. "Practically cholesterol free. Contains no flesh. Refrigerate at below +10ºC." Neuform certification symbol.

2842. **Product Name:** [GranoVita Muesli Bar (Honey)].
Foreign Name: GranoVita Muesli Riegel (Honig).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk

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GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Ingredients: Whole grain rolled oats, honey, dried fruits (raisins, figs, dates, apples, pears, apricots, plums, peaches), popped rice, vegetable oils and fats in changing amounts, weight adders, maltodextrin, cornflakes, coconut flakes, soy flour, defatted milk powder, wheat germ, natural aromas, orange fruit powder, acidifiers, citric acid, apricot fruit powder, sea salt, lecithin (as a plant emulsifier), caramel.
Wt/Vol., Packaging, Price: 25 gm in foil wrapper. Retails for DM 0.70.
How Stored: Shelf stable.
New Product–Documentation: Label sent by Anthony Marrese. 1989. 2 by 6 inches. Foil wrapper. Light green, dark green, and red on white. "Whole grain fruity. Sweetened only with honey." Neuform certification symbol.

2843. **Product Name:** [GranoVita Sojagen Plus Instant {Powdered Soymilk}].
Foreign Name: GranoVita Sojagen Instant.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Ingredients: Soybeans.

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Wt/Vol., Packaging, Price: 350 gm. Retails for DM 9.80.
How Stored: Shelf stable.
Nutrition: Per 100 gm.: Protein 14.2 gm, fat 29.2 gm, usable carbohydrates 53.7 gm, calories 535.
New Product–Documentation: See next page. Label sent by Anthony Marrese. 1989. Nov. 5.5 by 8 by 1.5 inches. Paperboard box. Red, light green, dark green, pink, and black on white. "Sojagen Plus. Milk free, Gluten free. Lactose free. For the bottle. Contains a measuring spoon. Infant food." A photo on the front and back panels shows a young mother holding a baby that she is feeding this soymilk to in a bottle.

Manufacturer's brochure. Dr. Anemueller. 1989? Richtige Ernährung für Mutter und Kind [Right nutrition for mother and child]. 24 p. See p. 18-19. Though said to be published by the Deutscher Verein für Gesundheitspflege [DE-VAU-GE] e.V., this looks like a GranoVita promotional and information brochure, describing their full line of infant and baby foods. Sojagen Plus is one of only 2 foods that can be introduced from birth.

Manufacturer's brochure. 1989? "GranoVita Soja-Drinks und -Desserts... ein erfrischender Genuss [a refreshing enjoyment]." 6 pages, with many color photos. Contains a brief description of Sojagen and Sojagen Plus, with a color photo of both packages/boxes.

2844. **Product Name:** [GranoVita Sandwich Spread (Homemade Style, Mushroom, Olive, Herb, or Natural)].
Foreign Name: GranoVita Sandwich-Pastete (Hausmacher Art, Champignon, Oliven, Kraeuter, Naturell).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Ingredients: Water, vegetable oils and fats in changing amounts, nutritional yeast, wheat grits, onions, buckwheat groats, potato flour, sea salt, seasonings, soy flour (*Sojamehl*)*, spices, herbs. * = Organically grown.
Wt/Vol., Packaging, Price: 80 gm can. Retails for DM 1.48.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 100 gm.: Protein 5.4 gm, fat 13.6 gm, usable carbohydrates 12.8 gm, calories 195. 1 BE (Broteinheit, or diabetic exchange) = 94 gm.
New Product–Documentation: Label (can) sent by Anthony Marrese. 1990. Jan. 2.75 inches diameter by 1 inch deep. Label is printed on the metal. "Vegetarian foods. Made purely from plants. A pure vegetarian spread for bread, practically cholesterol free." A color photo on the bottom of the can shows 2 pieces of bread on a plate covered with the spread. Exklusiv Neuform certification symbol.

Ad (full-page, color) in Kurier/Neuform. 1989. Dec. p. 17. "GranoVita quality. 90 years of experience." A color photo shows four of the sausage-shaped packages and five rounds of dark bread each topped with a whirl of the spread, topped with a garnish. "GranoVita Vollwertkost. Echt guenstig" [Really beneficial].

2845. **Product Name:** [GranoVita Soya Sausage for Frying and Grilling {Meatless}].
Foreign Name: GranoVita Sojawurst zum Braten und Grillen.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Ingredients: Water, vegetable oils and fats in changing amounts, onions, egg protein, wheat protein, soy protein, spices, seasonings, salt, vegetable thickeners (carob bean meal and guar seed meal), wheat flour, glucose, apples, smoke seasoning, whole soybean product (Vollsoja-Erzeugnis), rolled oats, fine Graham bread crumbs, herbs, milk protein, soy sauce, caramel.

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Wt/Vol., Packaging, Price: 200 gm cellophane bag. Retails for DM 3.48.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 10 gm, fat 24 gm, usable carbohydrates 4 gm, calories 272. 1 BE (Broteinheit, or diabetic exchange) = 300 gm.
New Product–Documentation: Label sent by Anthony Marrese. 2 by 5 inches. Brown, red, green, and black on white. "Contains no meat [Fleisch]. Prepare in the frying pan or on the grill." An illustration shows 2 sausages in a pan. Neuform certification symbol.

2846. DE-VAU-GE Gesundkostwerk GmbH. 1989? Bio-Tofu fuer die Vollwert-Kueche [Organic Tofu for the High Quality Kitchen]. Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. 16 p. Catalog. 20 x 20 cm. [Ger]
• ***Summary:*** This attractive full-color booklet contains a 2-page introduction to tofu, 2 pages of photos of 11 GranoVita tofu products, and 10 pages of recipes using the products and photos of the finished dishes. One sidebar discusses the different types of tofu coagulants. A blurb on the cover reads: "Recipes and tips. Information from your Reformhaus." Exklusiv Neuform certification symbol. The rear cover is titled "granoVita organic tofu tips for the high quality kitchen (Vollvertkueche)." Address: Lueneburg, West Germany.

2847. **Product Name:** [GranoVita Organic Tofu].
Foreign Name: GranoVita Bio-Tofu.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Ingredients: Water, organically grown soybeans, calcium chloride coagulant.
Wt/Vol., Packaging, Price: 250 gm poly bag.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 11 gm, fat 5 gm, usable carbohydrates 0.3 gm, calories 89. 1 BE (Broteinheit, or diabetic exchange) = 400 gm.
New Product–Documentation: Manufacturer's brochure. 1989? "Bio-Tofu for the High Quality Kitchen." p. 4-5. A color photo shows the Labels. Contains an illustration of a pagoda on the front. Red, pea green, black, and yellow on beige and white. "The plant alternative (Die pflanzliche Alternative). For frying, baking, deep-frying (making into fritters), or dicing in salads." Gives instructions for making fried tofu slices.

Letter from Eric C. Fehlberg, Director, International Health Food Assoc. 1990. May 24. DE-VAU-GE began making its own tofu in Luneburg in Jan. 1986. Before that it purchased tofu from a Belgian [sic, actually Dutch; Heuschen-Schrouff] soy milk company.

Label sent by DE-VAU-GE. 1990. June 11. The date given for GranoVita Tofu is 1988 but no date is given for Bio-Tofu.

2848. **Product Name:** [Kolett's Soy Sauces (Italian, Mexican, Argentinian)].
Foreign Name: Kolett's Salasa de Soja (Italiana, Mejicana, Argentina).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Wt/Vol., Packaging, Price: Glass jar.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Manufacturer's leaflet. 1989? GranoVita. Sin conservantes. No colorantes. Alimentos Naturales. A color photo shows the three jars and labels. An illustration (line drawing) on the front panels shows a smiling, rotund Italian-looking chef. "100% vegetarian." These products are probably for export to Italy.

2849. **Product Name:** [Kolett's Soy Sausages (Regular, or Spicy)].
Foreign Name: Kolett's Salchisas de Soja (Regolare, Picantes).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Manufacturer's leaflet. 1989? GranoVita. Sin conservantes. No colorantes. Alimentos Naturales. A color photo shows the two cans and labels. On the front panel is a photo of each product in a dish ready to be served. "Contains no meat." These products are probably for export to Italy.

2850. **Product Name:** [Kolett's Canned Soy Sausages (Regular, or Spicy)].
Foreign Name: Kolett's Salchisas de Soja (Regolare, Picantes).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Manufacturer's leaflet. 1989? GranoVita. Sin conservantes. No colorantes.

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Alimentos Naturales. A color photo shows the two cans and labels. On the front panel is a photo of each product in a dish ready to be served. "Contains no meat." These products are probably for export to Italy.

2851. **Product Name:** [Kolett's Bottled Soy Sausages (Regular, Frankfurt-Style, Vienna-Style)].
Foreign Name: Kolett's Salchi-Soja (Regolare, Frankfurt, Vienna).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Wt/Vol., Packaging, Price: Glass jar.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Manufacturer's leaflet. 1989? GranoVita. Sin conservantes. No colorantes. Alimentos Naturales. A color photo shows the three bottles and labels. "100% vegetarian. Contains no meat. Heat and serve." These products are probably for export to Italy.

2852. **Product Name:** [Kolett's Meatless Soy Patties (Delicate/Mild, or Spicy)].
Foreign Name: Kolett's Soja-delikat–Sin carne, Soja-zart–Sin carne.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Wt/Vol., Packaging, Price: Glass jar.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Manufacturer's leaflet. 1989? GranoVita. Sin conservantes. No colorantes. Alimentos Naturales. A color photo on the front of each of the two bottles shows the finished patties with vegetables ready to be served. These products are probably for export to Italy.

2853. **Product Name:** [GranoVita Organic Soya Drink (Unsweetened/Sugar Free)].
Foreign Name: GranoVita Bio Soja Drink (Ungesuesst).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1989?
Ingredients: Water, soyabeans (grown in a biologically controlled area), emulsifier: lecithin (of plant origin).
Wt/Vol., Packaging, Price: 1 liter Tetra Brik Aseptic carton.
How Stored: Shelf stable; refrigerate after opening.
Nutrition: Per 100 ml: Protein 3.6 gm, fat 2.8 gm, carbohydrates 1.7 gm, calories (kcl) 46 (197 kJoules).
New Product–Documentation: Label sent by DE-VAU-GE. 1990. June 11. 12.75 by 9.5 inches. Red, orange, blue, and green on white. Illustration of a blue glass of soymilk with 6 green soybean leaves below it on the front panel. "A pure plant protein source. Cholesterol-free (Rein pflanzlicher Eiweisstraeger. Cholesterinfrei. Sugarfree)." The back panel states: "Organic Soya Drink is made with 100% natural ingredients. Easily digested. The fat and total sugar content of Organic Soya Drink is less than that of cow's milk. It's lactose free too, so it's suitable for people with an allergy to dairy products. Contains no animal produce. 100% non dairy.

"Totally free of artificial colouring or flavouring. A blend of water and organic soya beans. A tasty and refreshing drink, delicious served hot or cold. suitable for use in tea or coffee (pour milk first), mashed potato, pudding, custards, sauces and yogurt, etc."

Label sent by Anthony Marrese of Hamburg. 1991. June. ½-liter Tetra Brik carton. The product name in German is now written Bio-Soja-Drink. Green, black, yellow, and red on white. Illustration of a large yellow sun rising behind a red-roofed farmhouse. Retails for DM 1.69. Use by 26 Nov. 1991. Exclusive Neuform certification symbol.

2854. **Product Name:** [Formoja {Soymilk}].
Foreign Name: Formoja.
Manufacturer's Name: Granero (Importer-Distributor). Made in Issenheim, France, by Cacoja.
Manufacturer's Address: Carretera de Petres, s/n. Sagunto (Valencia), Spain. Phone: (96) 315 71 36.
Date of Introduction: 1989?
New Product–Documentation: Letter (fax) from Hernadette Dechamps, American Soybean Assoc., Madrid. 1990. May 23. Granero (gives address and phone number) distributes a soymilk called GranoVita imported from Germany.

2855. Granose Foods Ltd. 1989? A selection of recipes using Granose delicious health foods. Stanborough Park, Watford, Herts. WD2 6JR, England. 28 p. Undated.
• ***Summary:*** Contents: Main meal entrées. Dinner party entrees. Supper dishes. Party and picnic fare. Miscellany. Each recipe calls for the use of a Granose food product. The booklet contains some color photos. On the front cover is a color photo of fruits, grains, bread, milk, eggs, etc. Address: Watford, Herts., England.

2856. Loma Linda Foods, Inc. 1989? Soyagen delights: Easy to prepare recipes. Riverside, California. Five panels each side. Each panel 21.6 x 8.8 cm. Back to back. Undated.
• ***Summary:*** A glossy color leaflet. On the cover panel are various meatless foods against a background that fades from light blue up to dark blue. These recipes show how to use Soyagen (powdered soymilk) in: Entrees. Soups. Breads.

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Beverages. Puddings. Desserts, etc. On the rear panel are color photos of three different cans of Soyagen (one is carob). Address: 11503 Pierce St., Riverside, California 92515.

2857. Loma Linda Foods, Inc. 1989? Something new for the menu: From Loma Linda Foods. Riverside, California. 12 pages. Each page 21.6 x 8.8 cm. Back to back. Undated.
• ***Summary:*** A glossy color leaflet. On the cover panel are three meatless casseroles against a background that fades from pink to brown. Recipes show how to use the following Loma Linda meat alternatives: Chik-Nuggets. Chik-Patties. Dinner Cuts. Griddle Steak. Linkettes. Little Links. Redi-Burger. Vegeburger. Vege-Scallops.

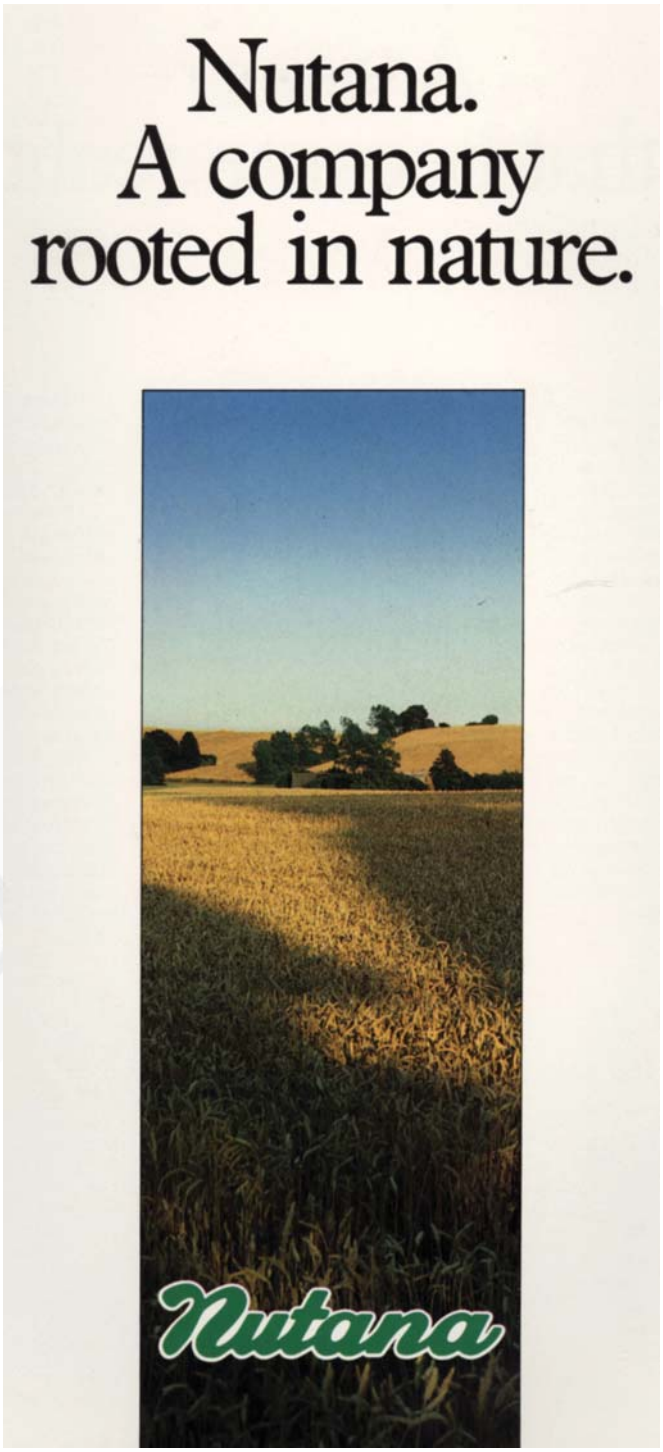
On the rear panel are color photos of cans of Loma Linda Dinner Cuts, Vege-Burger, Little Links, and Chik-Patties. Address: 11503 Pierce St., Riverside, California 92515.

2858. Nutana. 1989? Nutana. A company rooted in nature. Bjaeverskov, Denmark. 8 p. Undated. Manufacturer's catalog.
• ***Summary:*** "Nutana was founded under the name 'Den Sanitære Fodevarefabrik' (The Sanitary Foodstuffs Factory) in early 1898. The founder was the visionary chief physician Carl Ottosen, who after studying at the famous Battle Creek Sanitarium in the USA took the initiative of setting up the present-day 'Nordisk Filantropisk Selskab' (Nordic Philanthropic Company), one of whose aims was and is to promote health. This led first to the setting up of 'Skodsborg Badesanatorium' (Skodsborg Hydro) and then to the founding of 'Den Sanitære Fodevarefabrik,' whose main task was to supply healthy, vegetable foodstuffs to the Hydro."

"The products were sold partly by the company direct and partly through 'Sana,' Denmark's first health food shop... Den Sanitære Fodevarefabrik has changed its name to Nutana and is now Northern Europe's largest producer of health food."

Nutana imports, processes, markets and exports more than 300 different products. Administration, production, and the main warehouse have been situated at Bjaeverskov in Central Zealand, Denmark, since 1967. In Norway, Nutana Norge was founded in 1946. In Sweden, Svenska Nutana was added in January 1987. In Finland, Finn-Nutana Oy was founded in 1978. "Nutana: The green alternative throughout Scandinavia." Address: Bjaeverskov, Denmark.

2859. Nutana. 1989? Nutana. Ringstedvej 531, DK-4632 Bjaeverskov, Denmark. 12 p. Undated. Manufacturer's catalog.
• ***Summary:*** The cover is a semi-abstract painting of ears of golden wheat in the foreground and rolling green hills and trees behind. The booklet contains many color photos. Contents: Nutana builds on a healthy idea. The



Green alternative. Current control of raw materials and development of products. Effective production. Nutana: The green Danish kitchen–lasts from morning till night. Sales to supermarkets, health food shops, catering, and export. Nutana now and in the future.

Nutana products are being sold in more than 3,000 shops in Denmark. Address: Bjaeverskov, Denmark. Phone: 45 3 67 00 19.

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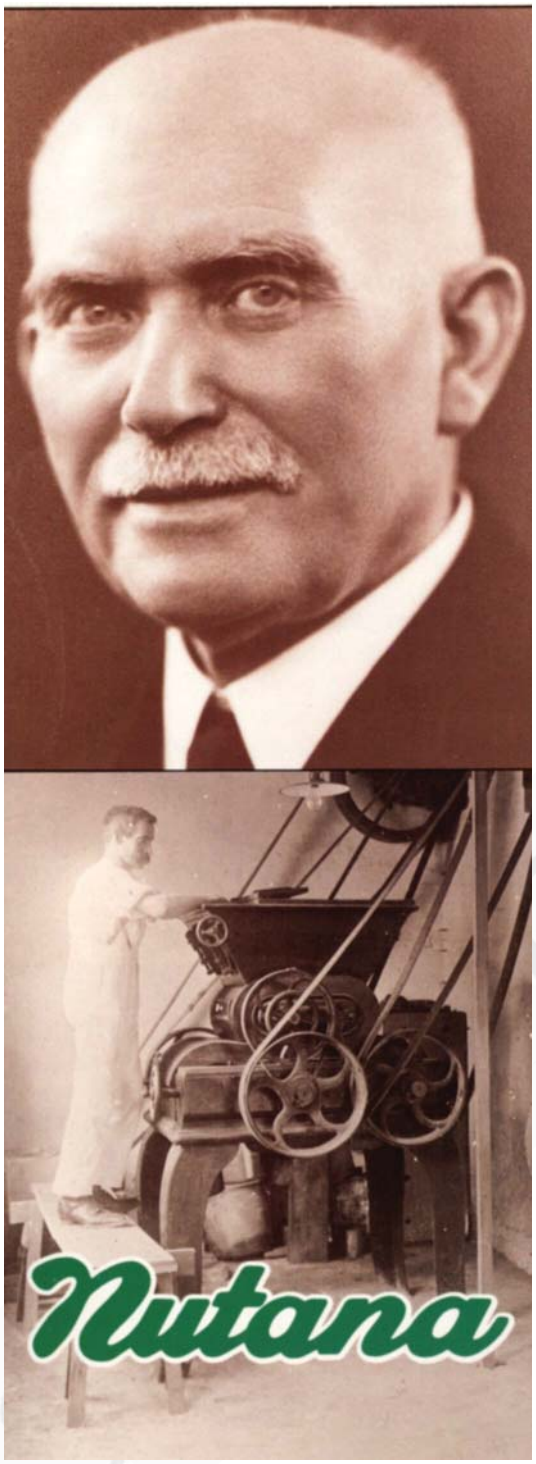

2860. Nutana. 1989? Nutana–A company with its roots in nature (Leaflet). Ringstedvej 531, DK-4632 Bjaeverskov, Denmark. 3 panels each side. Each panel: 30 x 21 cm. Undated. Manufacturer's catalog.
• ***Summary:*** See next page. A color photo on the cover shows a huge field of ripe wheat, with a centered inset of vegetables and beans. "Nutana's objective is to promote health by producing and marketing vegetable foodstuffs and disseminating knowledge about health. Since 1967 the administration, production, and main stores have been situated in Bjaeverskov in central Zealand."

From Nutana's Green Kitchen come 18 frozen entrees, which are listed (in English) and shown in a color photo (with Danish labels). None have a soy-related product name. The five best-sellers are Celery Burger (100,000 units in 1988), Lentil Burger, Sesame Burger, Beetroot Burger, and Vegetable Gratin. Address: Bjaeverskov, Denmark. Phone: 45 33 67 00 19.

2861. Sanitarium Health Food Co. 1989? Sanitarium: The people who believe food should not only taste good, it should be good for you! 148 Fox Valley Rd., Wahroonga, NSW 2076, Australia. 8 p. Undated. Manufacturer's catalog.
• ***Summary:*** Contents: Background. Manufacture. Retail. Export. Products.

In the late 1800s a group of immigrants from the USA, all of whom were members of the Seventh-day Adventist Church, decided to make their living by distributing health foods. At first they imported a selection of products from Battle Creek, Michigan, then famous for its sanitarium. The first products arrived in Melbourne in 1897. They included Granola, Caramel Cereal, and gluten products. But when demand outstripped supply, in late 1897 a baker, E.C. Halsey, was persuaded to migrate to Australia to start up a manufacturing plant similar to the one he had operated in Battle Creek. On Nov. 8 he arrived in Sydney en route to Melbourne, totally unaware of what he was starting. The records show that the St. George's Bakery was rented in Melbourne in 1898. The production of Caramel Cereal and Granola commenced immediately.

In 1898 the group moved to larger premises in Cooranbong, a rural area south of Newcastle in New South Wales, and adopted the name Sanitarium Health Food Company. With Halsey in charge, production commenced in a large defunct sawmill in 1899. After a period of uncertainty, the Company grew and expanded until today, it has manufacturing plants in all states of Australia, in both islands of New Zealand, and in Papua New Guinea. In about 1906 the company's first retail shop opened in the Royal Arcade, Sydney. Many of the early shops included a vegetarian restaurant. Today the company operates some 70 retail shops. It also has an export division in Sydney. In 1935 the Australasian Food Research Laboratories were started. Located on the spacious grounds of the Cooranbong plant, they new employ a staff of nearly 40 people. Photos show the original Cooranbong factory, early products (incl. Nut Meat, Protose, Weet-Bix, Corn Flakes, and Marmite yeast extract), and today's food factories at Cooranbong, Victoria, and Palmerston, North New Zealand.

Product lines include Cereals (The company's leading product is Weet-Bix, the most popular breakfast cereal in

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Australia and New Zealand. It was first manufactured under the Sanitarium name in the mid-1920s, and comes in the shape of little biscuits. Other well known brands are Granose, Bran-Bix, and Sanitarium Skippy Cornflakes), Juices and Drinks (So Good, a non-dairy soy drink, is the newest introduction), Spreads (such as peanut butter and Marmite), Muesli Bars, Specialty Lines (such as dried fruits), Canned Protein Foods (all vegetarian, such as B-B-Q Links, Tender Bits, Vegetarian Rediburger, and Nut Meat), and Sundried (incl. TVP products, and Caffex coffee substitute); a color photo shows all of these.

The name and address of the company's head office, export division, and various food factories and retail outlets is given. Address: Wahroonga, NSW, Australia.

2862. Broom, Maria. 1990. Serulada Spiritual Foundation in Uganda, and soybeans (Interview). *SoyaScan Notes.* Jan. 21. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** This foundation is a spiritual, vegetarian community of about 200+ people who live on the land at Sseesamirimbe, near Masaka, Uganda. They grow a lot of soybeans and eat them as such; they do not do any processing, but are interested in making tofu, soymilk, and tempeh. Maria gave them three Soyfoods Center books on these subjects. She has visited the community twice, for 1 month each time. They have been together for about 15 years, have an African spiritual master named Bambi Baaba, but their spiritual practice resembles East Asian practices. They have a city address too: P.O. Box 5374, Kampala, Uganda.

Maria visited Dr. D. Warren Harrison of Africa Basic Foods. He hopes to contact the community and teach them more about soyfoods. Address: 1728 Linden Ave., Baltimore, Maryland 21217. Phone: 301-462-5370.

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2863. Worthington Foods, Inc. 1990. Worthington Foods: Direct delivery price list. Effective February 5, 1990 (Leaflet). Worthington, Ohio. 6 p. Each single sided.
• ***Summary:*** These products are divided into the following categories: Worthington dry. Worthington canned. Natural Touch beverages. Natural Touch confections. Natural Touch dry & canned. Natural Touch frozen. Worthington frozen. La Loma dry. Miscellaneous. La Loma gravies. La Loma cereal. La Loma canned. La Loma beans. Millstone. La Loma frozen. Meat substitute–miscellaneous. Bush's Best products. Emes. Amberwave Foods–frozen. LaFane's Food Enterprises. Sovex. P.A. Pickles. Southeast Territory only–bulk items. Address: Ohio.

2864. Fehlberg, Eric C. 1990. Seventh-day Adventist health food companies in Europe (Interview). *SoyaScan Notes.* March 7. Conducted by William Shurtleff of Soyfoods Center. Followed by a letter dated 24 May 1990 clarifying details.
• ***Summary:*** There are three major Seventh-day Adventist (SDA) food factories in Europe, each owned by the church: DE-VAU-GE in West Germany, Nutana in Denmark, and Granose in England. There are smaller factories in Spain, and Switzerland. All these companies are owned by the SDA church. The leading Adventist food companies, ranked in descending order of annual sales, are: 1. DE-VAU-GE, established 1899 in West Germany. They are by far the biggest in Europe. They manufacture a total of 257 products. DE-VAU-GE began making its own tofu in Jan. 1986; before that it purchased tofu from a Belgian soymilk company [Note: actually from Heuschen-Schrouff in the Netherlands]. When Michael Makowski took over as managing director in about 1972-73, company sales were about US$3-4 million. By 1983 sales were about $18 million. Since then growth has been fantastic. 1989 turnover was DM 84 million (US$49 million). This is due to both excellent management and the German interest in natural, health, and vegetarian foods. 2. Nutana, est. 1898 in Denmark. They are about half the size of DE-VAU-GE. Under the management of Bent Nielsen, who was there until 3 years ago, the company grew rapidly. Since 1987 growth has flattened, but there is great potential for future growth. 3. Nutana in Norway (Nutana Norge), formerly Dagens Kost, est. 1970. They were established as a marketing company for Nutana, Denmark, and they sell all the soyfoods made by Nutana, Denmark. They also manufacture 55 products, but they import and wholesale 321 products. All of the imports come from European Adventist companies. 4. Granose Foods, est. 1899 in England. They manufacture 39 products and distribute 98 more (mostly from Nutana or DE-VAU-GE). They have been a manufacturer since 1899, and they built a new food plant in 1989. Their business is now growing rapidly. 5. Nutana in Sweden (AB Svenska Nutana) was renamed in 1987. It was formerly named Edakost Food Company, Sweden, est. 1970. 6. Nutana in Finland, formerly Finn-Nutana, est. 1979. 7. Pur-Aliment, est. 1928 in France. They are not a food manufacturer; purely marketing. 8. PHAG Food Factory (Fabrique de Produits Dietetiques), est. 1895 in Switzerland. The small factory produces 40-50 tons of food a month. 9. Granovita Spain, was founded and began manufacturing in about Aug. 1985 in Valencia, Spain. They do not produce any soyfoods at all, but they market soy products made by DE-VAU-GE in West Germany and by Nutana in Denmark. 10. Nutana in the Netherlands, founded in 1986. They are presently selling all the products produced by Nutana of Denmark as well as 5 other products: Vitanex (Sandwich cream), Rondolettes (Chickenlike or beeflike flavor), Snackers (Soy sausages), Boulettes (Dinner balls).

The Austrian Food Company, founded in 1976, was a restaurant rather than a food manufacturer; it was closed in 1987.

Granose and DE-VAU-GE were both importing foods from Loma Linda in the USA. But now that Loma Linda has been sold to Worthington Foods, it is not clear what will happen to these imports. Today, the various Nutana companies are independent, but there is much talk of bringing Nutana in Norway and Holland together with Denmark. Nutana has always been behind the expansion of SDA food work in the Scandinavian countries. Using the common name Nutana greatly facilitates marketing.

The European food companies have grown at different rates, largely dependent on the effectiveness of each company's management. The trend has been generally up. The highest growth rates in the past 5 years have been shown by Granose in England (though it started from a smaller base), followed by DE-VAU-GE in West Germany. Pur-Aliment and Nutana have had a bit of a struggle.

All of these companies pay a portion of their profits back to the church. They are encouraged to pay about 20% of profits back to the church, but some pay almost 50%. This is similar to the dividends paid by secular companies. Fehlberg believes that tofu will be the growth food of the future; it has great growth potential that has not yet begun to be realized. Address: Director, International Health Food Assoc., Seventh-day Adventist General Conference, 12501 Old Columbia Pike, Silver Spring, Maryland 20904. Phone: 301-680-6674.

2865. Fehlberg, Eric C. 1990. Recent Seventh-day Adventist work with soymilk (Interview). *SoyaScan Notes.* March 7. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** So Good soymilk from Australia has had remarkable success since it was launched in April 1987. Sanitarium Health Food Co. was the first to make soymilk in Australia. It caught on rapidly, and soon prompted 4-5 competing brands to be launched, but none of them have sales nearly as large as So Good. The main problem has been

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the company's inability to produce enough to keep up with demand. It was launched in about April 1987. In Oct. 1989 they sold 1,738 long tons (2,240 lb/ton, thus 3,893,120 lb). The equipment used to produce the soymilk is Adventist technology, not that purchased from Alfa-Laval, STS, etc. although in the last 6 months Sanitarium Foods purchased a pilot plant from Alfa-Laval which they plan to use in their laboratory. Originally So Good was packed under contract by a nearby dairy company in Combibloc cartons. After a year or so they purchased their own Combibloc packaging machine. Australia started to make soymilk after DE-VAU-GE in West Germany. The latter is very happy with their STS system, and Fehlberg is now seriously considering ordering one or two more turnkey soymilk plants for other countries in the near future. Sanitarium Foods has a very strong research lab.

The Seventh-day Adventist food company in South Korea, Sahm Yook Foods, now makes a Tetra Pak soymilk. The company was established in 1978, but did not begin food production until Sept. 1981. It began to make Sahm Yook Soy Milk in May 1985. Only a plain soymilk is produced–no flavors. After launching soymilk, the company began to grow dramatically, as that product grew. Last year they built a very large, now soymilk plant (based on Adventist technology) and they are now about the 2nd or 3rd largest soymilk maker in Korea. Address: Director, International Health Food Assoc., Seventh-day Adventist General Conference, 12501 Old Columbia Pike, Silver Spring, Maryland 20904. Phone: 301-680-6674.

2866. Fehlberg, Eric C. 1990. Thoughts on Loma Linda Foods, its acquisition by Worthington Foods, and the health foods industry in America (Interview). *SoyaScan Notes.* March 7. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Worthington Foods purchased Loma Linda Foods (LLF) from the Seventh-day Adventist Church in Jan. 1990. Loma Linda Foods, unlike most other Seventh-day Adventist companies worldwide, tended historically to target its products to Seventh-day Adventists. Within North America there are very, very few respectable SDA businessmen. That is the problem. "Loma Linda has been working since 1906 with their eyes blindfolded. Too often, instead of using a businessman to head the program, the men in their wisdom have elected to install a broken down minister, and expected him to make a roaring success of it."

A very good businessman, George T. Chapman from Australia, ran LLF from 1938 to 1963. The company did very well financially under his leadership. Since 1963 the company has had a series of managers who lacked business experience; the result was ongoing financial problems. In June 1984 Mr. Fehlberg went from his position at the General Conference to Loma Linda where he turned the company around. Fehlberg ran LLF for about 2 years, during which time it went from a substantial loss to a very profitable company. Mr. Pizzaro was brought in Nov. 1984 and has kept it profitable. He is a very conservative man with a background in banking. He was able to hold LLF together but was not inclined to take the risks to make it really take off.

The church first wanted to sell off the infant formula part of the company because of the high cost of liability insurance. The FDA are really down on infant formula foods. If anything goes wrong, there is no end to the strife. LLF had one small recall due to a small shortage of vitamin A–from dissipation. It was very expensive. Fehlberg understands that but does not understand at all and strongly disagreed with the sale of LLF. "I talked myself hoarse on the committee opposing the sale but I didn't win. I am not happy that it ended up in the hands of Worthington Foods. Their financial report over the past 5 years is not that strong. The last year has not been a healthy year. I hope they can survive. Loma Linda will definitely help them survive by giving them a lot of extra new sales with no extra administration or marketing costs. Now that they have a monopoly, they may relax their standards. I believe that once the 5-year non-compete term expires, you'll get an influx of products into the United States from Adventist companies overseas that will make it very difficult for Worthington to operate–unless they can improve things. Fehlberg prefers the flavor the Australian meat analogs, which are less highly flavored and easier to digest.

Fehlberg feels that the USA is 20 years behind many other countries (Australia, West Germany, Japan) in food processing and storage techniques, largely because of Food and Drug Administration (FDA) restrictions. One area where the USA lags behind is in retorting of food products in plastic film containers. We tend to retort foods too long, and do not have foods retorted in sausage-type pouches (e.g., tofu sausages), which require no refrigeration. The FDA is afraid of botulism in such protein foods, so they require that the foods be frozen. In Australia, West Germany, and Japan these foods are refrigerated, but Adventist tests show they can be stored at room temperature for 6-12 months, or more. If Worthington's frozen meatlike products could put in plastic containers made of this special film (which is available in America) there would be major cost savings in factory storage, transportation, and retail storage. Address: Director, International Health Food Assoc., Seventh-day Adventist General Conference, 12501 Old Columbia Pike, Silver Spring, Maryland 20904. Phone: 301-680-6674.

2867. Fehlberg, Eric C. 1990. Recent organizational changes in Seventh-day Adventist international food and development work (Interview). *SoyaScan Notes.* March 7. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** 2-3 years ago his organization's name was changed from World Food Service to International Health

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Food Association. The former name implied that the company was a foodservice organization. The association is composed of all Seventh-day Adventist (health) food companies worldwide. The organization's logo is a circle of the world, with a sheaf of wheat in orange, and with IHFA under it in red. It is part of the General Conference of the Seventh-day Adventist Church.

Seventh-day Adventist World Service (SAWS), the Church's relief and development program, emphasized the relief work more that the development. This organization is now named ADRA (Adventist Development and Relief Agency); its focus for the last 6-8 years has been more on long-term development than relief. Development helps to prevent the problem from recurring. There is no Adventist health food company presently in South Africa; a company was there once but it has been discontinued. One is still operating in Nigeria but it has problems. IHFA works closely with Dr. D.W. Harrison in Uganda, though the business is not church owned. He needs a good businessman to help him run that show. Now he spends a few months in Uganda, then has to return to the USA to his medical practice to earn some money to help keep it going. A new organization is starting in Kenya; it will be run by a very competent black businessman. He is not directly connected with the church. Address: Director, International Health Food Assoc., Seventh-day Adventist General Conference, 12501 Old Columbia Pike, Silver Spring, Maryland 20904. Phone: 301-680-6674.

2868. Fehlberg, Eric C. 1990. Re: Enclosing pamphlets. Letter to William Shurtleff at Soyfoods Center, March 7. 1 p. Typed, with signature on letterhead.
• ***Summary:*** "Enclosed are some pamphlets, outlining our food work world wide. I have also sent, under separate cover, two samples from our overseas factories." Address: Director, International Health Food Assoc., Seventh-day Adventist General Conference, 12501 Old Columbia Pike, Silver Spring, Maryland 20904-6600.

2869. *Post-Dispatch* (*St. Louis, Missouri*). 1990. Peanut butter turns 100. March 12. Food section. p. 1, 4FW.
• ***Summary:*** According to the Peanut Advisory Board, a St. Louis [Missouri] physician (whose name is unknown) invented peanut butter in 1890 as an easy-to-chew, easy-to-digest substitute for meat. He ground roasted peanuts into a paste and spread it on bread; the result was a hit with his elderly patients whose teeth were so poor they could not eat meat.

We know that the unknown St. Louis doctor worked with George A. Bayle Jr., owner of a St. Louis food products company, who packaged and sold the new health food as Bayle Peanut Butter.

Also according to the board, at about the same time, Dr. John Harvey Kellogg developed peanut butter as part of his search for vegetarian foods for patients at his sanitarium in Battle Creek, Michigan. According to the Kellogg Company archives, Dr. Kellogg and his brother Will Keith (W.K.), roasted the peanuts then put them through grain rollers to make peanut butter. W.K. Kellogg established Sanitas Nut Co., which supplied peanut butter and other foods to the sanitarium and local grocery stores. But Dr. Kellogg later decided that roasted peanuts are not wholesome, and changed the formula to use steamed peanuts. Steamed peanut butter never caught on. A few years later, Joseph Lambert, one of Kellogg's employees, received the first patent for a peanut grinding machine.

Peanut butter became better known to the American public in 1904 when it was displayed and sold at the Louisiana Purchase Exposition (St. Louis World's Fair). C.H. Sumner recorded that he sold $705.11 worth of peanut butter to fairgoers.

A group interested in peanuts met in St. Louis in March 1990 to celebrate the centennial of the invention of peanut butter. "After lunch the group moved to the History Museum in Forest Park, where Suzanne Corbett, a St. Louis cooking teacher, expanded on peanut history and demonstrated some of her favorite peanut recipes... On display were three antique Bayle Co. of St. Louis peanut butter tins from the private collection of Shirley and Don Zork [of St. Louis; as of June 1995 phone number is unpublished]. One of the decorated tins [with handles on them] from the turn of the century suggested: 'A sandwich a day keeps your children at play.' Another claimed: 'The contents of this package is equal to 2½ pounds of beef steak or 2½ dozen eggs.' The tins were made with a lid and a wire handle so that children could use them for toys after the peanut butter was eaten."

Contains six peanut butter recipes.

2870. Karas, Thomas. 1990. The tofu industry and market in West Germany (Interview). *SoyaScan Notes.* March 14. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Soyastern/Dorstener Tofu Produktions (DTP) makes about 7,000 kg/week of tofu. Thomas thinks DTP is still the largest tofu manufacturer in West Germany, but he is not sure. In the natural foods trade, the other big competitor is Yamato; DTP is definitely larger than Yamato. He is quite sure that DTP produces more tofu than TKW. TKW has a big tofu plant and large scale equipment (they are a machine manufacturer) but they don't seem to sell much because they don't use organically grown soybeans, which are absolutely necessary to sell tofu.

He thinks DTP is also bigger than Hensel, but he is not sure. Heirler does not make regular (firm) tofu. Instead, they make special soy products, especially soy yogurt and silken tofu, plus some Tofu Pastete. Heirler is mainly a distributor of dairy products, and the biggest distributor of fresh natural foods in West Germany. He distributes the whole fresh program, including produce/vegetables, and soy products

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exclusively to the Reform Houses. He does not distribute to natural food stores (Naturkostlaeden, Biokostlaeden). The company does about DM 50 million in sales/turnover a year in West Germany, and about DM 10 million in other countries. Heirler's tofu is made by a dairy company named KMK (Kurhessische Molkerei Kassel) in Kassel. The dairy products he distributes are made in the same plant. The brand name is Soja Soft. KMK also makes tofu for Hensel, but KMK does not sell its own tofu. Heirler and Hensel work together. Heirler distributes the Hensel tofu. Originally Hensel tofu was made by Yamato, then Auenland, then Soyastern, and now KMK. Heirler has always wanted Hensel to expand their line of tofu products. But Hensel is very conservative and slow to act, so Heirler introduced its own line. Hensel is an old soyfoods manufacturer.

So the big 4 tofu makers in West Germany, in descending order of size, are probably Soyastern, Yamato, Heirler, and Hensel. But this will soon change because of DE-VAU-GE (DVG), and Huegli-Heirler-Yamato. DVG does not yet make their own tofu. They buy it all from Heuschen-Schrouff in the Netherlands. Soyastern has sold them tofu in the past. However in about June 1990 they will start to make their own, and they will probably become a big force in the market because they sell a lot of tofu now and they have excellent distribution to the Reform Houses. About 89% of their products are sold to Reform Houses. Martin Evers is the only distributor of DVG products to natural foods stores. DVG is a very big company and is very slow in making decisions.

When Huegli bought Heirler and Yamato, Heirler put half of the money he got from the sale back into Heirler and half into Huegli in the form of stock. Mr. Heirler is now on the board of directors of Huegli. Thomas talked with Mr. Heirler at length in Dec. 1989. His thinking is very much oriented toward the open market in Europe after 1992. Huegli is basically a producer for the Reform House market. His two brands are Neuco and Cenovis. The tofu used in the Neuco tofu salads is not yet made by Yamato; it is probably made by Witte Wonder in the Netherlands.

So West Germany's two biggest tofu company's will probably soon be DVG and Yamato-Heirler-Huegli. With the opening of Europe in 1992, some companies will decentralize/regionalize their business for reasons of ecology and freshness. Soyastern is too big for this. The other is the path that Huegli-Heirler-Yamato are taking, by merging and trying to distribute and sell products throughout Europe. Heirler is the perfect company for expanding distribution outside of Germany. They may be the best in Europe for refrigerated distribution; they also have a little frozen distribution. They now distribute some to Switzerland, Belgium, Austria, and East Germany. After 1992 this distribution will grow rapidly. Address: Bochumerstr. 92-104, D-4270 Dorsten, West Germany. Phone: 2362-26801.

2871. Storup, Bernard. 1990. The soymilk market in France (Interview). *SoyaScan Notes.* March 26. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** By far the biggest seller of soymilk in France in Alpro/Vandemoortele, whose plant is in Belgium. They sell an estimated 7-9 million liters/year of soymilk in France.

The biggest soymilk manufacturer in France is Cacoja (pronounced KA-ko-jah). They make an estimated 2.5 to 3 million liters/year. Cacoja's original brand name was Bioforme. They changed their brand name to BioSoja in the fall (Sept. or Oct.) of 1989. Unfortunately BioSoja is a brand owned by another soyfoods company (which notified Cacoja of the problem, and Cacoja chose to ignore it), so they will almost certainly be obliged to change the brand name once again! [to Formoja]. Cacoja was actually not their own name; it had been sold to a distributor, and they got into legal problems with that distributor, bu they are still using the name as their company name. Their plant is still in Issenheim. This company is making so many mistakes that it is hard to imagine how they can survive. In part, this is because they are a cooperative and in part because they have so much money that they can afford not to be careful. For them, every day is a jackpot!

Société Soy presently makes 70,000 to 100,000 liters/month. In 1990 they expect to produce 1.5 million liters, because they will soon introduce their own Tetra Pack line under the brand Biosoy.

The third and fourth largest soymilk manufacturers in France are probably Triballat and Innoval. Both make about the same amount, an estimated 500,000 liters a year. But this is a rough guess since they do not give out figures. Innoval's soymilk is very good quality.

Cacoja, Triballat, and Innoval all have big financial problems. They have large, expensive, automated, computerized factories and very low production. They have too much invested for the size of the market. They may produce only 1 day a week. They have no real leaders in the companies so the people are not really motivated by what they do. Its a pity, because they have two of the most interesting factories in Europe. They hope to private label soymilks for supermarkets.

It appears that Sojadoc sells their soymilk only in Spain (none in France), so it is very difficult to tell how much they are making or what they are doing. They were supposed to move their complete factory in Clermond-Ferrand, and now we do not know where they are.

DE-VAU-GE started to sell their soymilk in France, but they stopped. They now sell their soymilk mainly in West Germany, Belgium, and the Netherlands.

Thus soymilk consumption in France is presently estimated to be about 11 million liters/year, whereas production is about 3 million liters/year. Both figures are very small compared to the 2,000 million liters of cow's milk.

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Bernard would estimate that soymilk consumption in France is presently growing at 25% a year. Address: Founder and Owner, Société Soy, 1 rue du Crêt de la Perdrix, 42400 St.-Chamond, France. Phone: 77.31.23.66.

2872. Hansen, Asger Somer. 1990. The soymilk market in Europe (Interview). *SoyaScan Notes*. March 27. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** There are no statistics published on soymilk in Europe. The soymilk that is made can be used in either of two ways: (1) Aseptically packaged (typically in Tetra Brik cartons) for consumer use as a beverage or pudding-like dessert; (2) Soymilk base is used as an ingredient in other foods or to make "processed tofu," which is made by ultrafiltration rather than by coagulation. Alpro is definitely the largest manufacturer with output estimated at 18-24 million liters/year. DE-VAU-GE is second biggest with about 12 million liters/year in the form of long-life packs (beverages and desserts). DE-VAU-GE will soon start to make tofu, which will be used mostly as an ingredient in their foods (sausages, etc.). In Asger's opinion these are very good products. Finally there is Cacoja, Triballat, and some smaller companies making a total of about 5 million liters/year. This gives a rough estimate of 35-40 million liters/year of soymilk made in Europe.

The growth rate of this market during the past 2 years has been slow, maybe 5-10%. "The real growth area has been in processed foods with tofu as a main ingredient. That's where I see the growth happening, in foods like dressings, egg-free mayonnaise, sausages, etc."

Cacoja sells "soymilk base," which is sold from the factory in tankers. Last time he talked with customers, they were not satisfied with the quality of the product. The capacity is only 1,500 liters/hour. The Adventists are considering a soymilk plant in the USSR.

Anders Linder left DTD on 1 Nov. 1989. He was asked to leave because the company was not making enough money, and because the company has new management under APV. He is now living at Domsten, Helsingborg, in Sweden. DTD's name is now APV-DTD, part of APV-Pasilac. Asger is in charge of the Soya Technology Div. Two other people are employed by this division with him (Elizabeth Gibson). John Davies is in Hong Kong. Address: Technical Manager, Danish Turnkey Dairies Ltd., Soya Technology Div., 2 Europaplads (P.O. Box 146), DK-8100 Aarhus C, Denmark. Phone: (86) 12 4155.

2873. *Battle Creek Enquirer* (*Michigan*). 1990. Who really invented peanut butter? March 29. *
• ***Summary:*** Diane Dickey of the Kellogg Company says: "Dr. John Harvey Kellogg developed several foods between 1895 and 1905. One of the foods invented in 1895 was peanut butter–that's what the records show. A product similar to peanut butter shows a Kellogg patent dating back to February 16, 1887. Nuttose was a canned 'nut butter' developed by Kellogg. It had a consistency similar to brick cheese and served as a meat substitute.

"According to Kellogg Company archives, Dr. Kellogg and his brother, W.K. Kellogg, bought 10 pounds of peanuts, roasted them in the oven, put the nuts in a pillow case to remove the hulls, weeded out the husks and then put the remaining material through grain rollers.

"W.K. Kellogg, the business manager of the Sanitarium, opened Sanitas Nut Company and supplied food like peanut butter to the Sanitarium and local grocery stores. But after a while, John Kellogg changed the formula decided to steam-boil the peanuts instead."

2874. DTD Soya Technology Div. 1990. APV soymilk technology (Leaflet). Europaplads 2, P.O. Box 146, DK-8100 Aarhus C, Denmark. 3 panels each side. Each panel: 30 x 21 cm. March.
• ***Summary:*** This glossy, full-color leaflet, Anders Lindner's last project before leaving DTD/STS, describes: "Our products and services: Hardware, software, turnkey plus, some products made from soymilk base (yogurts, ice creams, tofu products, etc.). Our business is soymilk plants: About ourselves (APV DTD belongs to the APV-Pasilac Group), about soymilk." A color photo shows 4 flavors of Big Sipp soymilk. Soymilk processes and products. Progress of a typical project (2 flowcharts). On the back panel, 9 small color photos show commercial products made from soymilk, including Nasoya creamy tofu dressings, Nayonaise, GranoVita Bio-Tofu-Pastete (spread), and Tofuletten (liked sliced luncheon meats). Address: Aarhus, Denmark. Phone: +45 86 12 41 55.

2875. Price, Caroline. 1990. Food for thought: Natural food is more than nuts and berries. It also makes dollars and cents for state firms. *Michigan Business* 7(3):24. March. Section 1.
• ***Summary:*** Apple Valley Market, a natural foods and vegetarian supermarket in Berrien Springs, Michigan, is operated by Andrews University and employs about 100 people. They sell no meat or meat products in the store and offer more than 500 bulk food items. The store makes its own bread, which it distributes widely.

Wysong Medical Corp., a 10-year-old company based in Midland, Michigan, makes foods and supplements for animals and people.

The last section is about Eden Foods and American Soy Products. Soymilk is Eden's best-selling product. Ron Roller, vice president and general manager of Eden Foods, says the company sells about 100 truckloads of soymilk each month, has 83 employees, and does over $20 million in sales annually–from all products.

2876. Pusateri, Donald J.; Roth, W.T.; Ross, J.K.; Shultz, T.D. 1990. Dietary and hormonal evaluation of men at

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different risks for prostate cancer: plasma and fecal hormone-nutrient interrelationships. *American J. of Clinical Nutrition* 51(3):371-77. March. [61 ref]
Address: Depts. of Biochemistry and Nutrition, School of Medicine, Loma Linda Univ., Loma Linda, California and the Dep. of Nutritional Sciences, Univ. of Vermont, Burlington, VT.

2877. Ross, Jane K.; Pusateri, D.J.; Shultz, T.D. 1990. Dietary and hormonal evaluation of men at different risks for prostate cancer: fiber intake, excretion, and composition, with in vitro evidence for an association between steroid hormones and specific fiber components. *American J. of Clinical Nutrition* 51(3):365-70. March. [50 ref]
• ***Summary:*** Intake of dietary fiber and fecal fiber excretion were investigated for 3 days among 53 Seventh-day Adventist men: 18 non-vegetarians (MVs), 20 lactoovovegetarians (LOVs), and 15 vegans (Vs). The diets and stools were analyzed for neutral detergent fiber (NDF), hemicellulose, cellulose, lignin, and pectin. Vegans consumed and extracted significantly more of all fiber components than did LOVs or NVs. LOVs ate more of all fiber components (except cellulose) than did omnivores and excreted more NDF, hemicellulose, and cellulose. Dietary lignin was positively correlated with testosterone binding in the vegan group. There were significant relationships for all groups combined between lignin and water-insoluble binding of estrone, estradiol-17Beta, and testosterone. Further research is needed to clarify relationships between fiber components, steroid-hormone metabolism, and risk of prostate cancer.

Recent evidence indicates that diets high in complex carbohydrate and fiber but low in fat are helpful in preventing or treating various gastrointestinal diseases, diabetes, obesity, cardiovascular disease, and cancer.
Address: Dep. of Nutritional Sciences, Univ. of Vermont, Burlington, VT, and the Depts. of Biochemistry and Nutrition, School of Medicine, Loma Linda Univ., Loma Linda, California.

2878. Lindner, Anders. 1990. Re: The soymilk market in Europe. Letter (fax) to William Shurtleff at Soyfoods Center, April 4 and April 26. 3 p. [Eng]
• ***Summary:*** The following figures contain many guesstimates. The only countries in western and eastern Europe where significant amounts of soymilk are produced are Belgium, West Germany, France, England, and Switzerland. The following are the seven largest soymilk manufacturers in Europe, ranked in descending order of size:

1. Alpro/Vandemoortele, Belgium. Capacity: 35 million liters/year. Present output: 25 million liters/year. Growth: Believe so, but don't know how much.

2. DE-VAU-GE (DVG), West Germany. Capacity: 20 million liters/year. They are running their plant at full capacity, but as Adventists I think they don't work on Friday afternoon or Saturday, they close down during the summer, and they send one road tanker of soymilk each week to Granose in England, where it is made into soy yogurt. So they probably end up making about 12 million liters a year of soymilk in long life packs. Soon some of their soymilk will be made into tofu. Growth: Would if they could, but they can't with the line they have, which they bought from DTD/STS for DM 4 million. DVG is making an excellent profit on their soymilk products, that's for sure. This is in part because they have the Neuform chain at their disposal.

3. Cacoja, France. Capacity: 11 million liters/year. Believed to be running at full capacity. Growth: Planning a new line but no decision yet as far as I know. I think that Cacoja produces more than 1 million liters/year. They visited DTD/STS a year ago to discuss a second line. The first one had a capacity of 2,000 liters/hour or approximately 5 million liters/year.

4. Soya Health Foods Ltd., Manchester, England (Sunrise Soya Milk). Capacity estimated at 8 million liters/year. Actual production not known.

5. Soyana, Switzerland. Capacity and production not known. Soyana has consistently refused to allow us to visit them. Even our Indian client who wanted to discuss purchase of their Dahi dessert recipe was given the cold shoulder. I think that they have their own soymilk plant, but I'm not sure. Why shouldn't they, when they have plenty of products in Swiss shops.

6. Galactina, Switzerland. Capacity estimated at 6 million liters/year. Most is used for products other than liquid soymilk. They sell limited amounts of soymilk, definitely less than 1 million liters/year packed in Tetra Brik Aseptic at the Thun Dairy in Switzerland.

7. Schoeller in Nuremberg, West Germany. Capacity not known. Soymilk used in ice cream production. There are also soymilk producers in Italy [Crivellaro], and Spain [Proti].

"Total size of European soymilk market in 1989 estimated at 50 million liters. Some is in the form of dairy analog products. Alpro and DE-VAU-GE have about 70% of the market, including bulk distributed product. Growth rate over the past few years 10–15%.

"General observations of the European soymilk industry and market: The dairy industry in France was the first to go into soymilk to offer alternatives to consumers who prefer 'non-dairy dairy type products'. The soymilk-based ice cream of West Germany's Schoeller may start a trend for the rest of the European ice cream industry. There has been no equivalent to the U.S. Tofutti boom in Europe so far. Major liquid food companies do not at present see soymilk as a significant product for Europe but follow the trends and do some development, just in case.

"The future? It is necessary to make a distinction between Eastern and Western Europe. Western Europe has a surplus food production in general and surplus dairy

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milk production in particular. The health aspect alone, i.e. soymilk without improved palatability, will not significantly increase soymilk sales in Western Europe. The removal of dairy production subsidies in the EEC in the years to come, especially after 1992, may give an incentive to the big names in the food industry to develop soymilk into mainstream market products. There is EEC legislation on imitation dairy products and soymilk is mentioned as an example, but currently different member countries use their own laws.

"Many Eastern European countries have food shortages but lack money and entrepreneurship to venture into an unknown product like soymilk on their own. Furthermore, in these difficult markets, western companies with soymilk technology do not seem to find it worth the effort to first educate on the advantages and uses of soymilk and then to promote and arrange financing before they can hope to sell a soymilk processing plant. The new Eastern Europe with market economies now evolving gives hope for the future in general, but I couldn't make any guesses about soymilk.

"It is the aim of EEC to dismantle the agricultural subsidies. This will effect dairy production and new cheaper protein sources will be sought by the food industry. Soymilk definitely has a chance of 'growing up' when this happens.

"STS-Soya Technology Systems Limited no longer exists. It was the decision of APV's CEO to close it down as an independent company when the big APV reorganization took place. When we moved to Denmark we became DTD-Soya Technology Division. Now Danish Turnkey Dairies has itself become a division of the APV Pasilac Ltd and the official name is DTD-APV Pasilac Ltd (the result of mergers and takeovers!). Asger Somer Hansen now handles soymilk activities within the APV group and works in DTD-APV Pasilac Ltd.

"John Wilson still works at Alfa-Laval in Lund as far as I know–at least he did 2 years ago. Alfa-Laval also has another soymilk person, a young woman.

Note: Lindner, the managing director of Soya Technology Systems from May 1982 until Nov. 1989, has a good grasp of the world soymilk market. Address: P.O. Box 19002, S-250 09 Helsingborg, Sweden. Phone: 42-92776.

2879. Worthington Foods, Inc. 1990. La Loma (list of products): Revised April 6, 1990 (Leaflet). Worthington, Ohio. 1 p. Single sided.

• ***Summary:*** These products were formerly made by Loma Linda Foods (California). For each of the 49 products is given: Code. Description. Number and size of units per case. Address: Ohio.

2880. Burns, Arthur. 1990. Brief history and recent developments with Tivall in the USA, Israel, and Europe (Interview). *SoyaScan Notes*. April 17. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** The key man on the history of Tivall in Israel is Moshe Ribosh, the company's export manager (Phone: 011-972-4-858-700; Fax: 04-858-798). The company uses a new technology to make these meatless entrees. They refer to their products as "Third Generation Products" because of the advanced level of technology used in processing; Worthington or Loma Linda entrees were "Second Generation." The "green folder" (8.5 by 11 inches, with a green field of wheat on the cover) is now outdated. He will send a current one and a corporate brochure. To taste samples of his products, contact California distributors: Freestone Sales in Benicia (707-747-0233) or Howell Mountain Distributors in Angwin (related to Seventh-day Adventists).

Tivall started importing its products to the USA in late 1987 (test market) and early 1988. They entered the U.S. market using Intermilo (in Hackensack, New Jersey) as an importer and sales center. Later they set up Tivall, USA, Inc. to do all the importing; Intermilo is no longer relevant. The company now has 6 items (described in the new brochure) that contain soy as a major ingredient–with more to come.

The company sells about equal volumes to the retail and the foodservice markets. All products are kosher (Circle U) and Bethedas (Hasidic certification, with a symbol resembling a fleur de lis). The packaging is the same for each product in various segments. The retail market consists of kosher, health foods, and supermarket (small) segments. The foodservice market consists of the college and university segment, the business and industrial caterers, some kosher foodservice, and a little health care.

Concerning Israel, Tivall started as a very small company on Kibbutz Lochamei Hagetaot, at M.P. (Mobil Post, like rural free delivery) Ashrat (formerly transcribed Oshrat), Israel. The focus has always been producing kosher meatless entrees. They avoid use of the term "vegetarian" which connotes "Berkeley dropouts and twig eaters." The term meatless now attracts widespread interest. The growth of the products in Israel is phenomenal, with average annual nationwide sales of about $4 to $5 per capita. Note: With a 1989 Israeli population of 4.5 million, this would represent $18-$22.5 million sales a year. The company is doing very well financially. It is wholly owned by the members of the kibbutz. It is roughly resembles a U.S. limited partnership. It is not the only major business on the kibbutz; he thinks it started as an industrial kibbutz and they still do industrial products plus other food products.

Tivall sells a lot of product to Europe but since it is much closer they prefer to go through agencies rather than having a sales office there. The line is sold in France under the Gourmet Vert label, in England under Tesco Tivall, and in Germany Gourmet Garten. So the major export markets are these 3 European countries plus the USA. Address: President, Tivall, USA, Inc., 9633 E. Bexhill Dr., Kensington, Maryland 20895. Phone: 301-946-8855.

2881. Marshall, Philip. 1990. The soymilk industry and

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market in the UK (Interview). *SoyaScan Notes.* April 17. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The two brands of soymilk with the largest shares of the UK soymilk market are both imported: Provamel, the best-seller, is imported from Alpro in Belgium. Granose Soya Milk is imported from DE-VAU-GE in West Germany.

There are four soymilk manufacturers in the UK. The largest is probably Unisoy Milk 'n' By-Products Co. in Stockport (Cheshire County near Manchester). Their quality is excellent, almost as good as Alpro's. The people who founded Unisoy were formerly involved with Soya Health Foods Ltd. The founder, who had the money, died before production started. [Note: Neil Rabheru (see interview, 1990 July 2), founder of Unisoy, says the previous 2 statements are not true.] Unisoy started making soymilk about 4 years ago, and today their biggest product is own-label soymilk, packed in Tetra Brik by a contract packer, and sold to Sainsbury, a large chain/multiple retailer in the UK. Unisoy does not and will not make tofu. The company is not very strong. The person in charge is Neil Rabheru, of Indian extraction, a very nice man. He recently sold the company for a relatively small sum.

Second largest soymilk manufacturer is Soya Health Foods in Trafford (Sunrise brand, founded by Michael Cole and Mr. Arora, a Sikh / Indian). It was the Indian connection that resulted in the formation of Unisoy some years ago. Third may be the Regular Tofu Co., a division of Haldane Foods (Arkady/ADM), which produces Sojal Soya Milk. The Sojal brand was the property of another company in France, which originally produced the product for them using a soymilk powder made in Sao Paulo, Brazil (by Norsul, Agro-Nippo Productos, or ITAL?). Haldane no longer has the product produced in France but they still use the Sojal brand, and still has the product produced by another company (in what country is not known) and it is probably now made from whole soybeans rather than soymilk powder. [Note: The only soymilk listed in Haldane's Oct. 1989 catalog is So Good Soya Milk (organic or non-organic); Sanitarium Foods in Australia makes a product by the same name].

Fourth is Plamil, which contracts with some other company to have its soymilk made from soy protein isolates. They are quite a small company, ethically based, into vegan foods and marketing strategies from the 1960s and 1970s. Fifth is Itona (pronounced ai-TOW-nuh), which makes a soya milk of some description, but they are not really in the mainstream of the soymilk market. They probably make their soymilk from soy protein isolates and it is sold in cans–every other brand is in Tetra Pak or Combibloc. Address: Owner, Cauldron Foods Ltd., 149 South Liberty Lane, Ashton Vale Trading Estate, Bedminster, Bristol BS3 2TL, England. Phone: (0272) 632835.

2882. Vandemoortele, Philippe. 1990. The soymilk industry and market in Europe (Interview). *SoyaScan Notes.* April 17. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Philippe estimates that Alpro has about 70% of the fluid soymilk market (not including infant formulas) in Europe. In 1984 in Brussels Michael Martin of the American Soybean Association estimated the size of the European soymilk market to be 9-10 million liters/year. Philippe thinks that figure was too high; it was probably about 6 million liters. Now it is about 30 million liters/year in all of western Europe. The growth rate for soymilk production over the past 2 years has been about 20% a year.

The second largest soymilk manufacturer in Europe is DE-VAU-GE, with roughly 15-20% of the market. The rest are very small, with a combined percentage of only 10-15%. Third may be Triballat and fourth may be Cacoja. Together these two may be producing 1 million liters per year, but that is just a very rough guess. Innoval just started so they have not had time to do anything. Unisoy in England is very small. Soya Health Foods Ltd. (Sunrise brand) is almost out of business in soymilk. Galactina is limited to Switzerland, and they produce mainly tofu, not soymilk.

Looking at Cacoja and Triballat, they are completely different types of companies. Cacoja is a classical cooperative that has no experience in or organization for commercializing consumer products. So they have to co-pack, i.e. make products for other companies. Triballat is a small but very active dairy company, with a good sales and marketing organization in France. They are used to making and selling their own consumer products. Their Sojasun soy yogurt is a good-tasting, fresh product. It has been quite successful for a soya food, although compared with dairy products it is nothing.

There are have always been may negative things about soymilk in Europe. 1. The retail price of soymilk is very high compared to basic cow's milk, usually 2-3 times as high. In the USA the price of both cow's milk and soymilk are higher, but the ratio is similar. 2. The taste of soymilk is a big problem, although it is steadily getting better. 3. Cow's milk is a very traditional, widely accepted product in Europe. 4. The dairy lobby and its employees are very powerful in Europe and recently they have been attacking soymilk on issues such as its calcium content being lower than that of cow's milk. Doctors have been taught and teach their patients that cow's milk is a perfect product. Only a minority, but a growing minority, are opposed to the use of cow's milk. 5. The many European government regulations hurt soymilk. There are many taxes, such as a Value Added Tax (VAT) on soymilk that are not imposed on cow's milk since soymilk is considered in some countries to be a juice. Every country has a VAT system. The Netherlands, Belgium, and France had an 18% VAT on soymilk versus 6% on milk, but that changed 1 year ago so it is no longer a basic problem. In Belgium there is now a 6% VAT on both soymilk and cow's milk.

The two things needed to make the soymilk market grow

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are better taste and a better image of soymilk (compared to cow's milk) as a food that is good for one's health, and dissemination of the information showing the health benefits of soymilk over cow's milk. The quality of soymilk products is steadily improving and should continue to do so, not through discovery of any new basic principles but through many small adjustments.

The opening of Europe in 1992 will have little or no effect on soymilk. Competition is already international. The need for a multitude of packages in the various languages will not change; Alpro presently packs soymilk in more than 100 different Tetra Brik cartons! This includes both their own brands and those of companies for which Alpro private labels. This is both complicated and expensive. One possible change may be that governments will work faster to establish soymilk terminology. Now soymilk has no name! It can be called "soya juice, soya drink, soya beverage," but it cannot be called "soymilk." As long as it has no name, no regulations or standards can be made that effect it. Philippe would like to see the term "soya drink" or "soya milk" adopted. The latter was tolerated in the UK but it will probably be forbidden.

Philippe sums up the overall situation as follows: "I always repeat, there is more enthusiasm about soyafoods than turnover and certainly no profit. Alpro has lost money every year that it has been in business." He thinks DE-VAU-GE must also be losing money on its soymilk operation. "How can you make money when you invest $3-4 million in a factory that is making only a few million liters of soymilk a year? DE-VAU-GE is a very large company and they do well largely because they have a sort of monopoly in the German Neuform (Reform House) organization. An organization controls all of the Neuform stores, and it is linked with both the producers and the sales people. They all together pay money for this organization to help each other. If you want to make soymilk in Germany and deliver it to these stores, you cannot, because everything is protected. The competition now comes from the independent *Biolaeden."* Address: Managing Director, Alpro N.V., Vlamingstraat 28, B-8610 Wevelgem, Belgium. Phone: (056) 43 22 11.

2883. Vandemoortele, Philippe. 1990. Early history and recent developments at Alpro N.V. in Belgium (Interview). *SoyaScan Notes.* April 17. Conducted by William Shurtleff of Soyfoods Center. Followed by a letter (fax) on 30 May. 1990.

• ***Summary:*** N.V. Vandemoortele (the N.V. is written first in Flemish, but often last in English) began research on new soy products (mostly soy protein isolates and concentrates) in 1973. The goal was to find a way to bring soya beans to the consumer. They bought and sold soy protein products but never manufactured any. In May 1975 research on soymilk began. From 1975 to 1979 they were basically doing pioneer research. In Dec. 1979 they began production of soymilk, but they did not pack or sell it; it was just to get their new plant running. Famalac was a potential/fictitious product name that was described in a brochure, but the product was never sold commercially. This soymilk was produced at a plant located at Zuidkaai 33 in Izegem on a piece of land located next door to the main N.V. Vandemoortele facilities (whose official address was Prins Albertlaan 12). In Jan. 1980 Vandemoortele began to make its first commercial soymilk product (GranoVita Soja Drink in plain and carob flavors, packed in 500 ml Tetra Brik cartons) which was private labeled (co-packed) for DE-VAU-GE, a large Seventh-day Adventist health food manufacturer in West Germany. This was Alpro's first customer.

N.V. Alpro (named simply Alpro in English), was founded in June 1980. Alpro then purchased the land on which it was located from N.V. Vandemoortele. During 1980 Alpro became a truly independent producer, now also doing their own sterilization and packaging. It was Philippe Vandemoortele's idea to start Alpro.

His grandfather began to import soybeans in 1934 from Manchuria, and he started a small crushing plant. Philippe has always been interested in soya (he read a lot) and he wanted to go back to the use of soybeans for human consumption in the form of soyfoods rather than as isolates, concentrates, etc. While researching new developments in soymilk processing, he learned that new methods for making soymilk had been developed in other countries such as the USA [at Cornell University and University of Illinois], Brazil, etc. His company, which had many engineers and R&D staff, was the first soymilk manufacturer in the western world to invest in a pilot plant and then in a factory to make soymilk using the new technique. In the beginning, Alpro designed and built its own soymilk equipment.

At that time it looked like Alpro's main business would be selling this equipment to Third World countries to provide a practical solution to their nutritional and protein problems, especially for infants. In 1982 Alpro signed a contract to sell a soymilk plant to Lalasoa SA in Madagascar. The plant, which cost US$11 million, began operation in Jan. 1984 and it is still in operation. This was the only plant Alpro ever sold to a Third World country.

[Note: Alfa-Laval, which developed soymilk equipment, sold its first major piece of soymilk equipment (a VTIS sterilizer) to Yeo Hiap Seng in 1967, and its first complete soymilk line to Lam Soon (Ace Canning) in Kuala Lumpur, Malaysia. The latter began making soymilk in Dec. 1979, exactly the same year and month that Alpro began.]

The reason for the lack of sales of soymilk plants to Third World countries was mostly politics and lack of organization in those countries. It was not a problem of the resulting soymilk being too expensive. Another problem was that Alpro had only a single product to promote (the turnkey plant). So in Aug. 1984 the company decided to return to its basic business, producing foods, rather than idealistically

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trying to sell technology (soymilk plants) to the Third World. "In the beginning, we at Alpro had never imagined that there would be a market for soymilk in Europe. Almost nobody wanted the product. There was no interest, except among motivated health-food people. Everybody else in Europe thought the product tasted lousy."

In the early 1980s, while focusing on its Third World plants, Alpro also made soymilk for the European market. The main reason for making this soymilk was to demonstrate what the Alpro equipment could do. In Jan. 1981 Alpro began making and private-labeling Granose Soya Drink in plain and carob flavors for Granose, a Seventh-day Adventist food manufacturer and distributor in England. In March 1981 Alpro launched Soyamel (plain with vitamins), the first of its own soymilk brands, sold only in drug stores and pharmacies (chemie stores). It was followed in Dec. 1982 by Provamel plain and chocolate drinks, and the company's first pudding-like dessert (in chocolate flavor); the Provamel line was sold in health food stores. Next, in March 1984, came Alpro Soya Drink in plain and chocolate flavors, sold only in supermarkets (multiples). All the above were sold in 500 ml Tetra Brik cartons. Then in Nov. 1984 Alpro launched Sunsoy for the export market. It was sold in both 250 ml (plain, carob, or strawberry) and 1 liter (plain) Tetra Brik cartons. All four brands still exist, although Soyamel sales are small. Statistics on the sales of each brand are confidential. Alpro launched its first pudding-like soymilk dessert under the Provamel brand in about 1984, in chocolate and vanilla flavors. The concept, though based on a similar dairy product, was a first for soymilk.

Alpro continues to private label soymilk for anyone who can pay for it. The company's philosophy on this point has not changed over the years. "We are a producer, and as such we try to produce as much as possible, otherwise we could not pay for our research and fixed costs. We would like to sell as much of our own brands as possible, but if we do not private label for other companies, our competitors will do so instead."

In 1984 Alpro had planned to build a new soymilk plant in Ghent with a capacity of 40 million liters/year, but this plan was delayed. Instead they ended up building a new soybean cleaning and dehulling system. Finally Alpro did build a new plant at Vlamingstraat 28, in Wevelgem, near the French border. They started construction in June 1988 and they plan to be moved in completely by June 1990. The plant cost about US$15 million and its capacity is about 45 million liters/year, which is more than the present total European and American soymilk markets. It is a complete plant with packaging, sterilizing, and several lines. It is the biggest soymilk plant in the western world. Address: Managing Director, Alpro N.V., Vlamingstraat 28, B-8610 Wevelgem, Belgium. Phone: (056) 43 22 11.

2884. Buono, Mark Anthony; Setser, C.; Erickson, L.E.; Fung, D.Y.C. 1990. Soymilk yogurt: Sensory evaluation and chemical measurement. *J. of Food Science* 55(2):528-31. March/April. Kansas Agric. Exp. Station, Contribution No. 89-355-J. [13 ref]

• ***Summary:*** Fermentation significantly reduced the beany flavor of soymilk. Soymilk with added fructose got the highest taste panel score. Also published as American Soybean Association Human Nutrition Highlights 1/91. Address: 1. Kellogg Company, 235 Porter St., Battle Creek, Michigan 49016; 2. Dep. of Foods & Nutrition; 3. Dep. of Chemical Engineering; 4. Dep. of Animal Sciences & Industry. Last 3: Kansas State Univ., Manhattan, Kansas 66506.

2885. Buono, Mark Anthony; Erickson, L.E.; Fung, D.Y.C.; Jeon, I.J. 1990. Carbohydrate utilization and growth kinetics in the production of yogurt from soymilk. I. Experimental methods. *J. of Food Processing and Preservation* 14(2):135-53. April. [11 ref]

• ***Summary:*** If soymilk is to be used as an ingredient in human foods, it is important that the concentration of carbohydrates (mainly stachyose) that can cause flatulence be reduced and that the objectionable beany flavor typically associated with soy products also be reduced. This paper focuses on the key measurements made during soymilk fermentation. The growth and sugar utilization of *Lactobacillus bulgaricus* and *Streptococcus thermophilus* were measured in soymilk. Use of equal weights of the two pure cultures was found to be superior to a 1:1 cell number ratio for the mixed culture inoculum. Concentrations of stachyose and sucrose were followed by high performance liquid chromatography (HPLC). Address: Food Science Graduate Program, Durland Hall, Kansas State Univ., Manhattan, KS 66506; Buono is presently at the Kellogg Company, Battle Creek, Michigan.

2886. **Product Name:** Granose Country Delight: Organic Soya Dessert [Orange, Apricot & Nectarine, Peach & Papaya, or Strawberry & Guava].
Manufacturer's Name: Granose Foods Ltd. (Marketer). Made in southern England by Bridge Farm Dairies.
Manufacturer's Address: Howard Way, Newport Pagnell, Buckinghamshire, MK16 9PY, England. Phone: (0908) 211311.
Date of Introduction: 1990 April.
Ingredients: Peach & papaya: Organic soya milk (Water, dehulled soya beans, sea salt), raw cane sugar, peaches, vegetable oil, papaya, stabilisers, modified starch, guar gum, pectin, agar, citric acid, natural flavouring, colour (Annatto).
Wt/Vol., Packaging, Price: 125 gm plastic cup with foil lid.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Energy 398kJ/95 kcal (calories), protein 1.3 gm, carbohydrate 14.7 gm, fat 3.8 gm.
New Product–Documentation: SoyaFoods (ASA, Europe).

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1990 1(1):3. "Granose too are introducing a soya dessert called Country Delight in 3 flavours..."

Form filled out and four Labels (cups & tops) sent by Granose Foods Ltd. 1990. June 13. States that the product, made by Bridge Farm Dairies, was introduced in 1990. It is now sold in the four flavors shown above. A color illustration on the foil lid shows the main fruits used against an ivory background. The name of the fruits is written in a banner rectangle below the word "Granose" and above the term "Country Delight." A "Best before" date is stamped atop each lid. The front of the cup contains a similar but more elaborate drawing. "Best served chilled."

Granose leaflet distributed at Helfex. 1990. April. "Ingredients list for new products."

Letter from Granose. 1990. July 11. This is an Ultra Heat Treated product with a 15-week shelf life. It was launched in April 1990 and is not an ice cream.

2887. **Product Name:** Brazil Roast Mix.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Howard Way, Newport Pagnell, Buckinghamshire, MK16 9PY, England. Phone: (0908) 211311.
Date of Introduction: 1990 April.
Ingredients: Brazil nuts, textured soya protein, rolled oats, oat flour, pea bran, potato flour, dried onion, hydrolysed vegetable protein, spices, dried mushrooms, sea salt, chives.
New Product–Documentation: Granose leaflet distributed at Helfex. 1990. April. "Ingredients list for new products."

2888. Sanitarium Nutrition Education Service. 1990. Information for health professionals. Sanitarium So Good Non-dairy Soy Drink. Sanitarium Health Food Co., P.O. Box 249, Wahroonga, NSW, 2076, Australia. 8 p. April. 30 cm. [3 ref]
• ***Summary:*** Contents: Introduction. Ingredient description. Nutritional analysis. Suitability for special diets. Directions for use. So Good for babies. Typical nutritional profiles. Nutritional aspects of So Good. Address: Wahroonga, Australia. Phone: (02) 487 1711.

2889. Sanitarium Nutrition Education Service. 1990. So Good (Brochure). Sanitarium Health Food Co., P.O. Box 249, Wahroonga, NSW, 2076, Australia. 4 p. April. 30 cm.
• ***Summary:*** Contents: The amazing soya bean. The So Good story. Package size. Nutritional information. Ingredient description: Soya isolate ("extracted by sequential treatments of soya flour with alkali and acid solutions"), maltodextrin (derived from wheat or corn starch which is partially hydrolyzed with enzymes and/or acid; it contributes dextrose), corn syrup solids, sugar (sucrose; white / unflavored contains 1.6%, flavored 3.6%, lite 0%), vegetable oil (sunflower oil; it accounts for 3.4% of the fat level in So Good (white), 3.2% in the flavored varieties, and 0.7% in So Good Lite. All So Good products are free of cholesterol and lactose), vitamins and minerals ("The addition of vitamins and minerals is aimed at providing an equivalent level to that of full cream dairy milk.") Note that a major problem in fortifying soymilk with calcium is how to keep it from coagulating; So Good uses calcium chloride [509] and calcium oxide [(529]), flavors and colors (Flavored products use a combination of natural and artificial flavors. For example, Jaffa flavor uses natural orange and artificial chocolate flavors, plus Sunset Yellow color).

Nutritional analysis. Suitability for special diets. Directions for use. So Good for babies (So Good white is not recommended for babies under the age of 12 months; So Good Lite is not recommended for babies under the age of 2 years because of the low fat content). Gives five recipes. Address: Wahroonga, Australia. Phone: (02) 487 1711.

2890. Snowdon, David A. 1990. Early natural menopause and the duration of postmenopausal life: Findings from a mathematical model of life expectancy. *J. of the American Geriatrics Society* 38(4):402-08. April. [19 ref]
• ***Summary:*** Menarche is the time of the start of menstruation, and menopause is the time of its permanent cessation. Each is strongly and universally dependent on age. Data for this study were derived from a study of 5,287 naturally postmenopausal Seventh-day Adventists observed during 1976-1982. "For natural menopause before the age of 47 years, each one year decrease in age at menopause was associated with a 0.53-year increase in postmenopausal life (P = .04) and a 0.47-year decrease in the age at death (P = .04). For natural menopause at the age of 47 years and older, however, each one-year decrease in age at menopause was associated with a 0.99-year increase in postmenopausal life (P = .03) and only a 0.01-year decrease in the age at death (P = .85). Overall, these findings argue against the possibility that the association between age at menopause and age at death in this study was due to the relation of age at menopause to the duration of postmenopausal life." Address: Div. of Epidemiology, School of Public Health, Univ. of Minnesota, Minneapolis, MN 55455.

2891. Unti, Bernard. 1990. Vegetarian roots: A most unlikely group gave vegetarianism its start in America. *Vegetarian Times.* April. p. 52-57, 82.
• ***Summary:*** The foundation of American vegetarianism was laid in 1817 by English immigrants of a fundamentalist Christian sect, the Bible-Christians, who were disciples of William Cowherd (1763-1816). The only qualification for membership in the Bible-Christian Church was adherence to a meatless diet for 6 months. One convert, William Metcalfe (1788-1862) became Cowherd's most fervent supporter. In 1809, after renouncing meat and alcohol, Metcalfe joined Cowherd in his mission of reform. In 1817 Metcalfe and 41 church members sailed from England to America, where they

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settled in Philadelphia and built a church. There Metcalfe preached his vegetarian gospel twice every Sabbath. Painted on an interior wall of the church were the words of the apostle Paul: "It is good neither to eat flesh nor to drink wine" (Romans 14:21).

Metcalfe wrote numerous pamphlets on vegetarianism, as well as a longer treatise, *Abstinence from Animal Flesh* (1821), the first book on vegetarianism published in the United States. The Bible Christians were also the first Christian group in the USA to advocate abstinence from alcohol. Membership in the church grew but never exceeded 100 people. During an 1829 lecture visit to Philadelphia, Sylvester Graham met with the Bible-Christians, received their literature, and undertook a detailed study of diet and physiology. Soon he was recommending a vegetarian diet to the thousands who attended his lectures all across America.

After hearing that the Bible-Christians in England had established the Vegetarian Society of Great Britain (still in existence as the Vegetarian Society of the United Kingdom), Metcalfe founded the American Vegetarian Society. His co-founders included William Alcott and Dr. R.T. Trall. The new society, under Metcalfe's direction, published *The American Vegetarian and Health Journal*, America's first periodical concerning vegetarianism, from 1850 to 1854, when the society could no longer afford to pay its bills. Soon after the journal folded, Metcalfe returned to England, where he lectured, then died at age 75.

In America, Metcalfe's work was continued after some delay by Henry S. Clubb (1827-1921), a charter member of the Vegetarian Society of Great Britain. He immigrated to the United States, worked as a journalist and abolitionist, and in 1876 became pastor of the Bible-Christian Church in Philadelphia. A sturdy man with a white flowing beard and good health, he revived the American vegetarian movement, which had faded during the Civil War, reorganized the Vegetarian Society of America, and from 1888 onward edited its publication, *The Vegetarian* (later renamed *Food, Home, and Garden*).

Clubb now "threw his energy into building America's vegetarian movement. For instance, he worked to help vegetarians set up societies in other cities; by the mid-1890s there were viable vegetarian societies in Kansas City, Missouri, St. Louis, Minneapolis [Minnesota], Boston [Massachusetts], Pittsburgh [Pennsylvania], Chicago [Illinois], Washington, DC, and other cities. In conjunction with the world's fair [Columbian Exposition at Chicago] in 1893, Clubb helped to organize a Vegetarian Congress, which attracted delegates from all over the world.

"Clubb was acquainted with all the major health reformers of his day, and he was a key figure in linking the first generation of American health reformers (many of them Bible-Christians) with the new generation of vegetarian advocates led by John Harvey Kellogg, M.D. Kellogg's Battle Creek Sanitarium and similar institutions would become magnets for hundreds of thousands of people seeking to explore the benefits of a vegetarian diet.

"Clubb continued working well into his 80s. By 1916, however, he had become too feeble to conduct services outside his home, so the church members assembled there. He died in 1921 at the age of 94... One year after Clubb's death, the Bible-Christian Church disbanded."

Photos show: William Metcalfe, Rev. Henry S. Cobb [sic, Clubb], and Bernard Unti. A sidebar describes Unti's work at the American Anti-Vivisection Society (since 1985) and his interest in its library and the history of the humane movement and vegetarianism. He has been a vegetarian since age 8. He studied history and worked in Switzerland to promote a vegetarian health hotel there. He buys and collects old and new books on animal welfare/rights and vegetarianism. Address: Executive Director, The American-Anti-Vivisection Society, Suite 294 Noble Plaza, 801 Old York Rd., Jenkintown, Pennsylvania 19046-1685. Phone: 215-887-0816.

2892. *SoyaScan Notes.* 1990. New Trend: Large European food companies, and agricultural- and dairy cooperatives now launching and actively promoting innovative new tofu and soymilk products: Mostly dairylike and meatlike products (Overview). May 8. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** In Jan. 1980 Vandemoortele N.V., one of Europe's largest oilseed crushers, located at Izegem, Belgium, began to make its first commercial soymilk product (GranoVita Soja Drink in plain and carob flavors, packed in 500 ml Tetra Brik cartons) which was private labeled (co-packed) for DE-VAU-GE, a large Seventh-day Adventist health food manufacturer in West Germany. This was Alpro's first customer. In June 1980 Vandemoortele created Alpro N.V. to take over this production. The company quickly became Europe's leading soymilk producer and by 1990 had about 70% of the European soymilk market. Their new soymilk plant, costing about US$15 million and having a capacity of 45 million liters a year, opened in Wevelgem in June 1990.

In June 1984 Migros, Switzerland's leading retail food chain, launched 5 tofu products: Natural Tofu, Tofu Snack with Spices, Spicy Tofu Spread, Diced Tofu with Cream, and Tofu Bolognaise. In 1985 they introduced Tofu with Mushrooms and Gravy, followed in 1986 by Canned Tofu Kashmir (with Curry and Fruits), Tofu Spread with Cheese (in a Tube), Tofu Chocolate Crème, and Tofunaise (in a Tube), then in 1987 by Seasoned Tofu. In 1986 Migros, a 61 year old cooperative with 1.4 million members, had net sales of 3,166 million Swiss francs. The tofu was made by a Migros company named Conserves Estavayer in Estavayer-le-Lac, near Zurich.

Galactina is a well established Swiss company (located in Belp) that has made a soymilk named Naga Sonda for

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enteral tube feeding since 1980. In 1981 they launched the product in liquid Tetra Pack. They entered the tofu market in 1984 with Galactina Tofu, then in 1985 added three types of Seasoned Tofu (Gourmet Diced with Soy Sauce & Spices, Provencale with Herbs, and Jardiniere with Vegetables), followed in 1987 with Tofu Spread and 1988 with Tofu Burger and Tofu Salads. All were marketed very attractively.

In Aug. 1985 DE-VAU-GE, one of Europe's oldest and largest producers of vegetarian health foods, began operation of its new soymilk plant (purchased from STS/DTD) in Lueneburg, West Germany. By 1990 they were Europe's second largest soymilk manufacturer, with 15-20% of the market. They also sold many tofu products and were planning to produce tofu in the near future.

In 1985 Laiteries Triballat, a large French dairy products company (mostly cheese, located at Noyal-sur-Vilaine, Brittany) introduced Sojasun, an innovative cultured soymilk yogurt in 4 flavors, two with bits of fruit and two with fruit puree. In Oct. 1988 and early 1989 they promoted the product extensively on French television and in German print media. Sales in several western European countries were said to be good.

In 1986 Parmalat, the Italian dairy giant, introduced a soymilk named Soialat. By 1989 they had created a subsidiary named Parma Soia, which sold three lines of more than 20 soy products. The Campi di Soia line (containing soymilk, soy pasta, sauce, and sprouts) was sold at supermarkets. The Nature Soy line was imported, and the Erboristeria line was for the health food market.

In Jan. 1987 Cacoja, a newly-formed affiliate of the Coopérative Agricole de Colmar (CAC), began production of soymilk and soy desserts at its new, fully-automated plant (with an ultrafiltration system) at Issenheim, France. Purchased from Alfa-Laval, the plant cost 11 million French francs and had a capacity of 1,500 liters/hour of soymilk containing 4% protein. By 1990 Cacoja was Europe's third largest soymilk producer.

In Sept. 1987 Rayner Burgess Ltd., a large British Food company that specializes in an array of unique condiments, purchased Cauldron Foods Ltd., Britain's second largest tofu manufacturer, and the largest marketing its products to the Caucasian and health-food trades.

In Jan. 1988 British Arkady, a large British food conglomerate owned by Archer Daniels Midland Co. (Decatur, Illinois) acquired the Haldane Foods Group, and made it part of British Arkady's Health Foods Div. The Haldane Foods Group was put together by acquisition of Direct Foods Ltd. (founded 1980, acquired by the Group in 1985), Vegetarian Feasts Ltd. (founded 1984, acquired 1986), Haldane Foods Ltd. (founded 1983, acquired Aug. 1987), Vegetarian Cuisine Ltd. (founded 1985, acquired 1987), Regular Tofu Co. Ltd. (founded 1983, acquired Aug. 1987), Realeat Foods Ltd. (founded 1984, acquired Sept. 1988), Saucemasters Ltd. (founded 1988, acquired Feb. 1989), and Genice Foods Ltd. (founded 1988, acquired March 1989). Self-proclaimed as "Europe's leading healthier food group, most of these companies make tofu or soyfood products.

In April 1989 Huegli AG, a leading Swiss food company, purchased 75% ownership in Yamato Tofuhaus GmbH, one of West Germany's leading tofu manufacturers. At about the same time, Huegli purchased Horst Heirler, the country's leading distributor of fresh products.

Also in April 1989 Lima N.V. of Belgium, one of Europe's earliest natural foods companies, purchased Jonathan PVBA, Belgium's leading tofu manufacturer.

In Sept. 1989 Innoval (formerly Sojalpe), an acquired affiliate of Les Silos de Valence (a large 5,000-member cereal cooperative in Rhone Alpes, France), began to produce tofu, soymilk, and liquid soy concentrate (with an ultrafiltration unit) at a modern new plant, with a capacity of 2,000 liters/hour, purchased from Alfa-Laval at a cost of 20-21 million French francs.

In Feb. 1990 Euro-Nature, a French investment fund, purchased 97% Lima N.V. of Belgium.

In early 1990 Avo Feinkost GmbH, a large West German spice from Osnabrueck, launched the Sofit line of soy products, including various meatlike products, dressings, and salads.

2893. Howell Mountain Distributors. 1990. Cedar Lake (list of products): Effective May 14, 1990 (Leaflet). P.O. Box 96, Angwin, CA 94508. 1 p. Single sided.
• ***Summary:*** Describes 20 products made by Cedar Lake and 7 products made by Something Better. Address: Ohio. Phone: (707) 965-7557.

2894. Nordquist, Ted. 1990. Soy ice cream in Sweden and Europe (Interview). *SoyaScan Notes.* May 18. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** This week Ted introduced the "absolutely best-tasting soymilk-based ice cream in the world. Called Tofu Line Glass in vanilla and chocolate flavors, it tastes like old fashioned ice cream made from cream. The vanilla is better than its dairy counterpart." Four-color brochures and labels have been printed. Ted makes the soymilk at the rate of 4,000 liters/hour at Trensums Musteri, a juice company located in Tingsryd, located 20 or 30 minutes miles to the north of the southern seaside city of Karlshamn. Both Tingsryd and Karlshamn are located in Blekinge County. Its a very high-tech soymilk. This is the first product to come out of Ted's years of collaboration with Trensums. Ted buys the soy base from Trensums and ships it by tank truck to Winner (pronounced Vinner), one of Sweden's largest ice cream producers; it is a division of Karlshamn in Karlshamn. He sells the soy base to Winner. Winner makes the ice cream, and sells it back to Ted. It is hard-packed in 3/4 liter octagonal cartons (each has 8 sides with the top and bottom flat). Ted then sells the ice cream to AB Svenska Nutana, a

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Seventh-day Adventist distributor and marketer in Rimbo, Sweden. Nutana has exclusive sales rights in Sweden. Ted is now working on exports to Finland and Japan.

Ted and his coworkers are only interested in high-volume products. He hopes to sell in Sweden at least 400,000 liters/year of the new ice cream, made from 200,000 liters of the liquid mix. This is 9,000 liters/week, or 30 pallets/week. In addition, he hopes to export the product to other Scandinavian countries and to Japan and perhaps the continent.

It is quite surprising that, whereas there are many soy ice creams in America, there are only 2 others in Europe. One is made by Schoeller, which is one of Europe's largest ice cream producers. They bought an Alfa-Laval system that transforms whole soybeans (using the Illinois method, without separation of okara) into soymilk which they then spray dry and use to make a soy ice cream. "The samples of the ice cream and powder that they sent to Semper in Sweden were a total catastrophe."

Unisoy in England, run by Neil Rabheru, an Indian man, also makes a soymilk named Unisoy Gold and a soymilk ice cream named Maranellis Ice Supreme. They have been out since about mid-1989. It is fortified with calcium and vitamins to be as close as possible to dairy milk. Ted thinks it tastes fantastic, but the ice cream doesn't come close to Ted's. The owner of the company came to Sweden and tried to sell Ted his ice cream and aseptically packed soy base. Address: Aros Sojaprodukter, Bergsvagen 1, S-19063 Orsundsbro, Sweden. Phone: 0171-604 56.

2895. Nordquist, Ted. 1990. The soymilk market in Scandinavia (Interview). *SoyaScan Notes.* May 18. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The most popular soymilk in Scandinavia is that imported under the Nutana brand and made by DE-VAU-GE in West Germany. It is sold in an aseptic package. Nutana, located in Rimbo, Sweden, and owned by the Seventh-day Adventists, is a wholesaler and distributor for vegetarian products. Some Alpro soymilk is imported to Sweden but there seems to be less and less of it because Nutana has a very active marketing organization in Scandinavia. Within Scandinavia, Sweden is by far the biggest market for soyfoods. The population sizes are Sweden 8.3 million, Denmark 5.07 million, Finland 5.0 million, Norway 4.2 million, and Iceland 251,000. Alpro's soymilk dessert, in vanilla and chocolate flavors, is selling well.

The soymilk market in Scandinavia is, at most, 150,000 liters/year. It is growing slowly. This is still too small to be interesting or to pay for printing aseptic packages for a soymilk product. The minimum order for a Tetra Brik carton is 200,000 units, and the normal economical order for one single package is about 350,000 to 400,000 units. The labels are so expensive that he would not want to buy more than a 2-year supply. So he would not start until he can sell at least 200,000 liters/year. The cost of aseptic cartons is a major problem for soymilk makers in Europe. All are struggling. Aros will be interested in the next 2-3 years. His first product will probably be a "cooking milk" rather than a milk for drinking. He may work with the milk company Semper to produce a children's "Välling" (pronounced VEL-ling). This is a very popular breakfast product for both children and adults, usually made from powdered milk plus oats or wheat. It is sold as powder which is mixed with water and heated on the stove to make a sort of thick milk. They have developed a soy-based counterpart that tastes better than its dairy counterpart.

Ted's long term goal is to have his fresh soymilk beat powdered cow's milk on the market. His soy-base is so neutral or bland in taste that it can be used in place of powdered milk in ice creams, margarines, etc. That is his basic marketing strategy. As 1992 approaches and subsidies are eliminated over the next 2 years, 8,000 Swedish farmers are projected to loose their jobs from competition from the Continent. In Sweden there is a tremendous surplus production of milk and dairy products, as well as meat, wheat, barley, and oats. In Sweden, the dairy farmer presently gets almost 2 crowns/liter for his milk. That milk is retailed for 5.90 Swedish crowns/liter, but it would cost 6-8 crowns/per liter if it were not subsidized by the Swedish government. What is not sold as a liquid is spray dried, and sold at a low price to companies like Karlshamn to make ice cream and margarine. The price will go up as the subsidies are eliminated–all over Europe. Ted can produce liquid soymilk at 1.10 crowns/liter without subsidies. So Ted wants the farmers which would otherwise go out of business to start growing a new soybean that grows well in Sweden. Ted would buy those soybeans, make soymilk, and use it in Sweden in place of powdered milk, and export it as a premium product at a higher price.

Ted's soymilk system started with some ideas that he got from Alfa-Laval in Lund–the concept of starting with unsoaked, whole soybeans. They exchanged this for Ted's information on tofu. They have never been successful in making a bland soymilk like the one Ted makes today. Ted left Alfa-Laval in 1983-84 and went to Trensums. He has worked with Mark Ljungström (pronounced YUNG-strum) at Trensums for 6 years. Mark has built the machinery (using mostly Alfa-Laval equipment but with pieces from other suppliers) and Ted has the processing concepts. This has been repeatedly tested, changed, re-run, etc. until now it is a unique, excellent system. During the past 2 years, Arla (the Swedish milk company, and Semper, their development subsidiary) and Karlshamn (the Swedish fat company, that uses 90% vegetable oils) have entered the project. In the fall of 1989 Arla decided the leave the project because the new director of Semper new nothing about soya. So now Ted/Aros, Trensums, and Karlshamn are working together. Address: Aros Sojaprodukter, Bergsvagen 1, S-19063

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Orsundsbro, Sweden. Phone: 0171-604 56.

2896. Nordquist, Ted. 1990. The tofu market in Scandinavia (Interview). *SoyaScan Notes.* May 18. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** There are three tofu manufacturers in Sweden. Aros in Sweden is the biggest. Aros started making commercial tofu in Feb. 1981. By 1983 production had grown to 500 kg/week and they began vacuum packaging. By 1984 they were making 800 kg/week, and by Jan. 1985 tofu production had grown to 1,750 kg/week. In early 1987 they introduced the Tofu Line brand for all of their soy products, and they emphasize this brand in their marketing. Now they use about 900 kg/week of soybeans (with a yield of 2.2 or 2.3) to make about 2,000 kg/week of tofu. Much of this tofu is used in second generation products. Sales are growing in the regular chain stores, but sales to health food stores have been dropping over the past few years. Many health food stores are going out of business. There was a lot of negative publicity about their high markups on some products, some questionable products (such as shark's liver oil touted as a cure for cancer), and the fact that the largest chains were owned by pharmaceutical companies that were making big profits. Aros produces 90-95% of all tofu sold in Sweden, Norway, and Finland. The rest consists of imports: a little bottled tofu from Lima in Belgium and canned tofu from Nutana in Denmark. Growth of the tofu market over the past few years has been slow. The main growth has been in second generation products. Over the past 6 years, 99% of Ted's energy has gone into the soy-base project and this has prevented him from working on tofu.

But now many exciting things are starting to happen with tofu in Sweden that make its future look bright. Hans Klimming is the chief cook for the largest conference center in Gothenburg (Göteborg), which serves 1,500-2,000 lunches or dinners at a time, is now serving lots of tofu–and promoting it strongly. He employs a Thai cook who is developing the dishes using Aros' tofu. Klimming has gone to Dagab, Sweden's largest wholesaler for restaurants and hospitals, and urged them to sell tofu throughout Sweden. Ted is now working with Klimming to develop a cookbook containing bulk tofu recipes. Klimming has also gone to Sweden's strongest supermarket chain, ICA (each store is a franchise, 99% owned by the owner), and asked them to publish and carry this cookbook in 1½ to 2 years. Presently Aros' regular tofu is sold only in a few ICA and Konsum stores in Aros' own distribution area–where they deliver themselves.

The second tofu maker in Scandinavia, Urten's Tofu in Soeborg, Denmark, is a fairly small company that supplies Nutana in Denmark with their tofu. Nutana in Denmark is a huge industrial plant that makes mainly frozen foods but sells them primarily in Scandinavia, especially Sweden. They have 2 canned tofu products and last year they introduced a frozen dish containing tofu cubes. Urten's Tofu also sells tofu as such on a fairly small scale. Nutana does not sell any tofu as such. Urtekraemmeren in Copenhagen, which owns Urten's Tofu, is mainly an importer of biodynamic products. Making tofu is a small side business for them.

Aros sales are continuing to grow, even though Ted is spending most of his time away from the business with Trensums. Address: Aros Sojaprodukter, Bergsvagen 1, S-19063 Orsundsbro, Sweden. Phone: 0171-604 56.

2897. Whitford, Harry M., III. 1990. Recent developments with soyfoods in Europe (Interview). *SoyaScan Notes.* May 18 and 31. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Harry is an American. He was an AFS student in Germany. He left California in Oct. 1980 and has lived in West Germany since then. He is now married to a German lady. His new consulting company will try to help European soyfoods companies develop products for mainstream markets. In Europe the diet is generally more diverse and healthier, with less meat and more cereal grains than the USA. Thus there is less motivation for consumers to use soyfoods and (except in the UK) less interest in vegetarian diets. So marketing is the key to selling soyfoods; they must be developed and marketed to sell primarily because they are good tasting and only secondly because they are healthful.

Thomas Karas is saying that Soyastern is trying to merge with Yamato but actually Soyastern is totally bankrupt and Karas is trying to convince Huegli to buy it.

DE-VAU-GE buys about 5,000 kg/week of tofu from Heuschen-Schrouff. The latter uses a secret coagulant which they claim is natural. The tofu has a 6-month shelf life and a pH of 4.0. It is hard like rubber. Harry thinks that after the tofu is pressed and cut, it is soaked in a lactic acid solution (Takai told him this) then pasteurized. Heuschen-Schrouff controls the Chinese food supplies, and that is where they make most of their money. In Chinese markets, their tofu is sold in open buckets. All of their tofu is sold very inexpensively at a very small markup. He thinks they make 50,000 kg/week.

From a producers viewpoint, the German tofu market is the most saturated in Europe, except perhaps for the Netherlands; there are too many producers. There is almost no water-packed tofu in Europe, except that made by one small company in Dusseldorf, and a little sold in bulk floating in water in buckets; the rest is all vacuum packed. The typical tofu company gives its tofu a 5-6 week shelf life because that is what consumers expect–but it rarely stays fresh that long, and is often sour. The only company in Europe Harry knows of that pasteurizes is Heuschen-Schrouff. DE-VAU-GE is now making its own tofu–a colleague of his saw it. They copied a Takai carousel curding machine. They use it only in their second-generation products–they do not sell any as plain tofu. Address: Eurosoy

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consulting, Alleestr. 13a, D-4270 Dorsten 1, West Germany. Phone: 02362/43493.

2898. Howell Mountain Distributors. 1990. Longa Life products: Effective May 23, 1990 (Leaflet). P.O. Box 96, Angwin, CA 94508. 1 p. Single sided.
• ***Summary:*** Made in Australia. Describes 9 frozen products (Hot Dog, Vege-Snag–Curried, Vege-Henchen, Vege-Herb, Vege-Smoke, Vege-Garlic, Vege-Wurst, Cavellami Steak, Meatless Schnitzel). Address: California. Phone: (707) 965-7557.

2899. Andersen, Thomas. 1990. History of pioneering work with tempeh and tofu in Denmark (Interview). *SoyaScan Notes.* May 24. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Thomas, a native of Denmark who speaks flawless British English (in part because of his extensive travels), got interested in macrobiotics in about 1982-83 and, looking for work, traveled to London to study at the Community Health Foundation (founded in 1976 to teach macrobiotics). There from Simon Brown (the expert on soyfoods, who taught classes on how to make tofu and tempeh), Jon Sandifer, Roger Green (presently in Australia), and Andrew Leech, he learned how to make tempeh. There was a small commercial tempeh shop in the kitchen of the Community Health Centre; it started after the kitchen's closing time. He returned to Denmark and in 1985 he started the country's first tempeh shop, named Thomas Tempeh, located on Tagens Vej in Copenhagen. He had two problems. First, since many of his customers were interested in macrobiotics, they did not want the tempeh frozen, and it had a shelf life of only 8 days fresh. Second, the market was very small. So Thomas realized that if he wanted to survive working with soyfoods, he would have to make tofu as well as tempeh.

The two earliest tofu companies in Denmark were Dansk Tofu (owned by Ted Goldberg and some other guys) and Soy Joy in the Valby district of Copenhagen. [Note: Tofu Denmark in Valby was started in March 1982 by Per Fruergaard from Christiania]. The owners of Soy Joy were very idealistic. They never got a packaging machine for their tofu; they just delivered it in bulk in water, which the Danish health authorities, who are very strict, did not like. They were only in business for about 3-6 months. In late 1985 Thomas bought most of the tofu equipment owned by Dansk Tofu, which had been in business for about 1 year. The company was owned by Ted Goldberg, and they had stopped making tofu about 6 months earlier. At this time, Dansk Tofu simply disappeared. And now Thomas started making tofu and marinated tofu, still at Tagens Vej. On 1 Jan. 1986 he moved the business to Soendergade in the city of Toelloese, Denmark. The business was still named Thomas Tempeh. He quickly expanded his product line to include Tofu Pâtés and Smoked Tofu. All of his products were always made with organically grown soybeans. Then he ran into problems with the health inspectors. They did not like the fact that he was making tofu and tempeh in the same place, that he was smoking the tofu himself, and that there were problems with the tofu pasteurization. Moreover, Thomas was overworked (18 hours a day) and undercapitalized. He and one employee were making 500 kg/week of soy products. So in September or October 1986 he sold his business to Urtekraemmeren (pronounced ur-te-KRAH-mer-en), which had previously imported soyfoods from Japan but had never manufactured any.

Then Thomas went to Switzerland to help out with a tofu factory named Berner Tofurei, located in Bern and owned by Infinity, a macrobiotic group. In about Dec. 1986 Urtekraemmeren moved their newly acquired tempeh and tofu company to its present location in Soeborg, Denmark, and renamed it Urten's Tofu, and stopped making tempeh since the health inspectors didn't want tofu and tempeh to be made in the same room. Tempeh was selling, but not enough to justify buying a separate room and equipment for it. In April 1988 Thomas returned to Denmark and began to work as a tofu maker for Urtekraemmeren at Urten's Tofu, the company he had founded. The company was in bad shape: there were constant problems with the health inspectors, the equipment was old and bad, a long pressing time led to bacterial contamination, etc. In late 1988 or early 1989 Urten's Tofu started selling their tofu to Nutana, a large manufacturer of vegetarian foods owned by the Seventh-day Adventist church. This was a turning point in the history of the business. In about May 1989 Thomas told Urtekraemmeren that if they invested in new equipment he could make the company successful. They liked the idea so Thomas went to the SIAL food fair in Paris, met Takai, and bought their largest pressure cooker (220 liters), new pressing tables, a pasteurizing tank, etc. The next big development came in Sept. 1989 when Urten's Tofu got their tofu into the Irma supermarket chain in Denmark. Then tofu began to sell better on the health foods market as well. Thomas, Tom Kristoffersen, and one other man now make the tofu at Urten's. But it is hard work and wages are low. There are no tofu books in Danish.

Today Urten's Tofu is the only tofu company in Denmark. They make, on average, 750 kg/week of tofu (range: 500 to 1,500 kg/week). Their three products are tofu, marinated tofu, and tofu pâté. Production is growing nicely but varies widely from week to week.

A new tofu company named Oy Soya Ab is now being starting in Ekenäs, Finland, by people there who import macrobiotic foods from Japan. One of the people is named Elizabeth. Thomas will work as a consultant for this new company. Address: Urten's Tofu, Hoeje Gladsaxe Torv 2, DK-2860 Soeborg, Denmark. Phone: 31 67 41 90.

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2900. Fehlberg, Eric C. 1990. Re: List and activities of Seventh-day Adventist health food companies worldwide. Letter to William Shurtleff at Soyfoods Center, May 24. 6 p. Typed, with signature on letterhead.

• ***Summary:*** For each for the following companies is given the date of founding, date manufacturing started, and the soy products presently manufactured: Granovita, Spain. Nutana, Holland. Nutana, Norway. Nutana name changes. Austrian Food Company. DE-VAU-GE, West Germany. Sahm Yook Foods, Korea. Sanitarium Health Food Company, Australia (3 pages).

Lists (with addresses) the following companies: Sanitarium Health Food Company in Wahroonga, NSW, Australia; DE-VAU-GE Gesundkostwerk GmbH in Lueneburg, West Germany; San-iku Foods in Sodegaura-machi, Kimitsu-gun, Chiba-ken, Japan; Korean Food Factory (Sahm Yook Foods) in Choongchungnam-do, South Korea; Alimentos Integronaturales y Panificadora la Carlota in Montemorelos, N.L., Mexico; Produtos Alimenticios Superbom Industria e Comercio Ltda. in Sao Paulo, Brazil; Alimentos Granix in Florida, Buenos Aires, Argentina; Nutana Health Food Company in Bjaeverskov, Denmark; AB Svenska Nutana in Rimbo, Sweden; Granose Foods Ltd. in Newport Pagnell, Bucks, England; Pur-Aliment Food Factory in Clichy–Cedex, France; PHAG Food Factory in Gland, Switzerland (Note: PHAG is an acronym for Produits Hygièniques Alimentaires Gland); Egypt Food Factory in Heliopolis, Cairo, Egypt; Glaxo India Limited in Bombay, India; Westico Foods Ltd. in Mandeville, Jamaica; Industrias Covac S.A. in Alajuela, Costa Rica; South China Island Union Mission in Hong Kong (3 pages). Address: Director, International Health Food Assoc., Seventh-day Adventist General Conference, 12501 Old Columbia Pike, Silver Spring, Maryland 20904. Phone: 301-680-6674.

2901. Kjellker Gimre, Monica. 1990. Re: Complete soymilk or soybase plants installed by Alfa-Laval worldwide from 1979–1989. Letters to William Shurtleff at Soyfoods Center, May 30 and Aug. 24–in reply to inquiry. 2 p. Typed, with signature on letterhead.

• ***Summary:*** The following plants are listed chronologically by year of start-up, and within each year, alphabetically by country. Start-up–Country–Company–Product–Capacity (liters/hour)

1979–Malaysia–Lam Soon–soymilk–5,000

1980–Thailand–Kickapoo–soymilk–4,000

All plants made from 1984 on use Alfa-Laval's new Soyal design.

1985–West Germany–Ice cream maker [Schoeller]–soybase–3,000

1985–Switzerland–Soyana–soybase–1,000

1986–China–Guangzhou Cannery [Guangdong]–soymilk–2,500, 2 dec.*

1986–France–Cacoja–soybase–1,500

1987–China–Jin Jiang Foodstuffs Factory–soymilk–2,500

1987–India- Noble Soya–soymilk–4,000, 2 dec.*

1988–Argentina–Alimentos de soja–soymilk–4,500

1988–China–Jiangmen Foodstuff Factory–soymilk–2,500, 2 dec.*

1988–China–Wuhan Guan Sheng Yuan Foodstuff Factory–soymilk–2,500, 2 dec.*

1988–France–Innoval–soybase–1,500

1988–Nepal–Indreni–soymilk–2,500

1988–Nigeria–Sona Dairies–soymilk–4,500

1989–Australia–Sanitarium Foods–soybase–500

1990–France–Dairy Co-op**–soybase–500

* = 2 decanter centrifuges per system to boost the protein yield. The systems made before 1984 were for more traditional soymilk. Those made afterwards no longer require that the soybeans be soaked, and the "new" soyabase line in designed primarily for producing a non-beany soymilk, but it can be easily adjusted to give a traditional soymilk. "Soybase" is the product that comes out of the Soyal soyabase line after grinding, separation in one or more decanters, and deactivation of enzymes like trypsin inhibitors. This base is more concentrated than soymilk (9-12% solids/dry matter) and is what is used as the raw material for any soy-based product. "Soymilk" is a blended drink, often containing sugar, and standardized to a protein level required by the market. Soybase would only be run through an ultrafiltration unit to (1) remove phytic acid and oligosaccharides, or (2) to remove moisture and increase the percentage solids, as to make tofu. ** The plant owned by the Dairy Co-op in France is secret, but the base it produces will be used mostly for research on calf milk replacers and on replacing cow's milk in certain dairy products. This dairy does not have any products on the market. Address: R&D manager, Alfa-Laval East Asia Pte. Ltd., 11 Joo Koon Circle, Singapore 2262. Phone: 86 22 711.

2902. Krieger, Verena. 1990. Re: The soymilk market in Switzerland. Letter (fax) to William Shurtleff at Soyfoods Center, May 31. 5 p.

• ***Summary:*** Soyana in Geneva is the only soymilk maker in Switzerland; their production figures are confidential. Galactina Ltd. in Belp makes soymilk powder, but it is used only in Galactina baby foods. PHAG Sarl in Gland is Switzerland's oldest distributor of soymilk and soymilk products; they sell 2,800 liters/week of DE-VAU-GE soymilk. Biorex AG distributes soymilk imported from Alpro in Belgium. Address: Bruchmattstr. 24, CH-6003 Lucerne, Switzerland. Phone: 041-22 50 34.

2903. **Product Name:** [Tofu Line Soymilk Ice Cream (Vanilla, or Chocolate)].
Foreign Name: Tofu Line Glass (Vanilj, Choklad).
Manufacturer's Name: Aros Sojaprodukter KB.

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Distributed in Sweden exclusively by Nutana.
Manufacturer's Address: Bergsvagen 1, S-190 63 Orsundsbro, Sweden. Phone: 0171-604 56.
Date of Introduction: 1990 May.
Ingredients: Completely vegetarian chocolate ice cream: Water extract of whole ground organically grown soybeans, sugar, fruit sugar, palm oil, cocoa powder, emulsifier 471 (mono- and diglycerides from vegetable oil), salt, stabilizer E410 (fruit seed flour), E412 (guar gum powder), E407 (carrageenan), vanilla.
Wt/Vol., Packaging, Price: 0.75 liters = 400 gm.
How Stored: Frozen.
Nutrition: Vanilla: Per 100 gm.: Calories 190, protein 3 gm, fat 11 gm (of which 2 gm polyunsaturated), carbohydrates 23 gm (of which 22 gm sugar).
New Product–Documentation: Interview with Ted Nordquist. 1990. May 18. Contains details on the product, which is made in conjunction with Trensums Musteri and Winner (a division of Karlshamn, and the second largest ice cream maker in Sweden).

Manufacturers brochure (Full color, 30 cm). 1990. Sveriges första helt vegetabiliska glass (Sweden's first completely vegetarian ice cream). 4 p. A photo (p. 1) shows the two products in their octagonal containers. Page 2 asks "Why vegetarian/non-dairy (*vegetabilisk*) ice cream?" Page 3 asks "Why soya?" and gives 10 reasons. The rear cover contains brief information about both Aros and AB Svenska Nutana.

Letter (fax) from Ted Nordquist. 1990. Oct. 2. Sales of the new Tofu Line ice cream are about 9,000 liters/week. Hemholmen-Ingman OY in Finland (the country's second largest dairy, which sells 2 million liters/year of dairy ice cream) will begin selling with an order of 35,000 liters/week in a semi-trailer starting about Oct. 16-21. About 17% of Finns are lactose intolerant. It's going well.

Talk with Ted. 1990. Nov. 23. In June 1990 this ice cream was first produced for sale but it was not widely distributed until the end of September. Dagab is the main distributor to hospitals. Ted's ice cream sales are now almost the equivalent of $1,000,000/year. The goal is to sell 22,000 liters/week by Aug. 1991 in Sweden. Concerning prices, inexpensive Swedish dairy ice cream retails for 9 marks/liter, Ted's while soy-based Tofu Line is 17 marks/liter and superpremium dairy Mövenpick (made in Switzerland) retails for 24 marks/liter. To restaurants, low priced dairy ice cream is 55 crows compared with Tofu Line at 60 crowns.

Labels given by Ted Nordquist. 1990. Nov. 23. The label and plastic container are octagonal, 5.25 inches across. Each is brown, red, green, black, and white with the vanilla on parchment beige and the chocolate on light chocolate background. In the center is a small illustration of one green pod filled with yellow soybeans surrounded by green leaves. "The healthy vegetable ice cream." Nutana's name appears prominently in green near the bottom. Ingredients and nutritional composition are listed in a self-adhesive label on the bottom of the container.

Soyfoods Center product evaluation of vanilla and chocolate flavors. 1990. Nov. 23 in Alameda. This is the best vanilla soy ice cream that Akiko and Bill Shurtleff have ever tasted. It represents a major breakthrough in producing soymilk with no beany flavor, and has the potential to revolutionize soymilk and dairylike products worldwide.

Spot in SoyaFoods. 1991. Spring. p. 4. "Tofuline Ice Cream." This completely vegetarian ice cream is made by Aros Sojaprodukter of Orsundsbro, Sweden. Free of milk products, cholesterol, and lactose, it was launched last year and is available in 0.75 liter hexagonal packs in two flavors, vanilla and chocolate. "The product was developed using new soya milk technology using a 'dry bean method' and is being sold in Sweden and Finland."

Ad in Health Food Business (England). 1992. July. p. 7. The product is now named Swedish Glace (which see), and the label is in English. The manufacturer is Winner. Available from Foundation Foods, Chantry Place, Headstone Lane, Harrow, Middlesex, HA3 6NY, England.

2904. Lindner, Anders. 1990. Re: Consumption of soymilk in Europe, by country and per capita. Letter (fax) to William Shurtleff at Soyfoods Center, June 19. 1 p.
• ***Summary:*** The following figures are my guesstimates for the amount of soymilk consumed in major European countries. Most of the soymilk produced in Belgium [by Alpro] and Germany [by DE-VAU-GE] is consumed in other countries. Note: The large consumption in the U.K. is due to both its large total population and its large population of vegetarians and vegans. The latter do not consume milk or other animal products.

Country (Population)–Soymilk consumption in million liters–% of total–liters per capita per year

United Kingdom (56.7 million)–20 million liters*–40% of total–0.35

West Germany (60.2 million)–10 million liters–20% of total–0.17

France (55.8 million)–6 million liters**–12% of total–0.11

Belgium (9.9 million)–3 million liters–6% of total–0.30

Netherlands (14.7 million)–2 million liters–4% of total–0.14

Switzerland (6.5 million)–2 million liters–4% of total–0.31

Scandinavia*** (22.8 million)–2 million liters–4% of total–0.088

Italy (57.4 million)–1 million liters–2% of total–0.017

Austria (7.6 million)–1 million liters–2% of total–0.13

Spain (39.8 million)–1 million liters–2% of total–0.025

Others**** (24.3 million)–2 million liters–4% of total–0.082

Total (355.7 million)–50 million liters–100%–0.14

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* Neil Rabheru, founder and director of Unisoy, the largest soymilk manufacturer in the UK, estimates that 18-20 million liters/year of soymilk are consumed in the UK. ** Bernard Storup of Société Soy, a large soymilk maker in France, estimates consumption of soymilk in France to be much higher, about 11 million liters. Storup's estimate is probably more accurate. *** Scandinavia = Sweden (8.3 million), Denmark (5.0 million), Finland (5.0 million), Norway (4.2 million), Iceland (0.25 million).

**** Others = Portugal (10.2 million), Greece (10.0 million), Ireland (3.7 million), Luxembourg (0.369 million), Malta (0.358 million).

Highest per capita consumption: United Kingdom 0.35, Switzerland 0.31, Belgium 0.30, West Germany 0.17, Netherlands 0.14, Austria 0.13, France 0.11. Lowest per capita consumption: Italy 0.017, Spain 0.025. Address: P.O. Box 19002, S-250 09 Helsingborg, Sweden. Phone: 42-92776.

2905. Menzies, John. 1990. Re: Harry Miller's work with soymilk in East Asia. Plans by the South China Island Union Mission of Seventh-day Adventists to set up a health food company in Hong Kong and Taiwan. Letter to William Shurtleff at Soyfoods Center, June 20. 2 p. Typed, with signature on letterhead.

• ***Summary:*** After his soyfoods plant in China was destroyed, Dr. "Harry Miller retreated to Taiwan along with the Nationalists and later set up a soya milk plant associated with the Taiwan Adventist Hospital which has long since gone. I am not even sure when the soya milk operation was discontinued. Unfortunately the only industries set up in Hong Kong were hospitals.

"Recently I was asked by the South China Island Union Mission of SDA's to set up a health food industry in Hong Kong and Taiwan... My background is food technology and I have worked for Sanitarium in Australia and New Zealand for a number of years.

"Initially we will import various products from our sister institutions around the world and where possible re-pack under our own label. This will allow us to get a feel for the market so in the near future we will know what sort of a manufacturing plant to set-up (i.e. soyamilk, vegetarian, or cereal). It looks like we might even have an opportunity to set up a manufacturing base in one of the specially administered regions in communist China." Address: General Manager, Food Div., South China Island Union Mission of Seventh-day Adventists, 40 Stubbs Rd., 2nd floor, Hong Kong. Phone: 838-3991.

2906. Uruma, Masao. 1990. Re: History of San-iku Foods' work with soy in Japan. Please wait. Letter to William Shurtleff at Soyfoods Center, June 22. 1 p. Typed, with signature on letterhead.

• ***Summary:*** He will be gone for several weeks, attending the SDA General Conference in Indianapolis, Indiana, and will return to Japan on July 18. Then he will have time to check through the company's soy product history so that he can provide more accurate information. He has talked with a co-worker who used to associate with Dr. Harry Miller a long time ago. He will also provide historical information. Address: San-iku Foods, Sodegaura Machi, Chiba Ken 299-02, Japan.

2907. **Product Name:** Veggie Burger (Shipped from the USA to the Soviet Union as a Dry Mix).
Manufacturer's Name: Archer Daniels Midland Co.
Manufacturer's Address: 4666 Faries Parkway, Box 1470, Decatur, IL 62525. Phone: 800-637-5850.
Date of Introduction: 1990 June.
Ingredients: Textured soy protein concentrate, natural flavors, seasonings.
How Stored: Shelf stable.
New Product–Documentation: Peter Golbitz. 1990. Soya International. April/June. p. 10-12. "Soya Interview: Dwayne Andreas, CEO Archer Daniels Midland: Soybean Ambassador." Peter Golbitz. 1990. Soya International. April/June. p. 14. "ADM unveils new veggie burger: Over 50 million served." "Originally developed by ADM's wholly-owned subsidiary in the United Kingdom, British Arkady, over fifty million servings of the veggie burger, along with soy sausages and meat analog mixes, were sold in the U.K. last year. According to Ron Ferrari, sales manager of ADM's Protein Specialties Division, the veggie burger was developed to meet the demands of vegetarians..."

Archer Daniels Midland Co. 1990. "Annual report." "ADM has introduced its veggie burger, an all-vegetable protein food product based on soy protein concentrate. This innovative, cholesterol-free, reduced calorie product also contains dietary fiber and appeals to the vegetarian market. Early indications of good acceptance in the U.S. and U.S.S.R. suggest that this product has global potential..."

Stewart Reeve. 1991. *Soybean Digest.* Dec. p. 40a. "Fast food delight." "The product has already proven itself in an export market. ADM introduced a similar product trademarked as the Veggie Burger to the Soviet Union in October 1989 at a food trade show in Moscow. Shipped as only the dry mix, Veggie Burgers are sold in Soviet grocery stores as the mix or served in restaurants as burgers. The Petina restaurant in Moscow now sells 4,500 Veggie Burgers a day, Lensch reports. The Veggie Burger is tailored to the tastes of Soviet consumers. 'For example, the Soviet Union product has 10% fat content rather than the 5% the U.S. has. They're looking for calories,' he explains."

Talk with Lee Lensch of ADM. 1991. Dec. 16. Initial commercial sales began in June 1990. Although Realeat and British Arkady developed the Vegeburger in the UK using TVP (textured soy flour), ADM reformulated it in the USA using textured soy protein concentrate. Worthington Foods

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has a registered trademark on the name Veggie Burger in the USA only, so that is why ADM named its product Harvest Burger–after extensive talks with Worthington in the spring of 1990. The Veggie Burger made in the USA with textured soy protein concentrate is not currently sold in the UK. Kees Touw, who is in charge of all international sales for this product, would know why it is not sold–but it is probably because British Arkady or Haldane has their own line of products. Maybe one of their products is now made with textured concentrates.

2908. Brown, Peter J. 1990. Worthington Foods acquires La Loma foods. *Soya International* (*Bar Harbor, Maine*). April/June. p. 13.
• ***Summary:*** In Jan. 1990 Worthington Foods purchased the La Loma Foods line from Loma Linda Foods for approximately $6 million. Worthington's 1989 sales were $62 million, up 29% over 1988. The La Loma line is expected to increase Worthington's sales by up to 15% a year. The company has now four different food lines and brands: La Loma, Worthington, Natural Touch, and Morningstar Farms. The latter accounts for most of the company's sales, and Worthington states that Morningstar Farms products can be fond in 90% of America's food markets.

2909. Loma Linda Foods. 1990. For sale: Soy milk plant located in Ohio (Ad). *Soya International* (*Bar Harbor, Maine*). April/June. p. 27.
• ***Summary:*** The plant, being sold by Loma Linda Foods of Riverside, California, includes 122 acres of land, 26,000 square feet of plant and warehouse building, 14,400 sq. feet of office building and laboratory, 3,600 sq. feet of raw material storage building, equipment including a retort line, three residential properties, and a large storage area and garage building. "The plant is a cost efficient operation under local management."

Note: This plant was built and started by Dr. Harry Miller in 1939. Loma Linda is consolidating their soymilk production operations in Riverside, California. Address: Riverside, California.

2910. **Product Name:** Multigrain Cutlets.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085. Phone: 800-628-3003.
Date of Introduction: 1990 June.
Ingredients: Water, textured vegetable protein (wheat gluten, soy protein concentrate), red wheat flakes, barley flakes, oatmeal, rye flakes, triticale flakes, white wheat flakes, millet, guar gum. Broth: Water, flavorings (hydrolyzed vegetable protein).
Wt/Vol., Packaging, Price: 20 oz (567 gm) can. Retails for $2.65 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Soya International. 1990. April/June. p. 23. Contact: Don Michalenko.

Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19.

2911. **Product Name:** Veelets.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085. Phone: 800-628-3003.
Date of Introduction: 1990 June.
Ingredients: Textured vegetable protein (wheat gluten, soy concentrate, soy isolate), egg whites, wheat flour, corn flour, soybean oil, corn oil, modified food starch, partially hydrogenated soybean and cottonseed oil, natural and artificial flavors from non-meat sources, leavening (sodium acid pyrophosphate, sodium bicarbonate), calcium caseinate, salt, onion, mono- and diglycerides from vegetable sources, garlic, caramel color, paprika, niacin, iron (as ferrous sulfate) vitamin B-1 (thiamine), vitamin B-6, vitamin B-2 (riboflavin), vitamin B-12.
Wt/Vol., Packaging, Price: 10 oz paperboard box.
How Stored: Frozen.
Nutrition: Per 2.5 oz (71 gm): Calories 230, protein 14 gm, carbohydrate 12 gm, fat 14 gm, cholesterol 0 mg, sodium 390 mg, potassium 120 mg.
New Product–Documentation: Soya International. 1990. April/June. p. 23. Contact: Don Michalenko.

Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. 8 by 4 by 1.25 inches. Red, black, and yellow on white. Paperboard box. Front panel states: "A vegetable protein product. Completely meatless. Lightly breaded. Delicious as an entree or sandwich. Microwave in minutes. 4 patties. No cholesterol. No MSG added. No animal fat." Package design is copyright 1990.

Soyfoods Center product evaluation. 3½ inch patties are lightly breaded and pre-fried. Flavor, texture and salt level are very good. Package design: Excellent.

2912. **Product Name:** Golden Croquettes.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085. Phone: 800-628-3003.
Date of Introduction: 1990 June.
Ingredients: Textured vegetable protein (wheat gluten, soy concentrate, soy isolate), egg whites, cracker meal, rice, soybean oil, corn oil, partially hydrogenated soybean and cottonseed oil, potatoes, nonfat dry milk, natural and artificial flavors from non-meat sources, onions, salt, sucrose, parsley flakes, celery, niacin, iron (as ferrous

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sulfate), vitamin B-1 (thiamine), vitamin B-6, vitamin B-2 (riboflavin), vitamin B-12.
Wt/Vol., Packaging, Price: 15 oz paperboard box.
How Stored: Frozen.
Nutrition: Per 3.75 oz (106 gm): Calories 280, protein 19 gm, carbohydrate 20 gm, fat 14 gm, cholesterol 0 mg, sodium 890 mg, potassium 230 mg.
New Product–Documentation: Soya International. 1990. April/June. p. 23. Contact: Don Michalenko. Product with label purchased from Craig Klatt at Adventist Bookstore, Pleasant Hill, California.

2913. Muso Shokuhin. 1990. [Pure heart: Muso general catalogue]. Otedori 2-2-7, Chuo-ku, Osaka 540, Japan. 88 p. Printed 1 July 1990. 30 cm. [Jap]
• ***Summary:*** This strikingly beautiful, full-color catalog, pictures and describes Muso's natural-food macrobiotic products in Japanese for the Japanese market–although the title is written only in English. Includes many kinds of miso, shoyu (incl. Marushima Shoyu), black soybeans, yellow soybeans, kinako [roasted soy flour], seitan (in a jar from Marushima, p. 41; the product name is written as "Seitan" in large roman letters, then in smaller letters in katakana), San-Iku Foods canned products (Gluten Burger, Gluten Meat, Linketts, Soyees, Snack Joe; p. 41), yuba, gomoku nimame (cooked whole soybeans), many kinds of sea vegetables and related products, San-Iku Soyalac (8 different products), Marusan soymilk (5 different products; 3 are named mineral tou-jyan; the latter is the Chinese term for soymilk), macrobiotic books. Address: Osaka, Japan. Phone: 06-942-0343.

2914. Rabheru, Neil. 1990. Brief history of Unisoy Milk 'n' By-Products Ltd. (Interview). *SoyaScan Notes.* July 2. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Neil, who founded this company, was born in Tanzania. One of his parents was of Indian origin (born in India). He arrived in the UK in 1972 and went to work for a very large electronics company. By the mid-1980s he had cornered himself into a very specialized field of environmental testing and performance of defence equipment. The next step up in the organization was a long way away, so having run out of excitement in life, he began to look for more rewarding work. While doing a little import/export work he met an Indian named Mr. John Patel [pronounced puh-TEL] who suggested to him that they start a company to make soymilk, soy ice cream, and burgers. Mr. Patel did not have any money. The company was founded in June 1985. Before anything else happened, Neil became very concerned over irregularities in Mr. Patel's financial

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activities, and decided to discontinue his involvement with Mr. Patel. A few days later Mr. Patel died unexpectedly on 5 Nov. 1985. On Nov. 10-12 Neil selected the location for his new plant, then he raised the necessary startup capital from five venture capitalists in high tax brackets, but he was the company's only executive. Neil was never in any way involved with Michael Cole or with Soya Health Foods Ltd. (which is still owned by Mr. Arora, a Sikh) despite what others have said. Jan Freeman is presently involved with Unisoy.

In May 1986 Unisoy began to make its first product, White Wave Soya Milk (plain/unsweetened, or sweetened with raw cane sugar) at their present address. Before this time, the soymilk market in the UK was "very stagnant and boring, with limited growth. There was a very high price differential between dairy milk and soya milk. Soymilk packaging was poor. The ratio of the volume of business to the number of brands on the market was too high. Too many brands were fighting for too small a market. There was tremendous brand loyalty, promoted in part by the wide range of product tastes. That was Unisoy's biggest problem. So Unisoy decided to crash the price barrier, and develop some nice packaging and a better tasting, much creamier product." To learn how to make soymilk, Rabheru did an extensive study of the literature. He found many conflicting opinions but agreement on some basic points. To help resolve these, he consulted with Dr. H.L. Wang at the USDA Northern Regional Research Center in Peoria, Illinois. He developed a unique process, purchased a soymilk plant from Taiwan, modified it with steam injection and instrumentation to suit his application (he has an engineering background), developed soymilk products, ran taste tests, and continued improving his process. Unisoy's main competitors in the soymilk market at that time (and still today) were Alpro/Vandemoortele and Granose. Unisoy has taken over virtually all of the market share of Soya Health Foods Ltd., mostly because of better quality and lower price.

In May 1987 Unisoy introduced White Wave Soya Yogart, a line of products were yogurt-like desserts in fruit flavors with a shelf-life of 10-11 weeks with aseptic packaging. This was followed by Unisoy Carob & Banana Organic Drink (Aug. 1988), Unisoy Gold soymilk (March 1989), Maranellis Ice Supreme (soy ice cream, May 1989), and Unisoy Soy Yogart (Aug. 1989). All the previous soy ice creams and yogurts in the UK had contained soy protein isolates, since the manufacturers did not know how to make soymilk with a high protein levels. Even today, all the soy ice creams in the UK are made from soya isolates. Unisoy makes a special rich soymilk used specially for making their ice cream.

Over the years Unisoy steadily improved its soymilk process with numerous innovations. They now make excellent quality soymilk without dehulling the soybeans, without adding any oil or lecithin, and using only 1-2 people to operate the largely automated plant.

In Dec. 1988 Neil sold the company to Daisy Dairies Ltd. This cooperative group of companies has their head office in Hyde, Cheshire, and they also have fresh milk, UHT, catering, and ice cream manufacturing divisions, plus now Unisoy. He would prefer not to comment on the effects/results of the sale. Address: Unit 1, Cromwell Trading Estate, Cromwell Rd., Bredbury, Stockport, Cheshire SK6 2RF, England. Phone: 061-430 6329.

2915. Rabheru, Neil. 1990. The soymilk industry and market in the United Kingdom (Interview). *SoyaScan Notes*. July 2. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** There are only two significant manufacturers of soymilk from soyabeans in the U.K.; Unisoy and Soya Health Foods Ltd. Plamil Foods Ltd. buys soy protein isolates from Protein Technologies International, then subcontracts with a dairy to have these mixed with water and other ingredients, according to Plamil's formula, to make a soymilk. As far as he knows, Plamil has never purchased soybeans to make soymilk and has never had their own plant. Haldane used to import its soymilk from France. This soymilk was made, not from soybeans but from some kind of a spray-dried formulation. Then Unisoy started supplying Haldane, but that contract came to an end when Haldane was acquired by another company. Neil thinks they are now importing again, probably from France, not from Australia. Haldane's imports are very small. Neil has never heard of Itona Products Ltd. in Wigan, Lancashire [although they are still in business in 1990].

Of the soymilk made in the Unisoy produces well over 50%. Approximately 18-20 million liters of soymilk are sold and consumed in the UK each year. It is the biggest soymilk market in Europe, and it is growing at the rate of roughly 15-26% a year. "The growth has been phenomenal, and the bulk of the growth in the European soymilk market seems to have been in the UK." But he doubts very much that it is growing faster than 26% a year. The estimated market shares by company are: Alpro/Vandemoortele 51%, Granose 15-17%, Unisoy 15-17%, and others (Plamil, Soya Health Foods, Haldane, etc.) 15-19%.

In terms of outlets, Granose is sold only in health food outlets. Unisoy's best-selling and most profitable line is its four soyamilk products. White Waves sugar free has long been the best selling single product, but it is rapidly being overtaken by Unisoy Gold (fortified with vitamins and minerals), which has been a phenomenal success. The bulk of Unisoy's soyamilk sales is in national multiples/grocery chains. Of all Unisoy's products, about 65% of sales is in multiples and 35% in health food stores. Plamil has its own clientele; its products are very popular among vegans. Soya Health Foods Ltd. has been able to survive largely because of their soy ice cream, which was one of the first ones on the market in the UK [after Sojal and SoyBoy Soymilk Ices from

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the Regular Tofu Co.] and the most widely available brand for a long time. Soyamilk is a very small product for Soya Health Foods Ltd. now.

Alpro/Vandemoortele did the pioneering work in getting soymilk into British multiples (supermarkets). In about 1982 Safeway (which has its origins in America), became the first multiple (supermarket chain) to sell soymilk in the UK. They sold the Alpro/Vandemoortele line but they sold only a small quantity. Safeway has always purchased its soyamilk from Vandemoortele. Michael Cole of Soya Health Foods Ltd. also deserves a good deal of credit for the growth of soymilk in the UK. He did the early work in getting British-based supermarkets, large chain stores, and normal grocery stores interested in carrying soyamilk. By late 1985 Cole was selling large amounts of his aseptically packed Sunrise Soya Milk to multiples, including Tesco. "Cole did the solid job of marketing and bringing soyamilk into the perspective it is in now. Then he left Soya Health Foods in mid- to late-1987." He started his own consulting company. Today every multiple in the country, including the large chemist chains (drug stores) are now offering soyamilk to the consumer.

Unisoy exports their soymilk to the Netherlands, Italy (to Parma Soia), and Ireland. It is also sold in Portugal. It used to be sold in Belgium. Address: Unit 1, Cromwell Trading Estate, Cromwell Rd., Bredbury, Stockport, Cheshire SK6 2RF, England. Phone: 061-430 6329.

2916. Tabuchi, Ichiro. 1990. [Re: History of Soyalac soymilk production by San-iku Foods in Japan]. Letter to William Shurtleff at Soyfoods Center, July 4. 1 p. Handwritten, with signature on letterhead. [Jap; eng+]

• ***Summary:*** In 1948 Mr. Tabuchi visited Dr. Harry W. Miller and studied at his soymilk plant in Mt. Vernon, Ohio. During this period, Dr. Miller visited Nihon San-iku Gakuin (a Seventh-day Adventist school located at Chiba prefecture, Sodegaura-cho) almost every year and earnestly advised the people there to make soymilk. In about 1957-58 they started to make soymilk at a tofu plant that was owned by Mr. Ueda. They bottled it in 180 ml dairy milk bottles, which they sold with their tofu. It was a small scale operation and it didn't last long.

In 1959 at the Food Department of Nihon San-iku Gakuin, they set up a tofu manufacturing plant and started to make soymilk in 180 ml milk bottles for the school's lunch program. Several years later they started to make canned soymilk for general consumers. In order to help introduce the soymilk to the school, Dr. Miller lived on the school campus for 2 months. He taught and gave orientation to the students.

In 1970 San-iku Foods became independent from the San-iku Gakuin Food Department and started to make and sell infant formula. Address: San-iku Foods, Japan.

2917. Manrique, Jorge. 1990. Re: Gránix soy products introduced in Argentina, with date and name of each. Letter to William Shurtleff at Soyfoods Center, July 13. 1 p. Typed, with signature on letterhead.

• ***Summary:*** Lists six Granix (Gránix) soy products introduced from 1978 to 1986. "We are also enclosing product labels and a product catalog. If you are interested in prices, please contact Carlos Ruiz, Granix Sales Manager, Fax No. (541) 756-2629." Address: Production Manager, Av. San Martin 4625 (C.P. 1602), Florida, Prov. de Buenos Aires, Argentina.

2918. Klatt, Craig. 1990. Best-selling Worthington and Loma Linda food products in Northern California (Interview). *SoyaScan Notes.* July 18. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** This store has a large selection of meatless products made by these two Adventist companies. Of the canned products, Worthington's (and the store's) best-seller by far is FriChik (based on spun soy fibers), followed by Vegetable Skallops (with artificial seafood flavor; originally developed by Battle Creek Foods of Michigan), then Veja-Links or Burger. Loma Linda's most popular canned product by far is Big Links (like a Polish sausage), followed by Vege-Burger.

Of the frozen products, Worthington's best-seller is Smoked Turkey Slices, followed by Stripples (like bacon), while Loma Linda's best-seller is Corn Dogs (based on their Big Franks), followed by Fried Chicken. Loma Linda has tended to follow Worthington in terms of new product development and introduction. Craig has heard for reliable sources that spun soy protein fibers are quite similar to plastic fibers in that they are hard to digest and have a scouring effect on the digestive system. They also seem to cause large amounts of flatulence. His store is working to carry products with a "cleaner" list of ingredients, which are less highly processed, such as those made by Cedar Lake. Address: Manager, Adventist Book Center, 2300 Nourse Rd., Pleasant Hill, California 94523. Phone: 415-685-4300.

2919. Wiesner, Evelyn. 1990. Early Worthington labels and dates that commercial products were introduced (Interview). *SoyaScan Notes.* July 30. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** The early Worthington labels did not have a brand name on the front panel. Only the product name was given. Starting in the 1950s, Worthington Foods started to phase in the brand name "Worthington" on the front panel. Since then, the brand has always been simply "Worthington." The company has never kept a systematic collection of its labels, nor of the dates that new products were introduced. However the company does have binders from the 1950s and 1960s containing 10-20 labels on sheets with plastic covers; they were used for presentation to customers. These labels are not dated.

Information on new product releases can also be

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found in the various Worthington publications, such as the Chopletter: The Magazine of Worthington Foods News and Views (started April 1948), Tomorrow's Foods Today (started 1969), and The Healthy Appetite (started Feb. 1992). Address: Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

2920. Fleming, Diana J. ed. 1990. Country Life vegetarian cookbook: Delicious recipes from the kitchen of the Country Life vegetarian restaurants. Family Health Publications, 13062 Musgrove Highway, Sunfield, MI 48890. 190 p. Index. 23 cm.

• ***Summary:*** This book contains the most popular vegan recipes from Country Life vegetarian restaurants. In 1966 the first Country Life Restaurant opened its doors in Grand Rapids, Michigan. Today the 15 Country Life Restaurants, though all independently owned and staffed by Seventh-day Adventists, "share a common commitment to serve delicious, wholesome, 100 percent vegetarian food. They are also dedicated to furnishing educational programs, to ministering to the needs of the community, and to providing a relaxed, Christian atmosphere as a refuge for customers from the stresses of the work-a-day world." A list of the addresses and phone numbers of the 15 County Life restaurants (10 in the USA, 3 in Europe, and 2 in East Asia) is given on page 4.

"Soy or nut milk" is called for in many recipes throughout this book. Soy-related recipes include: Soy-oat waffles or pancakes (p. 20). Carob-banana tofu topping (p. 25). Tofu-pineapple "cottage cheese" (p. 28). Soy raisin puffs (with cooked whole soybeans, p. 35). Fluffy soy-corn muffins (p. 36). Scrambled tofu (p. 38). Chipped tofu (p. 39). Tofu cheese rarebit (p. 40). Tofu potato latkes (p. 41). Soy whipped cream (#1-#3, p. 60-61). Tofu whipped cream (p. 61). Tofu orange whipped cream. Tofu cheesecake (p. 66). Carob tofu cheesecake. Tofu loaf (p. 73). Kidney bean and tofu pie (p. 83). Pasty (filled with frozen tofu, p. 84). Soybean creole (p. 88). Tofu balls (p. 93). Lasagne (with crumbled tofu, p. 94). Stuffed shells (with tofu, and soy mayonnaise or soy sour cream). Eggplant Parmesan (with tofu). Tofu cacciatore (p. 96).

Stir fry vegetables (with tofu, p. 103). Tofu foo young (p. 105). Oriental medley (with tofu, p. 106). Walnut cheese spread (with tofu, p. 108). Gluten and broth. Teriyaki sauce (with soy sauce, p. 111). BBQ sauce (p. 112). Tofu "egg" salad (p. 118). Thousand island dressing (with soy mayonnaise, p. 120). Olive dressing (with soy base, or Soyagen, p. 121). Soy mayonnaise (#1 with soy milk, #2 with soy base, #3 with Soyagen, p. 123-24). Tofu mayonnaise (p. 125). Aioli or garlic mayonnaise #1 (with soy milk). Soy sour cream (p. 126). Soy margarine (#1 and #2). Tofu cottage cheese. Tofu tomato stars (p. 135). Sour cream potatoes (with soy sour cream or mayonnaise, p. 139). Tofu gumbo soup (p. 146).

Soy milk (#1 from soy beans, #2 from soy base, p. 149). Soy base (from soy flour, p. 150). Basic nut milk (with cashews, walnuts, filberts, or Brazil nuts, and honey or dates, p. 151). Cashew-pear milk (p. 152). Half and half (with cashews and almonds). Almond milk supreme... plus many other nut and fruit milks.

One innovative ingredient in many recipes is "Lecithin-oil slicker: This is a replacement for products such as Pam, a food release spray. Pour 6 parts oil, not olive, peanut or sunflower, into a jar with 1 part liquid lecithin. Cover tightly and shake well. Keep at room temperature. Do not use lecithin granules. Measure oil first then use the same utensil to measure lecithin to help prevent sticking of lecithin on utensil."

At the end of the book are several very interesting chapters: "The protein myth: When too much of a good thing is a bad thing," by M.G. Hardinge and W.C. Andress. One very interesting table (taken largely from G. Bunge 1902) shows that the longer it takes for a baby animal to double its birth weight, the lower the protein content of the mother's milk. Humans, with 1.4% protein in the milk, take 180 days (the longest). Cats, with 9.5% protein in the milk, take only 7 days (the shortest). A second chapter is titled "Dietary fat–good or bad?," by Bernell E. Baldwin. Address: Michigan.

2921. Shurtleff, William; Aoyagi, Akiko. 1990. Soymilk in Europe: The industry and market, commercial products, publications, and history. Lafayette, California: Soyfoods Center. 261 p. July 17. Indexes. 28 cm. [763 ref]

• ***Summary:*** Since the mid-1980s, the soymilk industry and market in Western Europe has been booming, and the future looks very bright. Many large companies with plenty of capital and marketing expertise are entering the market, product quality and diversity is steadily improving, and consumers are showing and increased interest in nutritional protein beverages that are free of cholesterol and lactose, and low in saturated fats.

Soymilk production and growth rate: Production of soymilk in western Europe as a whole is estimated to have grown to 30–42.5 million liters/year (7.9–11.2 million gallons/year) in 1990, up from only 6-10 million liters/year (1.59–2.64 million gallons/year) in 1984, a roughly fivefold increase in 6 years. This represents an average compound growth rate of about 30% a year.

Estimates of total market size (not including infant formulas): Philippe Vandemoortele, managing director of Alpro, Europe's largest soymilk manufacturer, estimates the adult soymilk market in Europe to be 30 million liters/year. Asger Somer Hansen, managing director of DTD/STS, one of Europe's two largest suppliers of soymilk plants, estimates 35-40 million liters/year. Anders Lindner, managing director of DTD/STS until late 1989, estimates 42.5 million liters/year, plus an additional 7.5 million liters/year that are made into dairylike products such as soy puddings, yogurts, ice creams, and cheeses.

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Leading countries: The largest soymilk market in Europe is clearly in the UK, because of its large population of vegetarians and vegans (vegans do not consume milk or any other animal products), its large total population, its large number of soymilk manufacturers and marketers, the fact that soymilk is now sold in many UK multiples/supermarkets, its relatively long history of soymilk production, and the fact that many soymilk products bear the generic name "Soya Milk" on the front panel. The first commercial soymilk in England was Solac, launched in 1912 with great fanfare and publicity by the Solac Company/Synthetic Milk Syndicate. Roughly 40% of all soymilk consumed in Europe is consumed in the UK, and per capita consumption is also highest there. The second largest market is probably France, with West Germany a very close third.

Leading manufacturers: Two companies (Alpro in Belgium and DE-VAU-GE in West Germany) dominate the market with an estimated 70% market share, and that percentage is not likely to decrease. Competition is fierce and increasing. Alpro, which began making soymilk in 1979 and now produces about 21 million liters/year, is building a new plant at Wevelgem, Belgium, which is scheduled to begin operation in June 1990. Costing about US$15 million, it will have a capacity of 45 million liters/year. DE-VAU-GE's plant, which was built by DTD/STS and began operation in August 1985, now produces about 12 million liters/year but has a capacity of 3,000 to 4,000 liters/hour of finished soymilk. Other manufactures with the year they started making soymilk and their current estimated annual production in liters/year: Unisoy (UK, 1986) 3 million; Cacoja (France, 1987) 3 million; Soyana (Switzerland, 1985) 2.5 million; Société Soy (France, 1975) 1.2 million; Soya Health Foods (UK, 1985) 1 million; Galactina (Switzerland, 1969) 1 million; Triballat (France, 1989) 0.5 million; Innoval (France, 1987) 0.5 million; Crivellaro (Italy, 1989) 0.5 million. Other smaller producers include Plamil (UK, 1965), Haldane (UK, 1984), Itona (UK, 1964), and Ralston Purina España (Spain 1984).

Price: The retail price of soymilk is 2-3 times as high as that of cow's milk.

Packaging: Virtually all European soymilk and soymilk-based products are now sold in Tetra Brik Aseptic cartons. But with the growing concern about and legislation concerning disposal of solid wastes, one very big potential danger lies on the horizon for soymilk–that aseptic packaging will be increasingly banned, as it already has been in the state of Maine in the USA after Sept. 1990. If the manufacturers of aseptic packaging do not find a truly recyclable package or establish a workable system to recycle their current packages, soymilk could be in for hard times.

Soymilk trends in Europe: Though soymilk production has increased fivefold since 1984, it is still minuscule compared to cow's milk. The flavor of soymilk continues to be a major problem for most Europeans. Features/benefits attracting Europeans to soymilk are its freedom from cholesterol and lactose, and the fact that its production places less of a burden on the environment and on factory-farmed dairy cows. Most of the soymilk in Europe is sold to the natural/health food trades via health food stores and (in German speaking countries) Reform House chains. Only in France and the UK (plus a little in Belgium) is it also marketed as a mainstream product through supermarkets. A small amount is consumed by Asian-Europeans and Seventh-day Adventists. Organically grown soybeans are used in a large and increasing percentage of European soymilk. In the UK, innovative natural sweeteners (such as apple juice) have also started to be used. Private labeling: Many large European natural/health food manufacturers and/or distributors now sell soymilk under their own brand. Alpro produces many private-label brands. This practice is much more common in Europe than in the USA. Medical Soy and Parma Soia in Italy are two recent additions to this growing list. Soymilk is widely exported across national boundaries within Europe. This will probably not change much after 1992. Many large companies have entered the market since 1985 with large automated plants, but many of these are running at a small percentage of their capacity–and thus are losing money. Because of the surpluses of cow's milk in Europe, there are many regulations (including value added taxes and labeling restrictions) against "imitation dairy products." These differ from country to country and will probably become less severe after 1992. These practices are much more restrictive in Europe than in the USA, although also in the USA soymilk is not allowed to be labeled "soymilk." European dairy magazines (unlike their counterparts in America) continue to view soymilk with fear and criticism, even ridicule, at the same time that many large European dairy companies are jumping into this new market that shows future promise–which the European cow's milk market seems not to. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2922. **Product Name:** Choplets.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: Worthington, Ohio.
Date of Introduction: 1990 July.
Ingredients: Textured vegetable protein (wheat gluten, soy protein concentrate), caramel color. Broth: Water, flavorings (hydrolyzed vegetable protein, spice extractives), yeast extracts, dextrose, salt, soybean oil, caramel color, monosodium glutamate.
Wt/Vol., Packaging, Price: 8 oz, 17 oz, and 30 oz can. 20 oz can retails for $2.75 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. 20 oz (567 gm) can. The ingredients are now: Textured vegetable protein (wheat

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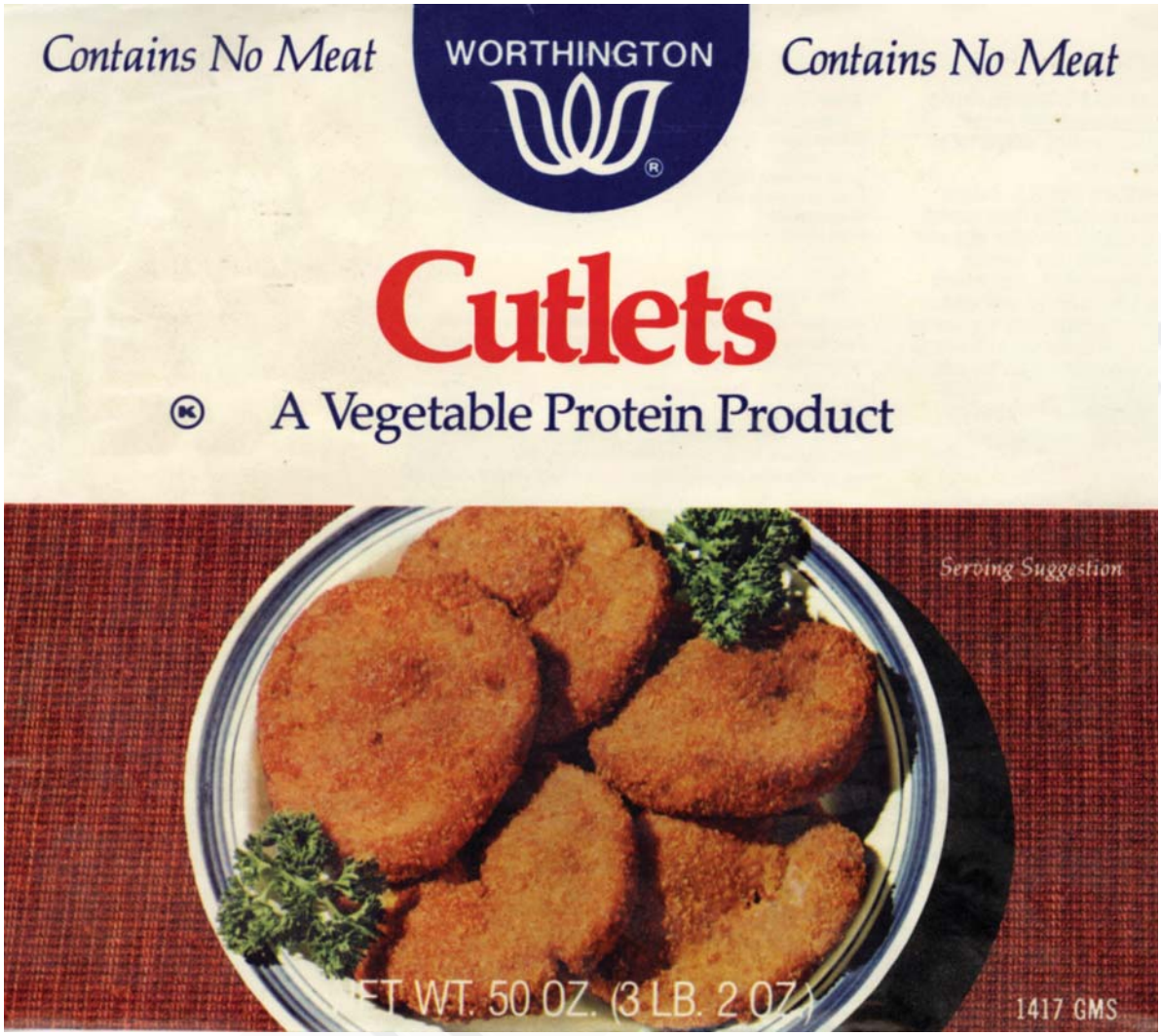

gluten, soy protein concentrate), caramel color. Broth: Water, flavorings (hydrolyzed vegetable protein, spice extractives), yeast extracts, dextrose, salt, soybean oil, caramel color, monosodium glutamate.

Note: This product was first introduced in Oct. 1941, but did not contain textured soy protein at that time.

2923. **Product Name:** Cutlets.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085. Phone: 800-628-3003.
Date of Introduction: 1990 July.
Ingredients: 1990: Textured vegetable protein (wheat gluten, soy protein concentrate), caramel color. Broth: Water, flavorings (hydrolyzed vegetable protein, spice extractives), yeast extract, dextrose, salt, soybean oil, caramel, monosodium glutamate.
Wt/Vol., Packaging, Price: 50 oz (1417 gm) can. Retails for $6.25 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19. Red and blue on white. The ingredients are now: Textured vegetable protein (wheat gluten, soy protein concentrate), caramel color. Broth: Water, flavorings (hydrolyzed vegetable protein, spice extractives), yeast extract, dextrose, salt, soybean oil, caramel, monosodium glutamate.

Note: This product was first introduced in 1960, but did not contain textured soy protein at that time.

2924. Fehlberg, Eric C. 1990. Re: Seventh-day Adventist health food companies worldwide. Letter to William Shurtleff at Soyfoods Center, Aug. 17. 4 p. Typed, with signature on letterhead.
• ***Summary:*** "Nutana of Holland do not manufacture the five products that are listed in my letter of May 24. Each of the products does contain soya as an ingredient, and it is my understanding that they are manufactured by Nutana of Denmark.

"Nutana of Norway, established in 1970, and you are right, it was formerly known Dagens Kost, but was renamed

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Nutana Norge, in 1982. In Norway they are strictly a marketing branch and do not manufacture any foods at all."

Sahm Yook Foods is the official name of the Korean Food Factory.

Alimentos Colpac is the official name of the food factory in Navojoa, Sonora, Mexico; it was established in 1969. The Montemorelos Branch is known as Alimentos Integronaturales y Panificadora la Carlota; it was established in 1981.

Granose Foods Ltd. of England moved from Stanborough Park, Watford, Herts, to Howard Way, Newport Pagnell, Bucks., in Jan. 1989. The official opening date was 9 July 1989.

PHAG (of Switzerland) is written in all upper-case letters; it is not an abbreviation of anything.

Glaxo Ltd. India has nothing to do with the Seventh-day Adventist church.

DE-VAU-GE was primarily responsible for setting up the Adventist food industry in Spain and the Kolett's brand is packed specifically for the Spanish market. DVG has two brand names which are manufactured for the reform or natural foods market in Europe: Granovita and Bosen. The products under the Bosen label were originally made in their bakery.

Pan American Health Service in Honduras still produces soymilk. Mountain View College in the Philippines is still making meat analogues and perhaps soya milk–but only for their own use. Bandung College (now called Bandung Academy) in Indonesia is still in operation and they may be making soya products. Two years ago they wanted very much to start a food factory, but it did not happen. The Hong Kong Hospital is still operating and they still manufacture small amounts of food, basically for their own use. South China College has a long history. It was established in 1903 as Bethel Girls' School, but underwent several name changes and changes of location due to political turmoil and the Sino-Japanese war of 1937, followed by the violence of the Second World War.

"Eventually it was re-established at Clear Water Bay in Kowloon, in 1958 and a college curriculum introduced in 1962. Its name was changed to South China Union College in 1964. In 1981 they officially adopted its name and has been called Hong Kong Adventist College since then. It still operates today, and possibly manufactures small quantities of food, basically for their own use." Address: Director, International Health Food Assoc., Seventh-day Adventist General Conference, 12501 Old Columbia Pike, Silver Spring, Maryland 20904.

2925. Fehlberg, Eric C. 1990. Re: Dr. Steven Youngberg and the Pan American Health Service. Letter to William Shurtleff at Soyfoods Center, Aug. 17. ½ p. Typed, with signature on letterhead.

• ***Summary:*** "Pan American Health Service was established by Dr. Steven Youngberg. He is over 70 today, and still operates the health service and still produces soyamilk. His brother indicates that he is quite an authority on soyamilk and protein. At present they are caring for more than seventy orphans in Honduras, where their daughter continues the program while they are in America. This is run by an Adventist, but not owned by the church. His U.S.A. address is: P.O. Box 888, Keene, Texas 76059. Telephone: 817-611-2646.

"The Honduras address is: Apartado 191, San Pedro Sula, Honduras." Address: Director, International Health Food Assoc., Seventh-day Adventist General Conference, 12501 Old Columbia Pike, Silver Spring, Maryland 20904.

2926. Shemer, Michael. 1990. Re: Tivall. Letter to William Shurtleff at Soyfoods Center, Aug. 26. 1 p. Typed, with signature on letterhead. [Eng]

• ***Summary:*** Tivall was established in 1984 and started to produce meat analogs in 1985. Today, Tivall is the world's largest producer of meat analogs.

Note 1. Below the word "Tivall" on the letterhead is written: "Vegetarian food products grown with nature's goodness." Note 2. Many industry analysts believe that Worthington Foods is the world's largest manufacturer of meat analogs. Address: PhD, Director of R&D, Kibbutz Lochamei Hagetaot, Mobile Post, Oshrat 25220, Israel. Phone: 04-858700.

2927. **Product Name:** Midland Harvest Harvest Burgers (Frozen) [Original, Taco, Italian-Style, or Sausage-Style]. **Manufacturer's Name:** Harvest Direct, Inc. Made in Decatur, Illinois, by Archer Daniels Midland Co.

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Manufacturer's Address: P.O. Box 4514, Decatur, Illinois 62525. Phone: 800-637-5850.
Date of Introduction: 1990 September.
Ingredients: Water, soy protein concentrate, partially hydrogenated corn and/or soybean and cottonseed oils, isolated soy protein, methylcellulose, natural flavors, onion powder, salt, maltodextrin, modified corn starch, corn syrup solids,...
Wt/Vol., Packaging, Price: Four 3.2 oz patties per 12.8 oz pack. Retails for $1.99 (12/91, Illinois).
How Stored: Frozen.
Nutrition: Per 3.2 oz.: Calories 140, protein 16 gm, carbohydrate 7 gm, dietary fiber 4 gm, fat 4.5 gm, cholesterol 0 mg, sodium 350 mg, potassium 450 mg.
New Product–Documentation: Talk with Richard Gross, owner of Nature's Oven, Florida. 1991. Sept. 3. Concerning ADM's new Harvest Burger (a name used only in the USA, called Vege Burger in the USSR and Veggie Burger, made by British Arkady in the UK and sold elsewhere in Europe), Richard finds its texture too tough and chewy (like the sole of a shoe), the flavor a little bit off, and he dislikes their use of methylcellulose as an ingredient (a binder) in the product; it is wood pulp processed with caustic soda and other chemicals, and there is a residue–it is not really natural as ADM claims.

Stewart Reeve. 1991. *Soybean Digest*. Dec. p. 40a. "Fast food delight." The first test market for this product began in April 1990 in 7 grocery stores, 2 cafeterias, 2 restaurants, and a hospital in four cities in central Illinois.

Two leaflets distributed at Natural Products Expo East in Baltimore, Maryland. 1993. Oct. "How vegetarian are they...?" A color bar chart shows that Harvest Burger contains no animal-based ingredients, Garden Burger from Wholesome & Hearty contains four (low-fat Mozzarella, cottage cheese, egg white blend, cheddar cheese), and Griller from Morningstar Farms (Worthington Foods) contains two (egg white, calcium caseinate). "How do 'vegetarian' patties stack up?" Comparing the 3 types of burgers mentioned above (90 gm serving), Harvest Burger is lowest in fat (4.5 gm), in calories (140 gm), and in cholesterol (0; tied with Griller). Garden Burger has the lowest percentage of calories from fat (26%) and the most cholesterol (11.4 mg). Griller contains the most fat (9.8 gm), the most calories (197), the highest percentage of calories from fat (45%), and the most fiber.

Talk with Lee Lensch of ADM. 1994. March 4. In April 1990 ADM started its first "public tasting" of the Harvest Burgers (as frozen patties) in Decatur, Illinois. It took until September 1990 to get packaging for the product, and that month ADM made its first shipment, to Super Value supermarkets in Minneapolis, Minnesota, with Indianapolis being the real focus test market. So ADM sold directly to a supermarket chain, not to a food distributor. In Jan. 1991 the four frozen Midland Harvest products first really hit the grocery store shelves in Indianapolis as a test market. For details, see interview with Lensch (4 March 1994).

Package with Label sent by Dr. Walter Wolf of Peoria, Illinois. 2000. Aug. 5. The package is copyrighted "ADM 1990."

2928. Mayer, Remy. 1990. Re: Soy products introduced in Switzerland, with date and volume of each. Letter to William Shurtleff at Soyfoods Center, Oct. 2. 1 p. Typed, with signature on letterhead.

• ***Summary:*** PHAG has never manufactured the PHAG Soja-Drink. The company was a distributor for a Belgium supplier, and now for its sister company DE-VAU-GE in Lüneburg, Germany. Details on 6 drinks and 1 dessert are given. PHAG is officially written in capital letters; it is an abbreviation of Produits Hygièniques Alimentaires Gland. Address: PHAG Sàrl, Alimentation naturelle, 1196 Gland, Switzerland [Suisse].

2929. Boyer, Nancy. 1990. In memory of Robert Boyer (Interview). *SoyaScan Notes*. Oct. 17. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Robert Boyer, died on 11 Nov. 1989 of prostate cancer. He was Henry Ford's top man with soybeans and soyfoods, and the inventor of spun soy protein fiber. Nancy is thinking seriously of having the story of his life written. She feels that his work is not that widely known or appreciated. During his last years, Robert's eyesight failed him. He took a course in writing one's autobiography. He started writing the story of his life from his childhood, but did not get very far with it because his poor eyesight prevented him from writing very much and because he did not feel comfortable dictating on tape. She has a box of his collected publications and unpublished writings. On his 80th birthday, her daughter did a silent video for him of his life. Dave Crippen from the Ford Archives (Henry Ford Museum, Dearborn, Michigan) interviewed Boyer in Florida for about 8 hours on tape about his life and work. These tapes are now being transcribed and should be available to her and the public in 6-8 months. Nancy has unnumbered copies of the tapes. Robert attended

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Worthington Foods' 50th anniversary. Soyfoods Center encourages her to hire a professional writer to work with her to write the story of her husband's life. Address: 632 Edgewater Dr. #731, Dunedin, FL 33528. Phone: 813-734-2415.

2930. Shurtleff, William. 1990. America's earliest known tofu manufacturer discovered: Wo Sing & Co. was making tofu in San Francisco in 1878 (News release). Soyfoods Center, P.O. Box 234. Lafayette, CA 94549. 2 p. Oct. 29. [2 ref]

• ***Summary:*** "In Jan. 1848 gold was discovered in California. By 1850 there were still only a few hundred Chinese in California. Then in 1852 the Chinese joined the Gold Rush. They called California the 'Golden Mountain.' By 1852 there were 20-25,000 Chinese in the golden state, and by 1860 there were 30-50,000. The 1880 census found 75,132 Chinese in California, comprising 8.6% of the state's population.

"These Chinese immigrants, mostly young men from Kwangtung province in southern China, and more specifically from the area around Canton, almost certainly brought soybeans with them to America, and they probably made tofu (which they called *daufu, dow-foo, or doufu*) using those soybeans. But, until now, no one has been able to prove the existence of any Chinese manufacturers of tofu or other soyfoods in America before 1899. During this year Walter C. Blasdale, an instructor in chemistry at the University of California, Berkeley, reported in the *USDA Office of Experiment Stations, Bulletin* No. 68 that Chinese in San Francisco were making 'bean cheese,' both fresh and fried, as well as fresh curds.

"After years of searching, William Shurtleff, Director of the Soyfoods Center in Lafayette, California, has discovered a tofu manufacturer in San Francisco, California, in 1878. According to the Wells Fargo and Co. *Directory of Chinese Business Houses*, published in San Francisco in 1878, Wo Sing & Co. was making fermented tofu and regular (non-fermented) tofu at 708½ Dupont St. in San Francisco. The name of the company and its products were written in both Chinese and English. Tofu was translated as 'Bean Cakes.' This was the earliest known tofu shop in the western world (as of Oct. 1990).

"In the same Wells Fargo directory published in 1882, a second Chinese tofu manufacturer appeared. Sam Sing was making fermented and regular tofu at 615 Dupont St., basement, in San Francisco. Wo Sing was still in business at the address given above.

"The earliest known Japanese-run tofu manufacturer in America was Hirata Co. in Sacramento, California. They began making tofu in 1895.

The oldest existing tofu maker in America today is Quong Hop & Co. of South San Francisco. Founded and still run by the same Chinese-American family, they began making tofu in 1906 in San Francisco.

"The two oldest existing Japanese-American tofu companies are probably House Foods & Yamauchi Inc. of Los Angeles and Aala Tofu Co. of Honolulu. Both trace their origins back to 1923 in Hawaii...

"The first five Caucasian-run tofu companies in the western world were all run by Seventh-day Adventists in America. In Nov. 1929, T.A. Van Gundy of La Sierra Industries in Arlington, California (near Riverside), introduced his La Sierra Soya Cheese...

"The sixth Caucasian-run tofu company in America, and the first of the new wave of Caucasian tofu makers, was the Welcome Home Bakery and Tofu Shop in Corvallis, Oregon, founded by Alec Evans. In March 1975 he started making 'Tofu.'

"The earliest document seen (Oct. 1990), written by an American, that mentions tofu appeared in 1770 when the famous Benjamin Franklin wrote a letter on Jan. 11 from London to John Bartram in Philadelphia...

"The Soyfoods Center would like to offer a $100 reward to anyone who can find a tofu manufacturer in North America or Europe before 1878."

Reprinted in Soya International (July/Sept. p. 3). Address: Lafayette, California.

2931. *Worthington This Week.* 1990. Noted community leader dies: James L. Hagle will be missed by Worthington residents. Oct. 29. p. 3.

• ***Summary:*** James L. Hagle died on 18 Oct. 1990 at his home in Muirfield Village, Dublin [Ohio]. Hagle was Chairman of the Board of Worthington Foods and Chairman Emeritus of the Harding Hospital Board of Trustees. In 1941 he earned B.A. degree in business from Andrews Univ., Berrien Springs, Michigan. After completing an M.B.A. degree from Northwestern University, Chicago, Illinois, he joined the staff of Worthington Foods, then known as Special Foods, Inc., as general manager. In 1948 he became president. A photo shows Hagle.

2932. Worthington Foods, Inc. 1990. Morningstar Farms: The foods you love... Only healthier. 900 Proprietors Rd., Worthington, OH 43085. 4 panels. Catalog. Undated (But Oct. 1990). 28 cm.

• ***Summary:*** Contents: Scramblers: Cholesterol-free real egg product. Morningstar Farms: Cholesterol-free meatless products. Morningstar Farms: The most complete line of cholesterol-free foods: Scramblers, Breakfast Links, Breakfast Patties, Breakfast Strips, and Grillers. Address: Worthington, Ohio. Phone: (614) 885-9511.

2933. Boismenue, Clyde. 1990. The market for soy protein isolates, concentrates, textured soy protein products, and soy flour in America today (Interview). *SoyaScan Notes.* Nov. 13. With follow-up on 22 Jan. 1992. Conducted by William

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Shurtleff of Soyfoods Center.

• ***Summary:*** Soy protein isolates have been the big unfulfilled promise in the U.S. food industry during the last 2 decades. Since 1975 Clyde has been a wholesale distributor for ADM. Today only 2 companies in America make regular isolates: ADM and Protein Technologies International. ADM was weakest in isolates until they purchased the Central Soya line. ADM also bought Grain Processing Corporation's Pro-Fam line and closed it down to get rid of excess industry capacity. Then ADM hired Roger Kilburn away from Ralston Purina to improve the flavor of ADM's isolates. This upset Ralston greatly. Ralston Purina spun off Protein Technologies International primarily to make it available for sale; everyone in the industry knows this.

In recent years there has been a little resurgence in isolates for several reasons largely related to the rise in casein prices: (1) With the rise of free enterprise and economic flux in Eastern European countries, they are being used increasingly to extend meats; the problem for western suppliers is getting paid. (2) The Chernobyl nuclear disaster, which took place on 26 April 1986 in the Ukranian SSR, wiped out the Polish dairy industry. Casein prices rose and isolates filled part of the void. (3) Worldwide, the price of nonfat dry milk (NFDM) and casein has been very high since about 1986 due to short supplies. Casein has traditionally been more expensive than isolated soy protein, in part because it is more functional (it melts and binds water well) and most people like the taste better. Within a period of several years, the price of casein rose from $0.90/lb to $2.50/lb. Egg protein costs $4 to $5 per pound. All of these things helped the U.S. isolate industry. In the U.S. the main problem is the obnoxious meat labelling requirements. For example, if isolates are injected into ham, it must be sold as "Smoked pork ham with soy protein isolate product." The labeling problems are caused in part by the fact that USDA is staffed largely by veterinarians.

The main applications for soy protein isolates in America are in infant formulas (roughly 50% of the total), muscle powders (35%), diet beverages that are supposed to suppress appetite, and other (health food candy bars, etc., 15%). The use of isolates in meat products is very small.

Most isolates are not very bland and not very functional. PTI's are more bland than ADM's. The bulk of Clyde's isolate sales are for muscle powders, which are used to make shakes. The only isolate thick enough to work in a shake is the one with the most sodium proteinates, which has the poorest flavor.

Even textured soy flour (TSF/TVP) has not been very successful in food uses; Clyde sells several million pounds a year of it, but the industry is very sleepy. It is used mostly in spicy Mexican foods (mainly burritos, to add chunky texture), and pizza toppings (since labeling is not a problem). It is used in school lunch programs and by the military in meatloaf and braised beef. Seventh-day Adventist food companies buy quite a bit and repackage it. By far the biggest use of TSF is in pet foods. In California, what is commonly called the "Brigg's Amendment" (Food, Drug and Cosmetic Law, California code, Article 7, Section 26595-26599, "Hamburger and imitation hamburger," became effective in July 1974), effectively prevents the use of TSP in hamburger, even in restaurants. Ground beef or hamburger containing any extenders (such as TSP), binders, or added water must be called "imitation hamburger." If imitation hamburger is sold or served in a restaurant, a list of its ingredients must appear on the menu. Mr. Briggs, a state legislator from Orange County, had a friend with some hamburger stands. This law is enforced, in practice, only with respect to hamburger patties, and especially when the price of hamburger rises; 80-85% of all ground beef is sold in the form of patties. It is not enforced when the ground beef is "cooked in a recipe" as in spaghetti sauce, taco filling, meat loaf, and sloppy joe mix. In these cases regulators do not enforce the law that requires the product to be called "imitation hamburger" if bread crumbs, rolled oats, or a soy protein product are added.

Concerning ADM's Veggie Burger, there are 4 kinds that come in dry form: Herbs & Spices Style, Curry, Meat-Style, and Gyros-Style. They were introduced about 4 years ago. ADM also makes pre-cooked, frozen patties.

Soy flour has two main applications: (1) As a replacer for non-fat dry milk (NFDM), usually sold mixed with whey and used in baked goods. Kraft makes one popular brand. (2) In calf milk replacers (CMR). Calva in Modesto makes lots of CMR using soy flour; not much soy protein concentrate is used in CMR. The key consideration is the "per pound protein basis." Meat protein costs $6/lb and soy flour protein costs $0.35/lb. Labeling regulations are the main barrier to more widespread use. Not much NFDM is used in breads today in America. Soy flour is more expensive than wheat flour, but it holds more water, and slows staling–two major sales points. Address: Basic Foods Co., 1211 E. Olympic Blvd. #204, Los Angeles, California 90021. Phone: 213-623-6686.

2934. Gardiner, Doris Kloss. 1990. The saga of *Back to Eden* after the original copyright expired in 1967 (Interview). *SoyaScan Notes.* Nov. 28. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** In 1967 Jethro Kloss' famous book *Back to Eden* was being published by The Message Press, run by the Hiatt family in the sleepy little town of Coalmont, Tennessee. Sales for the last few years were quite small. The book retailed for $6.98 and was available only in a hardcover edition with no illustration on the cover–as it always had been. That year (1967) the copyright to the book expired, after 28 years. Because of a complex set of circumstances, both the publisher and the Kloss family forgot to renew the copyright in time. Mr. Hiatt had died in Dec. 1967, and his

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wife was involved in a romance and remarriage that year. At that point the rights to the book legally went into the public domain.

In 1971 John Lust of Beneficial Books in New York published *Back to Eden* (692 p.). Doris went to talk to him, requesting that he stop publication. He refused. Mr. Lust is no longer living but his son bought the business in about 1985 and continues to publish the book. Two other companies also published the book. One went out of business (for other reasons), and another kindly ceased publication as soon as Doris asked him to.

When the Kloss family found out what had happened, they were very upset. In the summer of 1971 Doris and her close friend and relative, Promise, went to Tennessee to ask Mrs. Hiatt, their publisher if she would come out with a new paperback edition, but her life situation had changed and she did not want to. Doris and Promise decided to publish an expanded Kloss family edition of the book. That year they bought the rights, from Adventist-run *Review and Herald* publishing company, to a color illustration by Harry Anderson showing a man and woman seated by an idyllic river, surrounded by birds and animals, in the Garden of Eden. They would use this illustration on the cover of the new book. Promise Kloss Moffett wrote her recollections of her father, and many photos were added in the middle.

In the early 1970s Doris met Howard Weeks, who was a minister in the Seventh-day Adventist church and was vice president of public relations and development. They both lived in Loma Linda. He retired and decided to start a publishing company, Woodbridge Press, to publish academic works. Doris trusted him and asked him if he would publish the authorized Kloss Family edition of *Back to Eden.* He didn't really want to since it was not an academic work, but he felt sorry for the family so he said he would–out of kindness–if Doris and her husband would put up all the money needed for publication, about $50,000. Doris agreed and also offered to do all the initial work free of charge for 16 months. Weeks established an affiliate of Woodbridge Press named Lifeline Books just to publish this one title–the first book Weeks had ever published. The first run of 10,000 copies, printed in Nov. 1972, sold out in 2 months. The second printing was 30,000, the third, 50,000 copies, and the fourth in late 1973 was 100,000 copies. Originally Weeks seemed to Doris like a gift from heaven. But by the third printing things began to get strange as sales of the book increased and Weeks saw he had stumbled across a gold mine. He applied for registered trademarks on terms such as "Original Kloss Family Edition," "Jethro Kloss," and "Back to Eden," explaining to Doris that he was doing this to scare their competitor, Mr. Lust of Beneficial Books. By 1974 Doris realized that Weeks was not treating her fairly and she hired a lawyer to initiate litigation. In 1975 Weeks dissolved Lifeline Books and started publishing *Back to Eden* by Woodbridge Press.

On 5 May 1985, after 11 years of litigation with Howard Weeks of Woodbridge Press, ending in arbitration, Doris finally got full rights to the book. All contracts were rescinded and Weeks was prevented from having anything to do in any way with *Back to Eden.*

In 1981 Doris obtained rights to the book, founded Back to Eden Books to publish it, and added recollections by herself and her uncle Eden (Jethro's son). Doris' father was Harry C. Engelhard. In 1971, in order to identify herself with her grandfather, she adopted "Kloss" as her middle name. Eden Kloss died in 1989. Promise is now age 87, very healthy and doing very well. Address: Back to Eden Books, P.O. Box 1439, Loma Linda, California 92354. Phone: (714) 796-9615.

2935. Hopkins, Robert J.; Russell, R.G.; Donnoghue, J.M.; Wasserman, S.S.; Lefkowitz, A.; Morris, J.G., Jr. 1990. Seroprevalence of *Helicobacter pylori* in Seventh-day Adventists and other groups in Maryland. *Archives of Internal Medicine* 150:2347-48. Nov. [7 ref]
• ***Summary:*** No difference in seroprevalence among these groups was found; however seropositivity strongly correlated with age and black race. Address: Univ. of Maryland School of Medicine, Baltimore, Maryland 21201.

2936. Takai Seisaku-sho. 1990. Modern soymilk plant: Makes delicious dairylike soymilk with no beany flavor. 1-1 Inari, Nonoichi-machi, Ishikawa-ken 921, Japan. 4 pages. Nov. Catalog. With 1-page color insert. 30 cm. [Eng]
• ***Summary:*** Page 2 is a flow chart of the modern soymilk production process. Page 3 shows modern soymilk plant layouts, floor plans, and specifications. The color insert, which is titled "Modern soymilk plant: Makes delicious dairylike soymilk with off-beany flavor," is printed on both sides. The front shows 3 packaged soymilk products: Ah Soy, Hai-Meeru Soyalac (Made by San-iku Foods in Japan), and Soya Bean Milk (made by Guilin Sweets and Food Factory, Guangxi, China). Companies that make soymilk using Takai equipment include: Chung's Foods and Nam Yang Industries in Korea. Jinan Huifeng Bean Milk Product Factory in China. "One of our plants makes 1,000 liters of 5,000 x 200 ml packs of soymilk; another makes 10,000 or 20,000 packs of soymilk per hour. EMUL is a healthy soy-based frozen dessert. Contact Takai for an EMUL production plant." On the back is a plant layout. Address: Kanazawa, Ishikawa-ken, Japan. Phone: 0762-48-1355.

2937. Preston-Martin, Susan; Pike, M.C.; Ross, R.K.; Jones, P.A.; Henderson, B.E. 1990. Increased cell division as a cause of human cancer. *Cancer Research* 50(23):7415-21. Dec. 1. [96* ref]
Address: Depts. of Preventive Medicine and Biochemistry, Univ. of Southern California School of Medicine, Los Angeles, California 90033.

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2938. Mills, Paul K.; Newell, G.R.; Beeson, W.L.; Fraser, G.E.; Phillips, R.L. 1990. History of cigarette smoking and risk of leukemia and myeloma: Results from the Adventist Health Study. *J. of the National Cancer Institute* 82(23):1832-36. Dec. 5. [24 ref]

• ***Summary:*** The risks of leukemia and myeloma associated with cigarette smoking were evaluated in a cohort study of 34,000 Seventh-Day Adventists. Although Adventists do not smoke by church proscription, many are adult converts who smoked cigarettes prior to their baptism into the church. Ex-smokers were twice as likely to get leukemia and 3.01 times as likely to get myeloma as non-smokers. The more cigarettes smoked, the greater the risk. Address: 1,3-5. Dep. of Preventive Medicine, School of Medicine, Loma Linda Univ., Loma Linda, California 92350.

2939. Roberts, Peter. 1990. History of Direct Foods Ltd. and Compassion in World Farming. Part I (Interview). *SoyaScan Notes.* Dec. 12. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Peter was born in 1924 in the UK. His father was a doctor. By the 1950s, while he and his wife Anna were running a dairy and chicken farm, Little Barnett Farm, in the village of Froxfield, Hampshire, England, they became increasingly concerned with the cruelties inherent in both intensive factory farming, and traditional dairy farming–the separation of the calf from the cow, the marketing of the unwanted bull calves and the worn-out dairy cows, etc. So in about 1958 he and his wife stopped eating meat. They switched to a lacto-vegetarian diet, which they still practice. Their 3 children are now also vegetarians.

As they changed their farming practices to treat their animals more kindly, they found that farming became more and more uneconomical. Peter wrote an article for a local paper, the Squeaker, concerning the many problems with factory farming. He received many favorable replies, stating that the animal welfare organizations in the UK seemed to be concerned mostly with dogs and cats, but that much work needed to be done to protect factory farm animals. So in about 1961 they sold their farm. Peter worked briefly as a lime quarrier, then in 1967 he and Anna founded a pioneering organization named Compassion in World Farming (CIWF) to address the increasing problems with factory farming that he had experienced first-hand, and to get some decent standards for farm animals. Their main goals were to get rid of: (1) battery cages for chickens, (2) dry sow stalls (known in America as "gestation stalls") for pigs, and (3) veal crates for veal calves. Their strategy was to educate consumers as to how the food they were eating had been produced. They encouraged consumers either to switch from animal products grown on factory farms to those raised by free range farming methods, or to become vegetarians. Many members got upset as they learned about factory farming, decided to stop eating meat, and began to ask CIWF about alternatives. So the Roberts began to search for a good-tasting, nutritious, and reasonably priced protein alternative to meat sold in a convenient form. They got 3 samples of modern soy protein products (all dried) from the USA and found TVP made by ADM to be the best. When they wrote to ADM enquiring about marketing rights in the UK, the reply asked "How many million dollars can you put into it? We foresee a big future in Britain." That response killed the project temporarily. In 1965 The British Arkady Co. Ltd. (Arkady Soya Mills) had started to sell ADM's TVP in the United Kingdom, but Peter hadn't heard of Arkady at the time. About 4-6 months later a sales rep from British Arkady approached Peter, said he had been referred by ADM, and asked what Peter had in mind. Peter said he would like to retail TVP, especially in the health food area, especially in Britain but not restricted to Britain. Arkady offered to supply Peter but would not offer any exclusive arrangement. Arkady agreed not to compete with Peter, saying they were interested only in selling to food manufacturers, not to the retail market. Peter accepted and in 1969 placed a trial order of about 10 lb of beef chunks or mince. The Roberts called their product Protoveg (pronounced PRO-toe-vej), registered the trademark (though the registration was unsuccessfully challenged by Mapleton's Foods, a large British health food company), and sold it in 9 different flavors and textures: beef chunks, beef mince, ham chunks, ham mince, pork chunks, pork mince, natural (unflavored) chunks, natural mince, and Smokey Snaps (which resembled bacon bits). They packed it in 4.5 oz. double cellophane bags with a label between the two bags, developed a recipe leaflet and order form, and distributed it via their Compassion in World Farming and via Beauty Without Cruelty (Lady Dowding's anti-fur-trapping group). The 4.5 ounces yielded 1 pound of hydrated product; the mince hydrated in 2 minutes and the chunks in 15-20 minutes.

The product was instantly successful, which surprised the Roberts. The trustees of CIWF decided it would not be possible (for legal and financial reasons) to establish a commercial branch of the organization, so the Roberts used the money they had left after selling their farm then buying a house, and in Aug. 1969 established Direct Foods Ltd., a private company owned by Peter and Anna and run as a mail order business out of their new home in Greatham (5 miles from Petersfield), Hampshire. The health food shops in the UK were selling alternatives to meat, such as canned meatlike products made by Worthington Foods and Granose, but textured soya proteins were not available. TVP was tasty and nutritious, it looked and tasted like meat, and it was much less expensive than the canned products or meat. Direct Foods started advertising in some magazines, such as *The Vegetarian* and various health food publications. Next they began to sell to health food shops. Continued. Address: Compassion in World Farming, 20 Lavant St., Petersfield,

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Haunts (Hampshire) GU32 3EW, England. Phone: 0730 64208.

2940. Roberts, Peter. 1990. History of Direct Foods Ltd. and Compassion in World Farming. Part II (Interview). *SoyaScan Notes.* Dec. 12. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** In about 1970 Direct Foods launched 20 more convenience (add water, cook, and serve) vegetarian protein products, all were TVP-based alternatives to meat sold under the Ranch House brand. These included Curry, Stew, Goulash, Bolognese, Vegetable Mince, Soysage, Seasavour, Sizzleberg, Sosmix, Savoury Macaroni Mix. etc. All were vegan products except the bolognese, which contained milk powder, but even the milk was soon eliminated, so that all products were vegan. etc. Anna wrote three cookbooks, with even more recipes: (1) *The Earth Shall Feed Us* (1976; now out of print); (2) *The Protoveg Cookbook* (1984, which sold about 8,000 copies via mail order and health food shops; now out of print); and (3) *The Magic Bean* (April 1985, published and distributed more widely by Thorsons). These were sold in both health food stores and regular bookstores.

At this time British Arkady was making a product named Banger Mix (a "banger" is a sausage), made with soya protein and pig fat. Peter asked them to replace the pig fat with a hardened vegetable oil. The Roberts named the resulting product Sosmix. Introduced in about 1970, it was a dry sausage mix and soon became their best-seller. Because Sosmix became such a success, British Arkady invited Direct Foods to market Arkady's new vegetarian Burger Mix. Direct Foods accepted and again the product did well. Shortly after that, in about 1972, Brewhurst Health Food Supplies Ltd., the biggest health food distributor in the UK, asked if they could distribute the Direct Foods line of products. Direct Foods appointed Brewhurst as their first distributor, but did not give them an exclusive distributorship. This was a major breakthrough; sales tripled almost immediately. Soon Direct Foods appointed other distributors, and exporters, that exported to Jamaica, Malta, and Greece. So Direct Foods remained a product developer, marketer, and mail-order house.

In 1973 British Arkady started making TVP in England, then in 1974 they were acquired by ADM, largely because ADM had seen the rapid growth of the European TVP market, especially among food manufacturers. Most of Arkady's TVP was being sold to food manufacturers (for use in canned stews, etc.) and institutional foodservice, not to retailers.

The Roberts continue to run their growing business out of their home. The kitchen was the weighing room, the lounge was the dispatch room, and the rest of the house became the warehouse. There was no room left for the Roberts. Moreover, with a steady stream of delivery trucks coming down their narrow country dead-end road, they began to have problems with the town planning authorities. So in about 1974 they rented a warehouse for Direct Foods in Petersfield, about 5 miles away from Greatham–and breathed a sigh of relief at home. At this time their best-selling products were Sosmix, Protoveg Beef Chunks, and Beef Mince. Sales began to grow rapidly. For a short while, Brian Welsby's Haldane Foods did the mixing of the Ranch House line of products under contract.

In about 1976 and 1977 Direct Foods participated in its first exhibition, the huge Ideal Home Exhibition, which runs for a month every spring at Olympia in London. They served samples of Sosmix, which was an entirely new product for the British public, and it was a great success. Long lines of people were attracted by the smell, then won over by the ease of preparation, low price (less than half the price of eat sausage), and health benefits of this meatless sausage.

Direct Foods' first competitor was Itona (pronounced ai-TOE-nuh), which by 1978 had started buying TVP from Arkady and selling it as Itona TVP. Itona had purchased other soy products (probably soy flour) from Arkady before this. At one stage, they tried to make an agreement with Arkady which would have forced Direct Foods to buy from Itona, but this did not work.

Another strong competitor was Real Foods in Edinburgh, Scotland. They sold flavored TVP in 50 kg paper sacks to health food shops so that the shops could weigh out any amount the customer desired. This approach lowers the price of TVP to the consumer but in the end hurts the market due to lack of recipe information. After a while Real Foods disappeared.

In about 1979 the Roberts started their own health food store, named The Bran Tub, in Petersfield. In England a "bran tub" is sort of like a "lucky dip" where kids dive for presents.

Over the years Direct Foods had many problems with local regulators concerning labeling–but won in every case. One thought Protoveg was misbranded because the label said it was a vegetarian product but it contained salt–which was a mineral not a vegetable! Another tried to outlaw the term Sosmix because it sounded too much like sausage. The most important was when the public health authority took Direct Foods to court claiming that the term "Vegetable Goulash" was a contradiction in terms since "goulash" typically contained meat. Peter argued the 4-hour case himself and his victory set a major precedent. Representatives from many large food companies were present in the courtroom, and they congratulated Peter afterwards.

In March 1985 the Roberts sold Direct Foods (which was making good money) to British Arkady. Arkady had tried to sell their Arkady TVP to the retail trade through the Cash and Carry chain but had failed–at considerable expense to Arkady. Now Arkady wanted to buy either a majority share in Direct Foods or buy the entire company. Peter knew that if he said "no," Arkady was in a position to

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undercut Direct Foods and take away much of their market share. A major loss of market share would be a disaster, since Direct Foods' sales would then drop below the steadily rising threshold needed to cover their overhead and make a profit. Moreover, the Roberts wanted to spend more time concentrating on their animal welfare work through Compassion in World Farming. During the period from 1969 to 1985 Peter had devoted about 2/3 of his work time to CIWF and 1/3 to Direct Foods. Direct Foods was run mainly by Anna Roberts (who put in about the same amount of time as Peter), her sister, and her sister's husband, Bob Howe, who was production manager at the mixing and packaging warehouse. At the time of the sale Direct Food had 18 employees and was buying 30 tons a week of TVP from British Arkady. Address: Compassion in World Farming, 20 Lavant St., Petersfield, Haunts (Hampshire) GU32 3EW, England. Phone: 0730 64208.

2941. *SoyaScan Notes.* 1990. Europe's 20 largest tofu and soymilk companies (Overview). Dec. 23. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** The following summary is a combination of information from two sources: First, numerous interviews conducted by William Shurtleff of Soyfoods Center during 1990. And second, informed estimates by one of Europe's most knowledgeable soyfoods industry insiders. We give the ranking, company name, country, products (Tofu, Milk = Soymilk, Other), and number of metric tons of soybeans used per month.

1. Alpro. Belgium. Milk. Unknown.
2. Sojinal. France, Milk & Other. 417.
3. Heuschen-Schrouff. Netherlands. Tofu. 200.
4. DE-VAU-GE. Germany. Milk & Tofu. 100.
5. Aros Sojaprodukter. Sweden. Tofu, Milk & Other. 92.2.
6. Unisoy. England. Milk. 47.0.
7. Soya Health Foods. England, Milk. 45.0.
8. Soyana. Switzerland. Tofu & Milk. 32.0.
9. Société Soy. France. Tofu & Milk. 30.0.
10. Cauldron Foods. England. Tofu. 20.0.
11. Haldane Foods/Regular Tofu Co. England. Tofu & Milk. 10.9.
12. Galactina. Switzerland. Tofu, Milk & Other. 10.0.
13. Soyastern / Dorstener Tofu. Germany. Tofu. 9.3.
14. Dragon & Phoenix. England. Tofu. 8.0.
15. Jonathan P.V.B.A. / Lima Foods. Belgium. Tofu. 6.0.
16. Triballat. France. Milk & Other. 5.6.
17. Innoval. France. Milk. 5.6.

Crivellaro. Italy. Milk. 5.6.

Plamil. England. Milk. 5.6.

Paul's Tofu. England. Tofu. 4.7.

2942. Araki, A.M. 1990. [Re: A brief history of tofu shops in Fresno, California]. Letter to William Shurtleff at Soyfoods Center, Dec. 31. 2 p. Handwritten. Followed by phone interview on 8 Jan. 1991. [Jap; eng+]

• ***Summary:*** "It was difficult for me to collect this information. For some people I talked to it was a sensitive issue, like coming out of the internment camps after World War II back into white society. Since the generations have changed, I had to talk with many people. I came to the USA in Aug. 1920 and settled in Fresno that month. At the time in Fresno there were two tofu shops in Japantown: Yokota Tofu-ten (run by Yuichi Yokota, located on Fargan Alley, which was back-to-back with E Street; Yokota's postal address was on E Street), and Nakaoka Tofu-ten (run by Mr. Nakaoka on Kern St.). He is not sure of the shops were named "Tofu-ten" or "Tofu-ya," but he prefers "Tofu-ten because it has a higher class sound (more *jôhin*).

The owner of Nakaoka Tofu-ten died in about 1922. His wife re-married to Mr. Zenkichi Nagahama, who took over the company, renamed it Nagahama Tofu-ten, and ran it at the same location for about 20 years until 1942, when he was sent to an internment camp. He did not re-start the company after the war; he was too old.

Right after World War II, in about 1945, the first tofu shop in Fresno was started by a man who came from the Los Angeles area; although he was a Japanese, he had a big body and blue eyes. But he didn't last for long. After that he company was run consecutively, at the same location, by Joe Hashimoto, Sakae Tôkubo, Dr. Wilkinson (an M.D. and Seventh-day Adventist; he was a very famous surgeon and he made tofu himself at his shop on E Street), and then the two Goto brothers. After the war, the younger Goto brother immigrated to the U.S. from Japan. (Sometimes we call those new first-generation Japanese shin-issei). The same shop on E Street, which has been in business the longest, is now in its third generation, run by Musashi [Brad] Kubota."

He is not sure when the first tofu shops started in Fresno. However his father arrived in Fresno in 1911 and had a shop across the street from the Nagaoka tofu shop on Kern Street. He thinks Yokota was there at the same time, since the house in which Mr. Yokota lived in 1920 (he built it himself) was quite old, dating from about that period. His tofu shop was in the front of his house, facing the street.

There were some Chinese-run tofu shops in Fresno during this period but he does not remember any details concerning them. Address: Nichi Bei Times, Fresno Branch, P.O. Box 11489, Fresno, California 93773. Phone: 209-237-6779.

2943. Bloyd-Peshkin, Sharon. 1990. Patching together our past: Vegetarianism is on the rise, spurred on by a patchwork of philosophies. *Vegetarian Times.* Dec. p. 30-36, 38-40. No. 160.

• ***Summary:*** Discusses the main forces and people leading to a rise in vegetarianism. "Let's not beat around the bush–we all know what the image of vegetarians was in 1974 when

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Paul Obis began a four-page, black-and-white newsletter called *Vegetarian Times.* Vegetarians were long-haired, blue-jeaned, peace-loving, laid-back, anti-establishment, back-to-nature *hippies*... Vegetarianism was primarily associated with the counterculture.

"Sixteen years later, *Vegetarian Times* is a full-color, glossy magazine read by hundreds of thousands of people coast-to-coast... There simply is no typical vegetarian. Vegetarians include people as different from one another as Mister Rogers, U.S. Rep. Andrew Jacobs (D-Indiana) and Michael Jackson.

"In the past 16 years, many factors have contributed to the tremendous increase in the number of vegetarians in this country and to their diversity. Eastern spiritual philosophy, the back-to-nature movement, environmental awareness, animal rights, and an awareness of the connection between diet and health all became parts of American culture during these years, and all have fostered a greater interest in vegetarianism." Each of these five main factors is examined one by one.

"Within the Seventh-day Adventist Church, which has always endorsed a vegetarian diet, the '70s and '80s were a time of growth and of increasing adherence to vegetarianism. The religion grew to more than 6 million in 1990 from about 2.5 million members in 1974... There is a much greater commitment to a vegetarian diet among Seventh-day Adventists [now]."

A sidebar looks at the strong influence of The Farm in Tennessee, founded in 1970 by Stephen Gaskin and friends. The farm popularized soyfoods (thru Farm Food Co. and The Book Publishing Co.) and a vegan diet. By 1981 the community had 1,200 members, but today it is down to about 250. Other sidebars include: (1) Attorney Jim Mason, co-author of *Animal Factories* (Crown, 1980), and founder in 1979 of *Agenda,* a quarterly newsletter linking the various emerging animal rights organizations. (2) Helen and Scott Nearing. Dr. (psychiatrist) Neal Barnard, founder in 1984 of Physicians Committee on Responsible Medicine to create a dialogue about animal research within established medical circles. Harvey & Marilyn Diamond, authors of the *Fit for Life* books, which sold almost 3.5 million copies, making it the top-selling health and diet book of the 1980s.

2944. Dacosta, Yves. 1990. Lait de soja et tofu [Soymilk and tofu]. APRIA/CDIUPA, 1 avenue des Olympiades, 91300 Massy, France. 102 p. Dec. No index. 30 cm. Series: Actualités Scientifiques et Techniques en Industries Agro-Alimentaires. No. 45. [85 ref. Fre]

• ***Summary:*** Contents: Preliminary remarks. 1. Production of soymilk and tofu: Principles of production, the soybeans, cleaning/washing, soaking, grinding, cooking the slurry (*bouillie*), extraction of the soymilk, coagulation, separation of curds and whey, pressing the curds, removal of the tofu from the mold, cutting and packing the tofu, the need for water in a tofu ship, variations in production, storage and preservation of soymilk and tofu after their production, yuba, production of tofu from seeds other than soybeans.

2. Applications/uses of soymilk and tofu: Products: Soymilk and soymilk products (soymilk, sweetened soy beverages, dairylike soymilks, soy-based infant formulas, powdered soymilk, concentrated soymilks, soymilk mixed with other animal or vegetable milks, soy ice creams and frozen desserts, fermented soymilk products such as soy yogurt, various soymilk desserts [such as custards], sauces, dressings, and mayonnaises made from soymilk), tofu and tofu products (smoked tofu, fried tofu [*tofu frit*], marinated tofu, fermented tofu, breaded tofu, tofu mayonnaise and sauces, tofu spreads for bread, tofu sausages, pâtés, or biscuits/pancakes [galettes], tofu quenelles, quiches, fritters, raviolis, pizzas, mixed salads, prepared dishes (*plats cuisinés*), or sandwiches, tofu cakes, cheesecakes, or tarts, tofu desserts, ice creams, or chocolate bars), preparations based on okara (sausages, pâtés, croquettes, burgers, special breads or biscuits), the nutritional arguments for soymilk and tofu (rich in proteins, lipids, absence of cholesterol and lactose, low in sodium, an excellent ingredient in "light foods" [aliments allegés]).

3. A quick look at the major enterprises making and or selling soymilk, tofu, or their products in selected countries: France (Cacoja, Innoval, Soy [Société Soy], Sojadoc, Triballat, Celia, Celnat, Lima-Andiran, Maho Distribution, France-Proteines-Services), Great Britain (Plamil Foods Ltd., Itona Products Ltd., Soya Health Foods Ltd., British Arkady Co. Ltd. [subsidiary of ADM; incl. Haldane Foods Ltd., Regular Tofu Co., Tofeata Tofu], Granose Foods Ltd., Cauldron Foods, Dragon and Phoenix, Paul Jones (Tofu Shop), Full of Beans Soyfoods, Birchwood Health Products, White Waves, The Bean Machine Co-op Ltd., St. Ivel, St. Giles Foods Ltd., Yu's Tofu Shop, Tousoy Ltd., Allied Foods Ice Cream Co., Nexus Foods, Vegetarian Feasts, Unisoy Milk and By-Products Ltd.), Germany (DE-VAU-GE Gesundkostwerk GmbH, Soyastern Naturkost GmbH, Nuxo-Werke Rothfritz), Netherlands (Heuschen-Schrouff, Linn Oriental Products, Solnuts B.V., Manna Natuurvoeding), Belgium (Alpro, Jonathan P.V.B.A., Lima Foods, De Hobbit, Seven Arrows), Switzerland (Conserves Estavayer S.A., Soyana, Galactina), Sweden (Trensums Musteri, Aros Sojaprodukter), Italy (Crivellaro), Spain (Zuaitzo), USA, Japan, Hong Kong, Taiwan, Singapore. Bibliography.

Note: A great deal of the information in this report is taken, without permission or adequate citation, from books published by the Soyfoods Center in California. The statistics and dates given for the European, American, and Asian markets are taken almost completely from Soyfoods Center books. In some cases where the author relied on these books published more than 2 years ago, the information is presented as if it were current, whereas it is actually out of date and no longer correct. Dacosta's book, which might

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be called a "review of the literature," contains little or no new information. However his bibliography, based largely on a search of the CDIUPA database, with some original references, is quite good.

APRIA stands for Association pour la Promotion Industrie Agricole. APRIA administers CDIUPA. Address: Conseiller d'Entreprises, France: 47, rue Guersant–7015 Paris, France.

2945. Flinders, Carol. 1990. Food grows up. *Vegetarian Times.* Dec. p. 71-74, 76-78. No. 160.
• ***Summary:*** A brief history of changing vegetarian food and diets, plus some recipes. "Getting started these days as a vegetarian doesn't mean eating the heavy, high-fat dishes of 16 years ago. Today's vegetarian meals are simple, reflecting the cook's talent and the particular treasures that are available from the garden or market." Protein was the sacred cow.

There are sidebars on: Frank and Rosalie Hurd, authors of *Ten Talents* (1968), and Mollie Katzen, author of *Moosewood Cookbook* (Ten Speed Press, 1977). Address: California.

2946. Fraser, Gary E.; Phillips, R.L.; Beeson, W.L. 1990. Hypertension, antihypertensive medication and risk of renal carcinoma in California Seventh-day Adventists. *International J. of Epidemiology* 19(4):832-38. Dec. [36 ref]
• ***Summary:*** This longitudinal study of 34,198 non-Hispanic white California Seventh-day Adventists identified incident cases of renal carcinoma (kidney cancer) over 6 years of follow-up. Frequent consumption of salad vegetables and fruit may be protective against this cancer. Address: Dep. of Public Health and Preventive Medicine, Loma Linda Univ., Loma Linda, California 92350.

2947. Shurtleff, William; Aoyagi, Akiko. 1990. Tofu & soymilk production. 2nd ed. Lafayette, California: Soyfoods Center. 336 p. Illust. by Akiko Aoyagi Shurtleff. Index. Dec. 11. 28 cm. [223 ref]
• ***Summary:*** Contains many new advertisements, plus changes on the copyright page, on page 14 (Soyfoods Association in now located at Bar Harbor, Maine), and rear cover of both paperback and hardcover editions (new ISBN for each). Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

2948. **Product Name:** [GranoVita Organic Soya & Fruit Dessert with 6-Grain Cereal {Cultured Soy Yogurt} (Strawberry, Cherry, Peach-Maracuja)].
Foreign Name: GranoVita Bio-Soja-Frucht-Dessert mit 6-Korn-Getreide {Soja-Joghurt} (Erdbeer, Kirsch, Pfirsich-Maracuja).
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1990.
Ingredients: Organic soya drink (Water, soybeans*) with fruit preparation sweetened fruit juice concentrate, naturals aromas and colors, 6-grain mixture (barley*, oats*, rye*, wheat*, rice*, buckwheat*), vegetable thickener, yogurt cultures. * = Organically grown.
Wt/Vol., Packaging, Price: 150 gm plastic cup with peel-off foil lid.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 3 gm, fat 2 gm, usable carbohydrates 13 gm, calories 82. 1 BE (Broteinheit, or diabetic exchange) = 92 gm.
New Product–Documentation: Talk with Alpro. 1990. April 17. DE-VAU-GE is developing a soy yogurt. Form filled out and Labels sent by DE-VAU-GE. 1990. June 11. This product was introduced in 1990. Note: Maracuja is name (in English, German, French, and Dutch) of a tropical fruit (*Passiflora alata*) that has a tart flavor; it can be eaten raw or made into drinks or sherbets. The peel-off foil lid, which is red or orange and green on a silver-white background, contains a color illustration of the fruit(s) used. "With yogurt cultures–free of milk components/constituents. Sweetened only with fruit juice concentrate." The plastic cup is red, green, and black on white. Exklusiv Neuform certification symbol. "Refreshing, made from plants (pflanzlich), with the nutritional riches of the soybean. The full sweetness of the fruit, natural aromas, and the mild acidification with special yogurt cultures impart the fine, fruity taste. A mixture of cereal grains, high in fiber, makes this an ideal dessert. Store at below 10ºC. With at least 70% dextrorotary L(+) lactic acid. Contains no preservatives."

2949. **Product Name:** [GranoVita Heideland Organic Tofu & Grain Dumplings].
Foreign Name: GranoVita Heideland Bio-Tofu Getreide Kloesschen.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1990.
Ingredients: Organic tofu (Water, organically grown soybeans, calcium chloride), onions, rye flakes, fine Graham bread crumbs (*Graham-Paniermehl*), egg protein, rolled oats, soy sauce, herbs, seasonings (*Wuerzmittel*), sea salt, spices (*Gewuerze*), garlic.
Wt/Vol., Packaging, Price: 6 dumplings weigh 250 gm.
Nutrition: Per 100 gm.: Protein 10.4 gm, fat 3.6 gm, usable carbohydrates 14.3 gm, calories 132. 1 BE (Broteinheit, or diabetic exchange) = 84 gm.
New Product–Documentation: Form filled out and Label sent by DE-VAU-GE. 1990. June 11. This product was

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introduced in 1990. Label: 2.5 by 4.5 inches. Self adhesive. Green, red, yellow, and black on white. Illustration of two red-roofed traditional houses among trees and bushes. "Contains no flesh. To prepare: Simply drop into lightly salted, boiling water and allow to simmer for about 10 minutes. Recommended in the context of a natural whole foods diet (*Im Rahmen einer Vollwerternährung zu empfehlen*)." Exklusiv Neuform certification symbol.

Note: In German, *Heide* means "heath, moorland, or moor." Thus Heideland refers to the moorland around Lueneburg where DE-VAU-GE is located.

2950. **Product Name:** [GranoVita Heideland Small Vegetarian Sausage With Organic Tofu].
Foreign Name: GranoVita Heideland Vegetarische Wuerstchen mit Bio-Tofu.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1990.
Ingredients: Water, vegetable oils and fats in changing proportions by weight, organic tofu (Water, organically grown soybeans, calcium chloride), onions, egg protein, wheat protein (gluten), soy protein, plant thickener agar-agar, spices (*Gewuerze*), natural aromas, rolled oats, seasonings (*Wuerzmittel*), garlic, sea salt, fermented rice flour, smoke.
Wt/Vol., Packaging, Price: 6 dumplings weigh 200 gm.
Nutrition: Per 100 gm.: Protein 10.6 gm, fat 30.9 gm, usable carbohydrates 5.7 gm, calories 343. 1 BE (Broteinheit, or diabetic exchange) = 210 gm.
New Product–Documentation: Form filled out and Label sent by DE-VAU-GE. 1990. June 11. This product was introduced in 1990. Label: 2.5 by 4.5 inches. Self adhesive. Green, red, yellow, and black on white. Illustration of two red-roofed traditional houses among trees and bushes. "Contains no flesh. Simply heat or fry. Practically cholesterol free. Recommended in the context of a natural whole foods diet (Im Rahmen einer Vollwerternährung zu empfehlen)." Exklusiv Neuform certification symbol.

Note: In German, *Heide* means "heath, moorland, or moor." Thus Heideland refers to the moorland around Lueneburg where DE-VAU-GE is located.

2951. **Product Name:** [GranoVita Heideland Vegetarian Bread Spread With Organic Tofu].
Foreign Name: GranoVita Heideland Vegetarische Brotbelag mit Bio-Tofu.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1990.
Ingredients: Water, vegetable oils and fats in changing proportions by weight, paprika, organic tofu (Water, organically grown soybeans, calcium chloride), onions, egg protein, olives, wheat protein (gluten), soy protein, plant thickener agar-agar, spices (*Gewuerze*), natural aromas, rolled oats, seasonings (*Wuerzmittel*), garlic, sea salt, fermented rice flour, smoke.
Wt/Vol., Packaging, Price: 160 gm.
New Product–Documentation: Form filled out and Label sent by DE-VAU-GE. 1990. June 11. This product was introduced in 1990. Label: 2 by 2.5 inches. Self adhesive. Green, red, yellow, and black on white. Illustration of two red-roofed traditional houses among trees and bushes. "Contains no flesh." Exklusiv Neuform certification symbol.

Note: In German, *Heide* means "heath, moorland, or moor." Thus Heideland refers to the moorland around Lueneburg where DE-VAU-GE is located.

2952. **Product Name:** [GranoVita Organic Tofu Grain Dumplings in Mushroom & Cream Sauce with Green Rye & Vegetables].
Foreign Name: GranoVita Bio-Tofu Getreidekloesse in Champignon-Rahmsauce mit Gruenkern-Gemuese.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1990.
Ingredients: Dumplings: Organic tofu (water, organically grown soybeans, calcium chloride), onions, rye flakes, fine bread crumbs (*Paniermehl*), egg protein, rolled oats, soy sauce, herbs, seasonings (*Wuerzmittel*), sea salt, spices (*Gewuerze*), garlic. Mushroom & Cream Sauce: Water, cream, milk, onions, butter organically grown rice flour, wheat flour, lemon juice, lecithin (vegetable emulsifier), carob flour (vegetable thickener), spices (Gewuerze). Green Rye & Vegetables: Water, corn, green rye, carrots, paprika, onions, wild rice, vegetable oil, spices (Gewuerze).
Wt/Vol., Packaging, Price: 350 gm.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 13.5 gm, fat 21.1 gm, carbohydrates 47.8 gm, calories 435. 1 BE (Broteinheit, or diabetic exchange) = 88 gm.
New Product–Documentation: Form filled out and new Labels sent by DE-VAU-GE. 1990. June 11. The product was introduced in 1990. Label: 5 by 8.5 by 1.5 inch paperboard box. Black, gold, red, green, and orange on white. A stylish color photo on the front panel shows the dish ready to serve on a black plate with a green sprig, red tomato, knife and fork nearby. At the top of the front panel: "The whole foods kitchen for the gourmet" (Die Vollwertkueche à la Gourmet). "A ready-to-heat menu for 1 person. Enjoy without flesh." The box contains two pouches: one with the tofu dumplings and sauce; the other with the grain and vegetables. The back

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panel shows how these can be heated in either a water bath, a cooking pot, or a microwave oven. Exklusiv Neuform certification symbol. There are three other similar products in this line.

2953. **Product Name:** [GranoVita Greek Vegetable Stew with Organic Tofu, Brown Rice, and Wild Rice].
Foreign Name: GranoVita Griechischer Gemuesetopf mit Bio-Tofu, Naturreis- und Wildreis-Beilage.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. Phone: (04131)-303-145.
Date of Introduction: 1990.
Ingredients: Stew: Paprika, water, mushrooms, onions, organic tofu (water, organically grown soybeans, calcium chloride), vegetable oils, egg protein, tomato pulp, organically grown rice flour, olives, seasonings (*Wuerzmittel*), soy sauce, sea salt, guar flour (plant thickener), spices (*Gewuerze*), herbs, garlic. Rice: Water, brown rice, wild rice, vegetable oil, sea salt.
Wt/Vol., Packaging, Price: 350 gm.
Nutrition: Per 100 gm.: Protein 13.6 gm, fat 16.0 gm, carbohydrates 61.7 gm, fiber (Ballaststoffe) 4.0 gm, calories 445. 1 BE (Broteinheit, or diabetic exchange) = 68 gm.
New Product–Documentation: Form filled out and new Labels sent by DE-VAU-GE. 1990. June 11. The product was introduced in 1990. Label: 5 by 8.5 by 1.5 inch paperboard box. Black, gold, red, green, and blue on white. A stylish color photo on the front panel shows the dish ready to serve on a black plate with a green sprig, mushroom, knife and fork nearby. At the top of the front panel: "The whole foods kitchen for the gourmet (Die Vollwertkueche à la Gourmet). A ready-to-heat menu for 1 person. Enjoy without flesh." The box contains two pouches: one with the vegetable & tofu stew; the other with the grain and vegetables. The back panel shows how these can be heated in either a water bath, a cooking pot, or a microwave oven. Exklusiv Neuform certification symbol. There are three other similar products in this line. One of these, GranoVita Gruenkern Käsebratling (Green Rye Cheese Patties in Mushroom sauce with Vegetables & Rice) contains soy sauce as its only soy-based ingredient.

2954. **Product Name:** Granose Vegetarian Spicy Links.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1990.
Wt/Vol., Packaging, Price: Glass jar.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Color photo of package in *Linda McCartney's Home Cooking.* 1990. p. 18. The label is red, white, and black on green.

2955. **Product Name:** Granose Vegelinks.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1990.
Wt/Vol., Packaging, Price: Can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Color photo of package in *Linda McCartney's Home Cooking.* 1990. p. 18. "Wheat protein frankfurters and sausages in brine." A photo shows numerous frankfurters in a bowl.

2956. **Product Name:** So Good Soycreem: Non-Dairy Cream Alternative.
Manufacturer's Name: Haldane Foods Ltd. (Marketer). Made in Clwyd, Wales, by Genice Foods Ltd.
Manufacturer's Address: 25 Hayhill, Sileby Road, Barrow upon Soar, Leicestershire LE12 8LD, England.
Date of Introduction: 1990.
Ingredients: Organic soya milk, vegetable oils, corn syrup, emulsifier (vegetable mono-diglycerides), stabilisers (xanthan gum, locust bean gum, guar gum), natural colour (beta-carotene).
Wt/Vol., Packaging, Price: 120 gm plastic cup.
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Energy 1827 Kjoules / 437 Kcal (calories), protein 3 gm, carbohydrate 12 gm, fat 36 gm (of which polyunsaturates 47%, and saturates 23%), sodium 0.1%.
New Product–Documentation: Label sent by Leah Leneman of Scotland. 1992. Jan. 2. 2.75 inch diameter foil cup lid and 2.5 inch high cup. Yellow, white, gold and light green on green. Illustrations of yellow daffodils and a butterfly on foil lid. Lid: "High in polyunsaturates. Low in saturates. Cholesterol free." Cup: "Soycreem is a new, cholesterol-free alternative to cream, made without animal fats or milk derivatives. Pour over desserts in the same way as fresh cream. (Not recommended for use in coffee.) Suitable for vegetarians and vegans."

Talk with Ray Pierce of Genice. 1994. Feb. 10. In 1990 chilled So Good Soycreem was launched as a non-dairy alternative to dairy double cream, but low in cholesterol, high in polyunsaturates, and low in saturates. It was made for Haldane in a little beige plastic pot with a green foil lid, packed at the Genice plant. It contains a trace of cholesterol because law requires that it contain 36% oil, including some palm oil. In 1991 a shelf-stable UHT version (completely sterilized, with a 9-month shelf life), now named Granose Soya Creem, was launched in a 225 ml Combibloc pack, made for Genice by a large dairy in Ireland which had Combibloc packaging equipment. The chilled So Good Soycreem was discontinued.

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2957. Kellogg's Frosted Mini-Wheats and Tofu Crunch (TV advertisement). 1990. Television broadcast. *
• ***Summary:*** Talk with Art Mio. 1990. March 9. "There is a TV commercial that has been running for the past month or so. It shows the husband sitting at the husband sitting at the breakfast table with a bowl of cereal in front of him. His elbow is on the table and his jaw is resting in the palm of his hand. His head is tilted and he looks like he is very sad, dejected, or upset. Right to the side of the couple is a big cereal box, in big letters is written "Tofu Crunch." It's a health commercial. The message is that you don't have to have bad tasting food in order for it to be healthy. Try sugar-coated Kellogg's Frosted Mini-Wheats. The media already considers tofu a 'yuck' food. How many clippings have you seen that say 'Tofu needs a good PR agency.'"

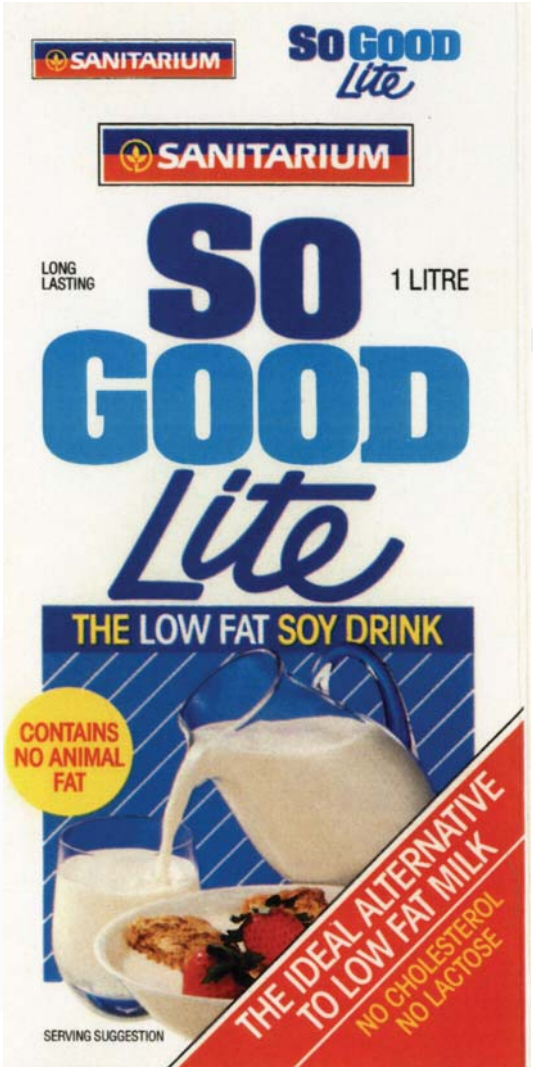
2958. **Product Name:** [Vege Ham {Meatless Ham}].
Foreign Name: Vegehamu.
Manufacturer's Name: San-iku Foods.
Manufacturer's Address: 1-1 Nagaurataku, Sodegaura-machi, Kimizu-gun, Chiba-ken 299-02, Japan.
Date of Introduction: 1990.
New Product–Documentation: Letter from San-iku Foods. 1990. June. This product was introduced in 1990.

2959. **Product Name:** Sanitarium So Good Lite: The Low Fat Soy Drink.
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 148 Fox Valley Rd., Wahroonga, N.S.W. 2076, Australia.
Date of Introduction: 1990.
Ingredients: Water (88.0%), soya isolate (4.0%), maltodextrin (3.3%), corn syrup solids (3.1%).
Wt/Vol., Packaging, Price: 1 liter Combibloc Aseptic carton.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Letter and Label sent by Sanitarium Health Food Co. 1990. June 25. Gives product introduction date as 1990.

Sanitarium Nutrition Education Service. 1990. April. "So Good." This 4-page leaflet gives a clear explanation of each ingredient used, plus nutritional and other information.

Note: This is the earliest commercial soymilk product seen (July 2013) with the word "Lite" on the front panel (one of two products).

2960. British Nutrition Foundation Task Force on Complex Carbohydrates in Foods. 1990. Complex carbohydrates in foods: Report of the British Nutrition Foundation's task force. London: Chapman and Hall. 165 p. 30 cm. [508* ref]
• ***Summary:*** "Complex carbohydrates, defined as starches plus non-starch polysaccharides, rather than 'fibre', was chosen as the title and subject for the Report for various



reasons: (1) The US Senate Select Committee on Nutrition and Human Needs (1977) had concluded that the intake of complex carbohydrates should be increased as one of its Nutritional Goals. (2) The DHSS Committee on Medical Aspects of Food Policy (1984) had recommended that a reduction in total fat in the diet could be achieved by an increased consumption of 'fibre-rich' carbohydrates (e.g., bread, cereals, fruit, vegetables)... (p. 1).

"The popular term, dietary 'fibre', previously defined as 'any substance of plant origin which is undigested by human alimentary enzymes' (Trowell et al. 1972), has been avoided as far as possible in the Report" (p. 2).

Brief history to 1985: "The value of 'fibre' in the diet was even recognised by the Greeks. Hippocrates, in the fourth century B.C., commented 'To the human body it makes a great difference whether the bread be made of fine flour or coarse, whether of the wheat with the bran or the wheat without the bran.'

"In the nineteenth century, [Sylvester] Graham and [John Harvey] Kellogg in the United States and Allinson in

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Britain, tried to draw attention to the importance of 'fibre' in the diet, all with limited success.

"Modern interest in carbohydrates and health began with Surgeon Captain Cleave's exposition of 'The Saccharine Disease.' Under this title, Cleave (1966) brought together a variety of conditions characteristic of the Western World which he thought were due to consumption of refined carbohydrates. This hypothesis was then developed by Burkitt and Trowell (1975) who suggested that it was the diets of Africans which protected them from most of the chronic non-infective diseases characteristic of Western culture. They suggested that many Western diseases were due to lack of 'fibre' in the diet rather than to the direct ill-effects of refined or 'fibre'-depleted foods. At about the same time, Painter (1975) presented his evidence that diverticular disease could be successfully treated with bran. A full account of the contribution of the contribution made by the early 'pioneers' of the 'fibre' hypothesis has been given by Trowell (1985)." Address: London.

2961. Ellen G. White Estate. 1990. The complete published writings of Ellen G. White on compact disc. Silver Spring, Maryland.
• ***Summary:*** On this CD-ROM are found all of the published writings of Ellen G. White, plus a few key writings about her, such as the 6-volume *Biography of Ellen G. White*, by Arthur L. White (1981-86). The entire contents of this CD-ROM is available on the Internet, or can be purchased for $179.00.

Talk with Tim Poirier, Associate Director of the Ellen G. White Estate. 1997. May 8. To make this CD-ROM, the full text of all of Ellen G. White's writings was keyed into a computer in ASCII format by a conversion company outside the USA; tags were inserted appropriately to identify fields, chapters, etc. for searching. The Ellen G. White Estate also worked with a Imode Retrieval Systems (in New York, New York), which specializes in making CDs and their search engines. Imode has a DOS engine and a Windows application named Personal Librarian. Tim still works with Imode. Address: Seventh-day Adventist Church World Headquarters, 12501 Old Columbia Pike, Silver Spring, Maryland 20904-6600. Phone: (301) 680-6552.

2962. Haldane Foods Group Ltd. 1990. They've every occasion to choose So-Good (Leaflet). Newport Pagnell, Bucks., England. 1 p. Single sided. 29 cm.
• ***Summary:*** See next page. On the top half of this attractive color leaflet, a photo shows a So Good brand Strawberry Bombe next to a whole strawberry on a black lacquerware surface. On the bottom half, accompanied by text, photos show four products (each launched in 1990) in the center: Strawberry Bombes, Tofu Delights (non-dairy frozen dessert bars), and two flavors of Tofu Dessert (ice cream style). The text reads: "From teatime afters, to exotic desserts, to treats. The So-Good range of non-dairy soya ice products from Haldane gives your customers every occasion to buy. Especially as the packaging is so appealing, the reputation so tasty and the products being so well advertised to your market..." Address: Howard Way, Newport Pagnell, Bucks MK16 9PY, England.

2963. Kolster, Uwe. 1990. Die gesunde Sojakueche: Koestlich und abwechslungsreich essen [Healthy soya cooking: Delicious and varied food]. Falken Verlag GmbH, 6272 Neidenhausen/Ts, Germany. 112 p. Illust. Recipe index. 21 cm. [Ger]
• ***Summary:*** This recipe book calls for the use of many DE-VAU-GE (GranoVita) products. Address: Germany.

2964. McCartney, Linda. 1990. Linda McCartney's home cooking. New York, NY: Arcade Publishing, Inc. (a Little, Brown company). England: Bloomsbury. 174 p. Illust. Index. 25 cm.
• ***Summary:*** As of 1994 this is said to be the world's best-selling vegetarian cookbook. It contains more than 200 recipes and many full-page color photos, uses TVP (both chunk and granular styles) in at least 22 recipes, mostly main dishes, including: Turnovers (p. 65). Beefless pie (p. 85). Beefless rice casserole (p. 86). Beefless stew (p. 86). Burgers bourguignonne (p. 89). Chili non carne (p. 94-95). Festive roast with savoury stuffing (p. 98). Lentil and steaklets stew (p. 104). Linda's lasagna (p. 104-05). Madras onion curry (p. 105). Maine sauerkraut (p. 105). Meatless loaf (p. 106). Mexican loaf (p. 108). Mince and aubergine casserole (p. 109). Moussaka (p. 109-10). Oriental beefless casserole (p. 115). Shepherd's pie (p. 120). Simple beefless hash (p. 120). Sour cream steaklet chunks (p. 121). Spaghetti sauce bolognaise (p. 149). Stuffed and broiled mushrooms (p. 125). Stuffed peppers (p. 126).

Linda and Paul (of Beatles fame) McCartney have been married since March 12, 1969, are vegetarians and very active in the field of animal welfare. Linda, born in Scarsdale, New York, USA, has been a committed vegetarian for twenty years, during which time she has lived in England. She is also a world-famous photographer. Her color photo appears on the cover. TVP is more popular among consumers in the UK than in the USA. Pages 18-19 show a color photo of many meatlike products and their packages–including Protoveg Sizzles, Protoveg 5 Grain Burgamix, Tivall Vegetarian Schnitzel, Sausage, and Burger, Fritini Vegetable Pattie Mix, Realeat Vege Burger Mix, Dietade Low-Salt Vegetarian Gravy Mix, Granose Vegetarian Spicy Links, Sausalatas, Vegelinks, and Sausfry, Friggs Vegetable Gravy Powder, and Worthington Wham, Bolono, GranBurger, Vegetarian Fillets [fish alternatives], Stakelets, and Stripples. Page 43 gives a brief description of soya beans and soyfoods. Address: England.

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THEY'VE EVERY OCCASION TO CHOOSE SO-GOOD.

From teatime afters, to exotic desserts, to treats. The So-Good range of non-dairy soya ice products from Haldane gives your customers every occasion to buy. Especially as the packaging is so appealing, the reputation so tasty and the products being so well-advertised to your market. Then of course, they know that they can indulge in So-Good ices as often as they like because there's no lactose or animal fat to worry about. So they'll buy more, and come back for more, on more occasions.

Of course, they'll also be buying So-Good brands from you because they think they're absolutely delicious. In every event, we're sure they'll be your most successful frozen assets.

SO GOOD

Haldane Foods Group Ltd, Howard Way, Newport Pagnell, Bucks MK16 9PY

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2965. Peanut Advisory Board. 1990. The official peanut butter lovers' centennial cookbook: A collection of America's favorite peanut butter recipes. Atlanta, Georgia: PAB. viii + 85 p. Illust. Recipe index. 22 cm.

• ***Summary:*** This book begins with a brief history of peanut butter. "First sold in 1890, peanut butter is still America's #1 sandwich spread. It's consumed daily by 40 million Americans, a remarkable 800 million pounds per year–double the amount 25 years ago. Ninety percent of all American homes have a jar in their pantry.

"There are many claims to where and when peanut butter was invented. Africans ground peanuts into stew as early as the 15th century; the Chinese have crushed peanuts into creamy sauce for centuries. Civil War soldiers dined on 'peanut porridge.' But these uses bore little similarity to peanut butter as it is known today.

"In 1890, an unknown St. Louis [Missouri] physician encouraged the owner of a food products company, George A. Bayle, Jr., to process and package ground peanut paste as a nutritious protein substitute for people with poor teeth who couldn't chew meat. The physician apparently had experimented by grinding peanuts in his hand-crank kitchen meat grinder. Bayle mechanized the process and began selling peanut butter out of barrels for about 6 cents per pound. Since Bayle already was baking and selling crackers, that is how most Americans first tasted the sandwich and snack spread that eventually would become America's favorite." A black-and-white photo shows 3 early cans of "Bayle Quality Original Peanut Butter," each with a handle, like that of a pail, on top.

Note: The Peanut Butter Board has no documentation for the statement that George Bayle was encouraged to make peanut butterin 1890, nor does the Board know when Bayle first started to manufacture it. In fact, a memo dated 1 May 1964 from RTK of the *St. Louis Post Dispatch* states: "Origin and first use as a health food by a St. Louis doctor in 1890. No proof at this time, but research is being done on it by the peanut growers, etc." A follow-up letter dated 19 Jan. 1971 from N.E. Williams, Assistant Librarian of the *St. Louis Post Dispatch*, to Mr. Ray O. Hammons of the College of Agriculture, Tifton, Georgia, states: "Enclosed is a copy of the only evidence of the origins of peanut butter in St. Louis in our files. We had an inquiry in 1964 concerning this, and we found nothing more, nor did the researchers seeking this history." See also Dec. 1921 obituary for George A. Bayle.

"At about the same time, Dr. John Harvey Kellogg in Battle Creek, Michigan began experimenting with peanuts as a vegetarian source of protein for his patients. His brother, W.K. Kellogg, was business manager of their sanitarium, the Western Health Reform Institute, but soon opened Sanitas Nut Company which supplied foods like peanut butter to local grocery stores."

On 4 Nov. 1895 Kellogg applied for a patent titled "Process of Preparing Nutmeal," which was issued to him on 13 April 1897. It described "'a pasty adhesive substance that is for convenience of distinction termed "nut butter."... The moist and brown product is soft and pasty like butter and is somewhat less digestible than the meal, owing to the greater amount of free oil it contains. It is used as a substitute for butter, either for table use or for shortening in cooking. It is, in fact, a good substitute for animal fats. It has a slightly nutty flavor and is palatably agreeable, beside being far more nutritious than butter.' However their peanuts were boiled (rather than roasted) and their pasty concoction never became very popular."

"One of their employees, Joseph Lambert, had worked with the Kelloggs to develop food processing equipment. He began selling his own hand-operated peanut butter grinders in 1896. Three years later, his wife Almeeta published the first nut cookbook, 'The Complete Guide to Nut Cookery' and two years later the Lambert Food Company was organized. They continued to sell peanut butter until 1908 when they turned their attention solely to manufacturing machinery.

"George Washington Carver's contributions: George Washington Carver began his research into peanuts in 1903 at Tuskegee Institute–research that would lead him to discover improvements in horticulture and the development of more than 300 uses for peanuts (including shoe polish and shaving cream). His first publication in 1925 introduced Americans to 105 peanut recipes, from peanut soup to coffee. For his work in promoting its cultivation and consumption, Carver is considered the father of the peanut industry.

"The world was first introduced to peanut butter at the Universal Exposition of 1904 in St. Louis, when C.H. Sumner sold $705.11 of the treat at his concession stand. Peanut butter's popularity soon spread. Krema Products Company in Columbus, Ohio, began selling peanut butter in 1908–and is the oldest peanut butter company still in operation today!...

"Peanut butter was sold in tin cans at the beginning of the century, but the demand for metal skyrocketed during the first World War and manufacturers soon switched to glass jars.

"Beginning in 1922, Joseph L. Rosefield began selling a number of different brands of peanut butter in Alameda, California. These peanut butters were 'churned' like butter and therefore smoother than the gritty peanut butters of the day.

In 1928 Peter Pan brand peanut Butter was introduced by Swift & Co. In 1933 Rosefield launched Skippy brand peanut butter in California; In 1935 he added the first chunk style peanut butter to his line. Reese's peanut butter cups were also introduced in the mid-1920s. Address: Peanut Advisory Board, 1950 North Park Place #525, Atlanta, Georgia 30339. Phone: (404) 933-0357.

2966. Seventh-day Adventist Dietetic Assoc. 1990. Diet

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manual, including a vegetarian meal plan. 7th ed. (Three-ring binder with dividers). Seventh-day Adventist Dietetic Assoc., P.O. Box 75, Loma Linda, California 92354. xv + 644 p. Index. 29 cm. In a 3-ring binder with tabbed dividers. Index. 30 x 29 cm.

• ***Summary:*** This comprehensive guide to planning, selection, and coordination of vegetarian diets, in the form of a three-ring binder with dividers, was edited by Georgia Hodgkin, M.S., R.D.; Susan Maloney, M.S., R.D., was the managing editor. Previous editions were published in 1960, 1965, 1970, 1975, 1978, and 1982. Each chapter has an author and a reviewer. References are found at the end of each chapter.

Contents: Introduction. Normal nutrient needs. Nutrition for pregnancy and lactation. Pediatric diets. Gastrointestinal diets. Renal diets. Cardiac diets. Diabetic and related diets. Mineral modified diets. Diet for acute care. Nutrition and immunity. Nutritional support and enteric feedings. Geriatric and rehabilitation diets. Test diets. Nutrition and drugs. Nutrition for exercise and weight control. Appendixes (11) including: Ingredients of selected vegetable protein foods. Nutrient composition of selected vegetable protein foods (both prepared by Yansee Wong). Addresses of selected Seventh-day Adventist hospitals (16 hospitals). Selected vegetarian cookbooks (15 citations). Selected books concerning a vegetarian diet (7 citations). Tables (79 tables). List of figures (10 figures). Address: Loma Linda, California.

2967. Sanitarium Health Food Co. 1990? Our story (Leaflet). 148 Fox Valley Rd., Wahroonga, N.S.W. 2076, Australia. 2 panels on each side. Each panel 30 x 21 cm. Undated.

• ***Summary:*** This glossy, color leaflet gives a brief history of the company, interspersed with many color photos. The company's export division is at Hudson Ave., Castle Hill, NSW 2154, Australia.

"The fascinating history of the Sanitarium Health Food Company started in the late 19th century when a group of highly motivated immigrants from the United States decided to make their living by distributing health foods that they had imported from Battle Creek, in Michigan, USA. Battle Creek was famous then for its Sanitarium, the health retreat based on a Swiss model, where the rich and famous from all parts of the United States and Europe came for a relaxing health holiday. One of the draw cards of this place was a breakfast cereal and health food manufacturing plant, the purpose of which was to supply food to the institution as well as to the neighbouring districts.

"A selection of these products was sent to Melbourne, Australia, in 1897, but before too long the demand for these unique foods outstripped the availability. Local production was inevitable...

"The name, Sanitarium Health Food Company, was adopted in 1898."

Photos show: (1-4 on front panel) Weet-Bix in a white bowl. A man on a bicycle pedaling a wheeled cart in front of him; on it is written Sanitarium Health Food Co. A modern factory with a company flag flying over it. Veggies in a wrap on a plate. (5) The old Battle Creek Sanitarium. (6) A hand pouring a pack of So Good Soymilk. (7) A very old photo showing an early food factory along the banks for a river. (8) An aerial view of a modern food factory. (9) A bottling line. (10) A breakfast table on which Sanitarium breakfast food products are served. (11) A Sanitarium food delivery truck. (12) Packages of the leading Sanitarium food products: Weet-Bix. Corn Flakes. Weet Bix Hi-Bran. Puffed Wheat. Weeta Puffs. Good Start. Ricies (rice cereal). Honey. Peanut Butter (Smooth or Crunchy). Crunchy Granola. Caffex. Golden Toasted Meusli. So Good (soymilk). Vegetarian Sausages (canned). Vegetarian Bologna (canned). Address: Wahroonga, Australia. Phone: (02) 487 1711.

2968. Sanitarium Health Food Co. 1990? Product range. 148 Fox Valley Rd., Wahroonga, N.S.W. 2076, Australia. 6 p. Catalog. Undated. 30 cm.

• ***Summary:*** Product lines include: Flake biscuit range (incl. Weet-Bix ["Australia's favourite whole wheat malted breakfast biscuits"], Corn Flakes, and Muesli). Loose cereal range. Sundry cereal range. Drinks and beverages (incl. So Good soymilk). Spreads (peanut butter and marmite). Legumes, grains, seeds (incl. soya beans in 500 gm bag). Dried fruits. Nuts. Mixes (such as nuts & raisins). Canned vegetarian meals (24 meatlike products, 3 of which are dry TVP in boxes). Misc. foods (incl. natural lecithin and lecithin granules).

The company also has an export division at Hudson Ave., Castle Hill, NSW 2154. Address: Wahroonga, Australia. Phone: (02) 487 1711.

2969. **Product Name:** Sanitarium Health Foods Soya Beans (Dry in Poly Bag).
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 146 Fox Valley Rd., Wahroonga, NSW 2076, Australia.
Date of Introduction: 1990?
Ingredients: Soybeans.
Wt/Vol., Packaging, Price: 500 gm poly bag.
How Stored: Shelf stable.
New Product–Documentation: Sanitarium catalog. 1990. Product range.

2970. **Product Name:** Sanitarium Health Foods Lecithin [Natural in Can, or Granules in Poly Bag].
Manufacturer's Name: Sanitarium Health Food Co.
Manufacturer's Address: 146 Fox Valley Rd., Wahroonga, NSW 2076, Australia.
Date of Introduction: 1990?
Wt/Vol., Packaging, Price: 125 gm can or 250 gm poly bag.

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How Stored: Shelf stable.
New Product–Documentation: Sanitarium catalog. 1990. Product range.

2971. Sanitarium Nutrition Education Service. 1990? A food lover's guide to vegetarianism. Sanitarium Health Food Co., P.O. Box 249, Wahroonga, NSW, 2076, Australia. 12 p. Undated. 30 cm.
• ***Summary:*** Contents: A taste for healthy eating. Health advantages. A vegetarian diet is nutritionally adequate. How can I change my eating habits? Suggested vegetarian menu. Address: Wahroonga, Australia. Phone: (02) 487 1711.

2972. **Product Name:** D'lites Vegy Protein Mix [Chicken Style].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1990?
Ingredients: Chicken style: Textured vegetable protein (soy protein isolate and concentrate), egg whites, soybean and/or corn oil, salt, flavorings (hydrolyzed vegetable protein, onion powder, turmeric, spice extractives), monosodium glutamate, carrageenan, niacinamide, etc. Reduced calorie mayonnaise: Water, soybean oil, modified food starch, egg yolks, vinegar, salt, eggs, mustard flour, phosphoric acid, DL alpha tocopheryl acetate (vitamin E), calcium disodium EDTA to protect flavor, natural and artificial flavor, oleoresin paprika, beta carotene (color), celery, green peas, dill pickle, modified food starch.
Wt/Vol., Packaging, Price: Roll.
How Stored: Frozen.
New Product–Documentation: Seventh-day Adventist Dietetic Assoc. 1990. *Diet Manual, Including a Vegetarian Meal Plan. 7th ed.* Appendix A.6-27.

2973. **Product Name:** Savory Slices–Vegetable Protein Slices / Artificial Beef Flavor.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085. Phone: 800-628-3003.
Date of Introduction: 1990?
Ingredients: Textured soy protein isolate, egg whites, soybean oil, wheat flour, partially hydrogenated soybean and cottonseed oil, yeast extract, flavorings (hydrolyzed vegetable protein, monosodium glutamate, onion powder, artificial flavor), caramel color, corn syrup solids,...
Wt/Vol., Packaging, Price: 20 oz (567 gm) can. Retails for $2.65 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19.

2974. **Product Name:** Turkee Slices: Vegetable Protein Slices–Artificial Smoked Turkey Flavor.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1990?
Ingredients: Slices: Textured vegetable protein (soy protein isolate, wheat gluten), egg whites, soybean and/or corn oil, partially hydrogenated soybean oil, flavorings (hydrolyzed vegetable protein, monosodium glutamate, artificial flavor, onion powder, natural smoke flavor, disodium guanylate, disodium inosinate), dextrose, brown sugar, salt, niacinamide, iron, vitamins. Gravy: Water, modified corn starch, flavorings (hydrolyzed vegetable protein, monosodium glutamate, onion powder, artificial flavor, disodium guanylate, disodium inosinate), salt, wheat flour, dextrose, soy protein isolate, soybean oil.
Wt/Vol., Packaging, Price: 13 oz can. Retails for $2.35 (7/90, California).
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Product with Label purchased at Adventist Book Center in Pleasant Hill, California. 1990. July 19.

2975. Berry, Rynn. 1991. Famous vegetarians & their favorite recipes: Lives & lore from Buddha to Beatles. Los Angeles, California: Panjandrum Books. xxix + 239 p. Illust. by Glory Brightfield. No index. 23 cm. [112* ref]
• ***Summary:*** Contents: Dedication. Acknowledgments. Table of recipes (9 soyfood entrees from 5 different vegetarians are included). Preface (by Jack Kroll, Senior editor of Newsweek, New York). Introduction. Part 1: Immortals. Pythagoras, Gautama the Buddha, Jesus Christ, Plutarch, Leonardo da Vinci, Percy Bysshe Shelly, Leo Tolstoy, Annie Besant, Mahatma Gandhi, George Bernard Shaw.

Part 2: Visionaries. Bronson Alcott, Sylvester Graham, Dr. John Harvey Kellogg, Henry Salt, Esmé Wynne-Tyson, William Shurtleff and Akiko Aoyagi, Frances Moore Lappé. Part 3: Contemporaries. Paul and Linda McCartney, George Harrison, Cloris Leachman, David Wallechinsky, Dennis Weaver, Killer Kowalski, Isaac Bashevis Singer, Malcolm Muggeridge (recently deceased), Brigid Brophy, and Rynn Berry.

Each chapter contains an illustration of the person, and a biographical sketch of their life and work, followed by several of their favorite vegetarian recipes. The book contains 74 recipes in all. It was copyrighted in 1990 but officially published on 5 Jan. 1991. Reviewed in Vegetarian Times (Feb. 1991, p. 75-76) by Corydon Ireland. Address: 159 Eastern Parkway (2H), Brooklyn, New York 11238. Phone: 718-622-8002.

2976. **Product Name:** [Soya Based Drink (Natural)].
Foreign Name: Soja Drink (Natur).

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Manufacturer's Name: Bruno Fischer GmbH (Importer-Distributor). Made in France.
Manufacturer's Address: Im Auel 88, 53783 Aetorf, Germany. Phone: 49-2243-4021.
Date of Introduction: 1991 January.
Ingredients: Water, soybeans* (9%). * = Organically grown.
Wt/Vol., Packaging, Price: 1 liter glass bottle.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Letter/Order for the book *Tofu & Soymilk Production* from "Bruno Fischer jun [Jr.]." 1979. Oct. 7. He is located at Taunusstrasse 13, 5000 Köln [Cologne] 91, West Germany. Phone: 02 21 / 83 26 51.

Talk with Bruno Fischer, who calls from Germany. 1993. Nov. 25. He sells soymilk, which he introduced in Jan. 1991, in glass bottles in Germany. In the unique sterile-filling process, developed by Alfa-Laval and Bosch, the soymilk is first UHT sterilized, then packed and sealed in sterile bottles. It is sold non-refrigerated with a 9-month shelf life. He does not make this soymilk; he imports it from a soymilk maker in France.

He is a Seventh-day Adventist who is the fifth generation of a family of butchers. His family quickly stopped making pork products and closed their shop on Saturday, the Sabbath–which was formerly their busiest day. Now he is gradually switching the company from meat products to alternatives. On 7-8 Oct. 1979 he visited Shurtleff and Aoyagi in Lafayette, California.

Labels sent by Bruno Fischer GmbH. 1994. Jan. 6. On each bottle are two labels, each 6 by 3.75 inches. The front label has white letters with dark blue borders on a pastel blue and green background. Four small square drawings show that this soymilk can be used like milk, drunk from a glass, poured on Muesli, or used in cooking. "Made purely from plants. No added sugar. Versatile–use like milk." The back panel gives the product name and ingredients in six languages. By each name is the flag of that country.

Product with Label sent by Bruno Fischer. 1998. April 15. Soja Drink–Natur. No added sugar. Ingredients and nutritional value are given in five languages, each with the flag of that country by the product name: German, English, Italian, French, and Dutch. Talk with Bruno Fischer. 1998. May 14. This product was named Soja Drink from the beginning; The name Tônyû was used only in-house. The current milk is made from organic soybeans grown mostly in southern France. The resulting soymilk is the highest in mono- and di-saccharides, and in lactones of any European soymilk. Bruno thinks that his is the only soymilk in the Western world today that is sold in a glass bottle. This is the kind of environmentally-friendly container that his customers at natural food stores in Germany want; Tetra-Pack is a symbol of an environmentally unfriendly container. The bottle and cap are steam sterilized, then filled with UHT-treated soymilk in a sterile environment. The filling plant is at Rugensburg; the bottles are then shipped to a storehouse at Saarbruecken, on the Saar River near the French-German border. Sold in a brown 1-liter glass bottle, this soymilk has a shelf life of 1½ years. It is made from soybeans that are dry-dehulled. Bruno has been in the plant where it is made and seen the whole process.

2977. Sabaté, Joan; Lindsted, K.D.; Harris, R.D.; Sanchez, A. 1991. Attained height of lacto-ovo vegetarian children and adolescents. *European J. of Clinical Nutrition* 45(1):51-58. Jan. [40 ref]
• ***Summary:*** Normal growth and development are documented in populations consuming large amounts of soy protein. Address: 1-2. Dep. of Epidemiology; 3. Dep. of Pediatrics; 4. Dep. of Nutrition. All: Loma Linda Univ., Loma Linda, California 92350.

2978. *Adventist Review* (*Hagerstown, Maryland*). 1991. Granose Foods sold. Feb. 14. p. 6.
• ***Summary:*** "A long chapter in the history of the Adventist Church in England closed last month with the sale of Granose Foods Limited in Newport Pagnell, England. The Adventist-owned health food company had served the British Isles with wide assortment of health food products for 92 years.

"The British Arkady Company Limited purchased Granose for £5.5 million (US$11 million), reports Ray Dabrowski, Trans-European Division communication director.

"The British Union Conference (BUC) Executive Committee took an action to sell Granose last October after three years of stagnant sales. In the three-year period, from 1988 to 1990, sales increased from £4.2 million (US$8.3 million) to £4.9 million (US$9.6 million), representing an 11 percent growth for the whole period and well under the national inflation rate.

"Eleven years ago Sanitarium Health Foods of Australia took Granose under its wing–giving it an infusion of cash and equipment. However, the Australian company later withdrew because of financial reasons.

"As part of redevelopment proposals for Stanborough Park, Granose moved into new facilities at Newport Pagnell in 1988. Even with new facilities, however, the sales did not increase significantly. Also, accrued interest on the £1.9 million (US$3.8 million) loan made to the company for the relocation contributed significantly to the company's operating loss of £122,000 (US$244,000) for 1989."

2979. McDermott, Ron. 1991. New developments at Worthington Foods (Interview). *SoyaScan Notes.* Feb. 25. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Ron was at Loma Linda Foods for 4 years, and before that at Ross Laboratories for 9 years. When Worthington Foods acquired Loma Linda Foods, it got all the

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meat analogs and the Soyagen soymilk, which is sold only in dry form to adults. Now Worthington has Soyagen and Soyamel brand soymilks. The last production of Loma Linda brand products in Riverside was completed under contract by Nutricia at the end of August, 1990. Then the unique and necessary equipment was taken to Worthington, Ohio, in the fall and set up there. Since December, Worthington has been working to bring the formulas back into production. A number of similar products were discontinued. Even after these were eliminated, Worthington still has a line of 180 products! This includes all Worthington products! The Morningstar Farms line accounts for the great majority of sales. The canned meat analogs account for about 20% of total Worthington sales. The rest is sales of frozen Worthington products, the Natural Touch line, beverages, etc. The best-selling product in the Natural Touch line has been the okara patties.

Nutricia had decided to consolidate their soymilk production in Riverside and to sell their old soymilk plant in Mount Vernon, Ohio. In fact, they set up a soymilk production line in Riverside, but they had problems with the aseptic part of it. But within the last 2 months they have decided to consolidate soymilk production at Mt. Vernon instead.

Jim Hagle, chairman of the board of Worthington Foods, died on 18 Oct. 1990 at age 78 at his home. Alan Buller has taken his place as chairman of the board. Dale Twomley is now president and CEO of Worthington Foods. Bob Clark (who came from Haagen-Dazs-Pillsbury) is the new vice president for marketing and Steve Dunson is vice president for corporate strategy & planning. Address: Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

2980. Nordquist, Ted. 1991. Changes in structure and ownership at Aros Sojaprodukter in Sweden (Interview). *SoyaScan Notes.* Feb. 25. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** On 31 Dec. 1990 Ted sold Aros. He now owns one-third of the new corporation named Aros Sojaprodukter AB. Eric Kennhed owns one-third and Blekinge Invest (which owns 100% of Trensums Musteri, a juice company) owns the other one-third. There is a five-person board of directors, and Ted is CEO.

He is trying to find companies to license his new technology and process for making soybase. He has a contract that offers a commission of 3% of the sales of each product for the first year after production starts, plus reimbursement for all travel if it leads to the signing of a licensing contract.

Anders Lindner is now part of Ted's group. William Shurtleff introduced and recommended Ted to him. Anders recently did a soymilk market study for Vitasoy in Australia.

Danish Nutana is in bad shape. Address: CEO, Aros Sojaprodukter, Bergsvagen 1, S-19063 Orsundsbro, Sweden. Phone: 0171-604 56.

2981. Mills, Paul K.; Beeson, W.L.; Phillips, R.L.; Fraser, G.E. 1991. Bladder cancer in a low risk population: Results from the Adventist Health Study. *American J. of Epidemiology* 133(3):230-39. Feb. [37 ref]
Address: Dep. of Preventive Medicine, Loma Linda Univ., Loma Linda, California.

2982. Worthington Foods, Inc. 1991. Worthington Foods product catalog. 900 Proprietors Rd., Worthington, OH 43085. 3 panels each side. Each panel: 28 x 21.7 cm. Undated.
• ***Summary:*** See next page. Contents: Worthington brand: Canned and dry (24 products). Frozen (25 products). LaLoma brand: Canned & dry (35 products). Frozen (6 products). Natural Touch brand (8 products). Note: Typographical error in Zip code. Address: Worthington, Ohio. Phone: 1-800-628-3663.

2983. *SCOPE* (*Loma Linda University, California*). 1991. Loma Linda University: "a miracle that should open the eyes of our understanding"–Ellen White, April 6, 1906. Jan/March. p. 6-13. [4 ref]
• ***Summary:*** An excellent and inspiring history of Loma Linda University with a very detailed chronology, starting in 1905.

2984. Fehlberg, Eric C. 1991. The sale of Granose Foods to the Haldane Foods Group and British Arkady Ltd. (Interview). *SoyaScan Notes.* April 30. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The sale of Granose took effect from 1 Jan. 1991. At the time of the sale, Granose was doing very well financially. The only year that they didn't break even or make a profit was 1990. At the beginning of 1990 they moved from their old building into the new one; the expenses connected with the move took up most of their profits. In all other recent years they have been making good money, and a portion of that money has been contributed to the church. Mr. Fehlberg cannot understand why the church would sell such a thriving company.

But the board of the directors of the British Union of the Seventh-day Adventist church got an offer (which was a little bit of back-door work) that was too good to refuse, so they looked at it in their committee meeting and decided to accept it. They have a good understanding of all aspects of the company. This is the second long-established Seventh-day Adventist food company that has been sold by the church during the last 2 years. Loma Linda Foods was sold to Worthington Foods in Jan. 1990. Most of the employees of Granose have stayed with the company after the sale. Peter Archer, the former general manager, has stayed but is no

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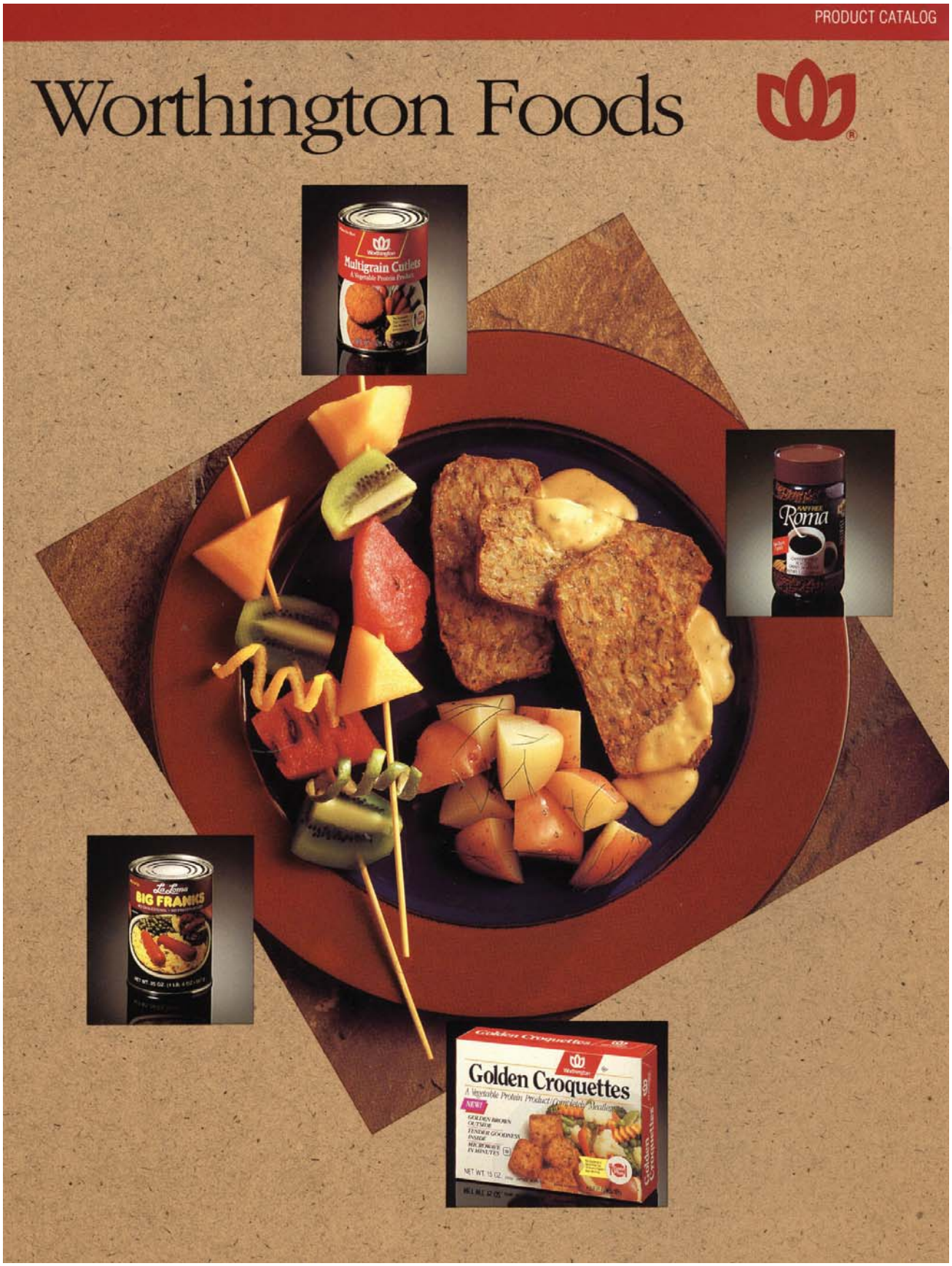

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longer the general manager. He is now marketing manager. The church no longer has any involvement with Granose at all.

We cannot say that these two sales are the start of a trend, but he is quite sure that the four Scandinavian Adventist food companies (Nutana in Denmark, Sweden, Norway, and Finland) will be the next to be sold. Nutana-Sweden is in considerably better financial shape than the other three, and Nutana-Finland is in pretty good shape. Nutana in Denmark and Norway are losing money and are very much in trouble. But he thinks that can easily be corrected if they get their costing straight and price their products based on their real costs. The man who has gone in to make these changes, Jan Paulsen, has as good a chance of succeeding as anyone, but he works out of London, England and does not have a much time for the health food work. He feels that the church should not be in the business of selling healthy foods. He influenced the board of the British Union in their decision to sell of Granose.

After the Scandinavian Nutana companies, the Egypt Food Factory, run by Mokhtar Nashed in Helipolois, Cairo, Egypt may well be the next to go, probably within the next few months. They used to make soymilk but he thinks they no longer are making it. Their products are "sub-standard" but still good. Superbom in Brazil is also having a hard time because of the adverse exchange rate and the desire to borrow money from the church. Superbom Chile is also having some problems.

But many of the Adventist food companies definitely will not be sold by the church in the foreseeable future. In fact, in the Far Eastern Division, a new food company in Hong Kong, run by Mr. Menzies, is scheduled to start selling products in early June of 1991. A new company is also starting in Thailand. Sahm Yook in Korea is also very successful, as is DE-VAU-GE in Germany and Sanitarium Foods in Australia. The food companies in Central America (Mexico, Costa Rica) and the Caribbean (Trinidad) are all doing well.

There are various administrative "Unions" within the Seventh-day Adventist Church. There are 4-5 unions in North America, 4 in Australia, many in South America, etc. The South American ones report to one central office in Brasilia, Brazil. The Central American food companies report to Miami, Florida. Sometimes a company manager and the head of the Union (a church official to whom he reports) have different ideas of what needs to be done at the company. These two men live in two different worlds, yet both have input in running the company. This can be a cause of business problems. The Mormon church owns some food companies and has the same type of problems. Address: Director, International Health Food Assoc., Seventh-day Adventist General Conference, 12501 Old Columbia Pike, Silver Spring, Maryland 20904. Phone: 301-680-6674.

2985. Fraser, Gary E.; Beeson, W.L.; Phillips, R.L. 1991. Diet and lung cancer in California Seventh-day Adventists. *American J. of Epidemiology* 133(7):683-93. April. [32 ref] Address: Center for Health Research, Loma Linda Univ., Loma Linda, California 92350.

2986. Ullmann, Daniel; Phillips, R.L.; Beeson, W.L.; Dewey, H.G.; Brin, B.N.; Kuzma, J.W.; Mathews, C.P.; Hirst, A.E. 1991. Cause-specific mortality among physicians with differing life-styles. *J. of the American Medical Association* 265(18):2352-59. May 8. [54 ref]
• ***Summary:*** This study compares the mortality of medical school graduates from Loma Linda University (LLU, 4,342 graduates) and the University of Southern California (USC, 2832 graduates) with each other and with that of contemporaneous white, American men. The LLU graduates had a risk similar to that of USC graduates for fatal cancer (with a mortality ratio, MR, of 0.92) but half the risk of fatal atherosclerotic disease, with an MR of 0.58 for coronary heart disease and 0.66 for cerebrovascular disease. "The overall mortality rate of LLU physicians was only 75% as high as that of the USC physicians and only 56% as high as that of the U.S. male population at large. We attribute this reduced mortality mainly to the low cardiovascular mortality rates, which may be accounted for by the life-style of the substantial proportion of Seventh-day Adventists among the LLU graduates." Address: 1. Depts. of Preventive Medicine and Medicine, School of Medicine, Oregon Health Sciences Univ., 31812 S.W. Sam Jackson Park Rd., Portland, OR 97201-3098; 2-3. Dep. of Preventive Medicine, Loma Linda Univ., School of Medicine, Loma Linda, California.

2987. *Dispatch* (*Columbus, Ohio*). 1991. Food company VP focusing on planning. May 27. p. 1D. Business section.
• ***Summary:*** "In response to health-conscious consumers, Worthington Foods will roll out new breakfast products the end of this month. The breakfast sandwiches and meals are additions to the company's Morningstar Farms line, said Stephen D. Dunson, recently promoted to vice president for planning and operations at the company. The new products will be test marketed in Columbus."

2988. Messina, Mark J. 1991. Update on soy and cancer prevention research (Interview). *SoyaScan Notes.* May 28. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Aside from Mark's article titled "Commentary: The role of soy products in reducing risk of cancer," published in the *Journal of the National Cancer Institute* 83(8):541-46 (17 April 1991), there will be no other proceedings published. Much of what the participants had to say has already been published. The conference brought the people and ideas together for the first time. Dr. Stephen Barnes was the co-author and chairperson of the workshop, and his work was the motivation for the workshop.

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Mark has almost finished writing a new paper which will be a review of all the literature on the role of soy products in reducing the risk of cancer. This review will contain many studies not mentioned in the article cited above, including about 20 animal studies. The initial animal research was very disappointing. K.K. Carroll, for example, in 1975, found no difference between soy protein and casein in protecting against cancer. The epidemiological work is inconclusive, and soy is limited to a minor role in Chinese, Japanese, and some Seventh-day Adventist studies. So, even if soy was protective, it would not get much attention in these studies. The literature seems to indicate that soy is most protective against colo-rectal cancer and against breast cancer. One basic problem is that case-control studies are often not very supportive of diet-cancer relationships; they are often done in homogeneous populations with a narrow range of dietary differences. For example, Japanese and Chinese have low fat and high soy consumption, while Europe and the USA are the opposite. This is a big problem for the field because even today much of our understanding of diet-cancer relationships is based on these international variations in cancer compared to the FAO data. We don't have that for soy; we just have a series of case-control studies, though they are generally suggestive of a protective effect. The animal studies show mixed results. Of the 4 studies on soy and mammary cancer, for example, 2 show a protective effect and 2 do not. So we need to look deeper for the cause of these differences. It looks like the isoflavones are the most likely candidates to be the effective protective agents. The protease inhibitors are extremely potent chemopreventive agents; they really work. Whether or not there is enough in soybeans to make a difference is a big question. There may be enough, but it is a difficult question to answer. The isoflavones are absorbed, you can measure them and their effects. They clearly can exert physiological or biological effects. If some of the proposed studies are funded, in the next two years we will learn a great deal about these compounds.

Mark feels that his new review of the literature may launch this as a whole field of serious research, and may stimulate much new investigation in this new field. A new case-control study, titled "Dietary effects on breast-cancer risk in Singapore just published in *The Lancet* (18 May 1991, p. 1197-1200), was so supportive of a protective effect of soy against cancer that it alone will stimulate more thinking about this area. The authors of that study did not set out to look solely at soy, but they noted that not many epidemiological studies have been conducted on soy. Those that have, have been quite supportive in showing a protective effect against cancer.

In about 2 months, NCI will be giving out some money for further study of the isoflavones in soybeans, to see how they are metabolized and their other effects. If things go well, with good results over the next 2 years, they might be in a position to do a human intervention study to look seriously at the effect of soy in preventing or curing cancer. Address: Diet and Cancer Branch, National Cancer Inst., 9000 Rockville Pike, EPN–Room 202, Bethesda, Maryland 20892-6130. Phone: 301-496-8573.

2989. **Product Name:** [GranoVita Organic Whole-Grain Tofu Ravioli].
Foreign Name: GranoVita Bio-Vollkorn Tofu-Ravioli.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1991 June.
Ingredients: Pasta shell: Whole wheat flour, egg, mineral water. Filling: Bio-Tofu (water, soybeans*, calcium chloride), sea salt, fine bread crumbs, Parmesan cheese, spices. * = Organically grown.
Wt/Vol., Packaging, Price: 250 gm poly pouch. Retails for DM 2.98 (6/91, Hamburg, Germany).
How Stored: Refrigerated.
Nutrition: Per 100 gm.: Protein 12.8 gm, fat 4.8 gm, usable carbohydrates 36.5 gm, calories (kcal) 240 (1021 kJoules).
New Product–Documentation: Label sent by Anthony Marrese of Hamburg. 1991. June. 6 by 7.5 inches. Poly pouch. Red, light green, and dark green on white. Illustration of a plate, spoon, and pot surrounded by green and red vegetables. "Vegetarian. Contains no meat."

2990. Lindsted, Kristian; Tonstad, S.; Kuzma, J.W. 1991. Body mass index and patterns of mortality among Seventh-day Adventist men. *International J. of Obesity* 15(6):397-406. June. [50 ref]
Address: School of Public Health, Loma Linda Univ., Loma Linda, California 92350.

2991. Toufexis, Anastasia. 1991. Playing politics with our food. *Time*. July 15. p. 57-58.
• ***Summary:*** "While the Food and Drug Administration reforms labels, the Agriculture Department drags its feet, thanks to its cozy relations with the meat industry... 'Everything in nutrition is political...' Part of the grocery garble stems from America's hodgepodge system of food regulation. Three federal agencies have jurisdiction. The FDA oversees all items sold in supermarkets except for meat, poultry and any products that are more than 2% meat. These products are monitored instead by the U.S. Department of Agriculture. Food advertising, meanwhile, falls within the bailiwick of the Federal Trade Commission... Unlike its sister regulatory agencies, the USDA is obliged to promote as well as police agricultural products. Nutritionists are quick to point out that the department is responsible for regulating most of the fattier–unhealthier–elements of the diet. But its mandate to promote the consumption of beef, pork, dairy products and eggs gets in the way of its concerns for

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American health..."

The Secretary of Agriculture is Edward Madigan, a former Congressman from the Illinois farm belt, who took office in March 1991 and is strongly committed to food producers rather than consumers. "The most glaring example of this bias involves a foiled attempt to revise the USDA's dietary guidelines. In 1958 the department introduced its 'basic four' food-group chart, which divided food into four major categories: milk, meat, vegetables and fruits, and bread and cereals. The groups were quickly branded into the brain of every American schoolchild as of equal importance.

"But as research into heart disease, cancer and nutrition proceeded over the past 35 years, the chart emerged as seriously misleading, more of a political construct than a guide to healthy eating. It overemphasizes meat and milk–a credit to the influence of those industries, whose lobbyists have been active and generous in Washington [DC].

"To better reflect current nutritional knowledge, the USDA began redrawing the chart three years ago. The result: the 'eating-right pyramid.' While the new guide keeps the basic four food groups, it dramatically shifts the dietary balance. Cereals and grains, fruits and vegetables are stressed by being placed in the broad lower area of the pyramid; meat and dairy products occupy a narrower upper portion; and fats and sweets are consigned to the 'use sparingly' tip.

"Unhappy with the new geometry, the meat and dairy industries began pressuring Secretary Madigan to prevent the pyramid from being publicly disseminated. One month after he took office, just as the pyramid was going to press, Madigan caved in... Consumer activists cite other instances that expose the USDA as industry's captive. New York University's Nestle relates how the department pressed for changes in the language of the 1988 Surgeon General's *Report on Nutrition and Health,* which she helped write. 'It was very clear to me that the report was not going to say "eat less meat."' In fact, when the report came out in 1989, it advised the public only to 'choose lean meats.'"

The 1980s were a decade of deregulation as the Reagan administration tried to get government off the back of business. "Industry and government grew cozier. A watershed occurred in 1984 when Kellogg's introduced a new marketing campaign for its All-Bran cereal. The company actually got the National Cancer Institute to agree to put a message on its package stating that diets high in fiber (and low in fat) may reduce one's risk of cancer. The FDA was horrified by this implied product endorsement. Under FDA rules, any product marketed with a claim that it prevents disease is subject to testing for safety and efficacy as a drug...

"Before long, food slogans were so out of hand that individual state regulators felt compelled to step in. Attorneys from nine states, including New York, California, Texas and Florida, formed a task force that became known as the 'food police.' They brought dozens of suits against manufacturers for misleading labels and ads, levied fines and seized goods...

"Suddenly, the gospel of deregulation lost its allure, and the idea of uniform national standards came to be regarded as a form of salvation...

"Congress, prodded by a coalition of 25 consumer and medical organizations, came up with the 1990 Nutrition Labeling and Education Act. Faced with a clearly popular bill, the President felt compelled to go along."

2992. Nordquist, Ted. 1991. New developments with Aros Sojaprodukter AB in Sweden (Interview). *SoyaScan Notes.* Aug. 23. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** The Aros plant has been moved from Örsundsbro (just southwest of Uppsala) to Tingsryd in the south of Sweden. Aros is working with Trensums Musteri, a juice company located in Tingsryd, located 20 or 30 minutes miles to the north of the southern seaside city of Karlshamn. Both Tingsryd and Karlshamn are located in Blekinge County. Ted and his family will continue to live in Örsundsbro, but his office and the company administration will be moved to Enköping, about 15 minutes from his home. He will continue to commute to Tingsryd when necessary. The company is now getting ready to sell soymilk equipment to interested buyers.

Nutana in northern Europe is now being sold and Ted's company is trying to buy it. Ted first learned (in Copenhagen, Denmark) that Nutana was going to be sold from Jon? Olsen, the marketing director for Danska Nutana. Only recently did he learn that it could be sold to a company other than Hundedogs? Adventista. Address: CEO, Aros Sojaprodukter, Bergsvagen 1, S-19063 Orsundsbro, Sweden. Phone: 0171-604 56.

2993. Drosihn, Bernd; Hess, Albert; Nagel, Christian. 1991. The tofu industry and market in West Germany (Interview). *SoyaScan Notes.* Aug. 25. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Bernd is in the USA with Albert Hess of Das Tofuhaus. They just had a nice visit to Northern Soy in Rochester, New York. Svadesha Vegetarische Feinkost bought Byodo Naturkost in April 1991 and is now in financial trouble because the owners do not understand the tofu market; they are trying to sell Byodo, which is now also having trouble.

Since Huegli bought Soyastern and Yamato, the two companies have steadily lost market share. For the past two years, Soyastern's quality has been very poor, and they have sometimes been unable to fill orders–but that has improved somewhat since they were bought by Huegli (a Swiss company). In 1988 Soyastern alone had 35-40% of the German tofu market, and now it is 20-25%. Soyastern's actual output of tofu stayed about constant but the market

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as a whole is growing well. Yamato has always been well organized. Another problem is that Huegli is seen by natural food store owners as a "big food company" and these owners do not want to support such companies by buying from them.

Roughly 20 tonnes/week of tofu are now made in Germany, and that is growing at 10-15% a year. Of total sales, roughly 35% is plain tofu and 65% is tofu products. There are many more tofu products. Tofu and tofu products now have much more shelf space in food stores, and many stores that used to carry only one brand of tofu now carry 3-5. Roughly 90% of the tofu sold in Germany is made with organically grown soybeans; Hensel is one major company whose tofu is not organic. A rapidly growing proportion of these organic soybeans are now grown in Europe. The main countries supplying organic soybeans for tofu in Germany, in descending order, are: USA, France, Austria, Hungary, and Germany (the latter grows 20-30 tonnes/year). Some smaller companies (such as Taifun, Albert Hess of Das Tofuhaus, and Christian Nagel) have all been growing well. The largest tofu manufacturers in Germany are: (1) Huegli with 40% of the German tofu market–composed of Soyastern, Yamato, and KMK–is by far the biggest; they also have some brands in the Reform market, and in canteens. Hensel, which has strong connections with Huegli, is not a manufacturer; their tofu is produced at KMK (Kurhessische Molkerei Kassel) in Kassel, which is owned by Huegli. In early 1990 Huegli purchased Heirler, the biggest distributor of fresh health foods in West Germany, and also a brand name in 2,000 Reform Houses in Germany; (2) DE-VAU-GE (GranoVita brand), with 10% of the market, is big in the Reform market; (3) Christian Nagel Hamburg Tofu Manufaktur, 7-8%; (4) Geestland in Bremerhaven, 7-8%; (5) Das Tofuhaus in Lautersheim, 7-8%; (6) Taifun; (7) Svadesha; (8) Soto. Bernd's company is still small but he now makes much more tofu than tempeh, and his sales are growing fast. He got his tofu equipment from Tofurei Jutta Schoenemann near Nuremberg–which was run by a housewife and her husband. They bought their equipment in Japan, made 100-200 kg/week of tofu, and went out of business about 2 years ago. He is not aware of any companies that have gone out of business during the past year, although Svadesha and Byodo are having a hard time.

A major change is that KMK is now producing the tofu for Soyastern and Yamato. Yamato's plant will be closed at the end of this year. It is less expensive for Huegli to produce all of their tofu at one place. Thus by early 1992 KMK will be the largest tofu plant in Germany. It is not clear what will happen to Klaus Gaiser; he does not want to move away from Tuebingen. Thomas Karas is probably living in Cologne; he was very lucky to be able to sell his company to Huegli though he had debts of about 1 million marks. Huegli assumed only one-fourth of these debts. Soyastern's two main sources of capital (one bank and the man who sold him the chicken factory) took over one-fourth of the debt. Another one-forth was taken over by his supplier of soybeans, and Thomas took on the last one-fourth himself.

The price of tofu in the USA is much lower than in Germany, except for Heuschen-Schrouff tofu, which is sold in Asian food stores. Tofu sold in Asian food stores in Europe is generally much less expensive than that sold in natural food stores. Huegli is trying to recover the market share they have been losing by selling their tofu less expensively; this will probably bring down all tofu prices in Germany–but Bernd hopes it does not fall to the American level.

The organic German Soyfoods Association has had a struggle. People are now encouraging Klaus Gaiser to establish an association of all soyfoods manufacturers in Germany. Another big question is how soyfoods manufacturers will relate to the unified European Community in 1992. Address: 1. Founder and president, Viana Naturkost GmbH, Cologne; 2. Owner, Das Tofuhaus; 3. Owner Hamburger Tofu Manufaktur. All: Germany. Phone: (02233) 41323 or 221-121175.

2994. Bloyd-Peshkin, Sharon. 1991. The health-fraud cops: Are the quack busters consumer advocates or medical McCarthyites? *Vegetarian Times*. Aug. p. 48-59, 88.
• ***Summary:*** William Jarvis, PhD, is founder (in 1977) and president of the NCAHF (National Council Against Health Fraud). He is convinced that orthodox medicine has all the answers, and that everything else (including chiropractic) is quackery. So they are quackbusters. Like the American Medical Association (AMA), Jarvis' group opposes nonconventional treatments–such as optometry, acupuncture, midwifery, chiropractic, etc. He is a professor of preventive medicine at Loma Linda University in southern California. A photo shows Jarvis. Address: Assoc. editor, Vegetarian Times.

2995. **Product Name:** Granose Vegetarian Wholefood Kitchen Vegetarian Sausages.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Stanborough Park, Watford, Herts., WD2 6JR, England.
Date of Introduction: 1991 August.
Ingredients: Water, textured defatted soya flour (defatted soya flour, iron, thiamin, riboflavin, vitamin B-12), hydrogenated vegetable oil, rusk, stabiliser (methyl cellulose, of plant origin), sea salt, hydrolysed vegetable protein, herbs, spices, colour (beetroot red).
Wt/Vol., Packaging, Price: 270 gm paperboard box.
How Stored: Frozen.
Nutrition: Per 100 gm.: Energy 190 kcal (calories; 790 kJ), protein 6.9 gm, carbohydrate 12 gm, fibre 4.5 gm, fat 13 gm.
New Product–Documentation: Part of label sent by Leah Leneman. 1992. Jan. 2. 6.5 by 3.75 by 1.12 inches. Black, blue, white, and yellow on gray. Color photo of browned sausages on a plate with sliced tomatoes, green beans, and

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sliced browned potatoes. "Individually frozen sausages of seasoned soya protein. Six sausages. No artificial colours or preservatives."

2996. **Product Name:** Naturally Tofu Ice Cream (Frozen Dessert Mix) [Strawberry].
Manufacturer's Name: Sovex Natural Foods, Inc. (Marketer-Distributor).
Manufacturer's Address: 9104 Apison Pike, Box 310, Collegedale, TN 37315. Phone: 800-227-2320 or 615-396-3145.
Date of Introduction: 1991 August.
Ingredients: Crystalline fructose, soy oil, malto-dextrin, corn syrup solids, tofu, sodium caseinate [from cow's milk], natural strawberry flavors, beet juice powder, sea salt, soy lecithin, cellulose gum, guar gum, xanthan gum, carrageenan.
Wt/Vol., Packaging, Price: 16.7 oz can. Later 22 oz can.
How Stored: Shelf stable.
New Product–Documentation: Ad in Natural Foods Merchandiser. 1992. December. Soyfoods 2000 (Special supplement insert, p. 5). Shows 2 cartons of Tofu Ice Cream mix (vanilla and strawberry flavors). Talk with Sovex. 1992. Nov. 30. The strawberry flavor was introduce in about the summer of 1991.

Notice on side panel of Better than Burger? package. 1993 Oct. "Have you tried Naturally Tofu products: Better Than Milk? Ice Creme?"

Product with Label (Strawberry) and leaflet sent by Sovex. 1993. Oct. 12.

2997. Rabheru, Neil. 1991. New developments with Unisoy, soymilk, and Haldane Foods in England (Interview). *SoyaScan Notes.* Sept. 16. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Unisoy was acquired by the Haldane Foods Group on 21 Dec. 1990. This has proved to be a very positive development for Unisoy. It is a great honor and very satisfying for Neil to be part of the same team with Dwayne Andreas and Peter Fitch, because both are very forward looking, energetic, and supportive men. The company now makes only soymilk. Other companies in the Haldane Foods Group now make the other soy products that Unisoy used to make–which is more efficient. For example, Genice Foods Ltd. makes soy margarine, yogurts, and ice creams. Unisoy plans to expand into a larger plant, probably at a new location. That phase, which will begin within 12 months, will involve an investment of £3 to £4 million. He is presently meeting with APV in connection with a new soymilk plant. Unisoy has not launched any new products since mid-1990. Neil has been too busy absorbing the Granose line into his production. Unisoy is now making all the soymilk that Granose used to buy from DE-VAU-GE, to use in continuing the Granose line of products that contain soymilk. Thus the Unisoy/Haldane now makes the profit that DE-VAU-GE used to make.

The acquisition of Granose by the Haldane Foods group was the most brilliant move one can imagine. 90% of the products that Granose was buying from other companies can be manufactured within the Haldane Foods Group. Granose's best products included their margarine, soymilk, ice cream, and yogurt. Peter Fitch deserves the credit for this stroke of

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genius.

The Haldane Foods Group now sells 4 soymilk brands, all now made by Unisoy: So Good (which used to be purchased from DE-VAU-GE; Sanitarium Foods in Australia only registered their brand in Australia and New Zealand), Granose, Unisoy, and White Wave. Neil believes that Unisoy makes the best-tasting soymilk in Europe today. Recently there was an independent magazine survey of all soymilks on the market and the Granose brand made by Unisoy won first, second, sixth, and ninth places. The UK soymilk market is extremely competitive and the prices are much lower relative to cow's milk than they are in the USA. On average at all retail outlets, cow's milk retails for about £0.50 per liter versus £0.59 to £0.79 per liter for soymilk. Thus soymilk in the UK retails for about 38% more than cow's milk.

Note: In the USA, cow's milk retails for about $0.72/liter and soymilk retails for about $1.86/liter or about 2.6 *times* as much as cow's milk. The current exchange rate is 1.79 U.S. dollars = 1 British pound. Thus U.S. cow's milk would sell for £0.40/liter (20% less than British cow's milk) and soymilk would sell for £1.04/liter (about 45% more than British soymilk).

In the UK most of the soymilk is sold in the multiples (supermarkets) in half liters (500 ml) cartons, and that is where the greatest growth is. There, soymilk is only about 20% more expensive than cow's milk. (Note: In the USA very little soymilk is sold in supermarkets.)

In the UK, Provamel (made by Alpro in Belgium) has about 42% of the total soymilk market. The four brands made by Unisoy have about 35-37%. The remaining 21-23% is divided among Sunrise, Plamil, and a few others. There is very strong soymilk brand loyalty in the UK.

Unisoy increasingly refers to itself as "the soyamilk division of Haldane Foods Group." The "Milk 'n' By-Products Ltd." part of the name will be dropped very shortly.

The last part of the soyfoods market that the Haldane Foods Group will attempt to capture is tofu, since Cauldron Foods has a very big lead on Haldane in this market. The Granose line of dry mixes used to compete directly with the Haldane Food Group's Hera line. Now all these products are made at one location.

The relationship between ADM, British Arkady, and the Haldane Foods Group has changed. The Haldane Foods Group is no longer part of British Arkady; both are now on the same level on the organization chart, and both report directly to ADM's European headquarters (ADM International Ltd. in England; John R. Mahlich, managing director). Peter Fitch used to work for British Arkady before the Haldane Foods Group was formed. Address: Unit 1, Cromwell Trading Estate, Cromwell Rd., Bredbury, Stockport, Cheshire SK6 2RF, England. Phone: 061-430 6329.

2998. McDermott, Ron. 1991. New developments in the Loma Linda Adventist Health Study, vegetarianism in America, and Worthington Foods (Interview). *SoyaScan Notes.* Oct. 15. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** A third phase of the Loma Linda Adventist Health Study is planned in order to further investigate some of the findings from the second study. For example, new evidence has shown that Seventh-day Adventists (SDAs) who consume larger amounts of nuts (such as walnuts, almonds, etc.) have lower incidence of heart disease. This seems contradictory since nuts have a high fat content. Gary Fraser at Loma Linda, the current principal investigator (PI), is now writing a grant proposal to NIH (National Institutes of Health). NIH sees this as a unique opportunity since SDAs are the only large organized group with a significant number of vegetarians.

Ron attended the second International Congress on Vegetarian Nutrition. Whereas the first congress in 1987 emphasized the *adequacy* of a vegetarian diet (i.e. it is safe and adequate; you can live on it without fear), the second one in 1992 emphasized the *benefits* of a vegetarian diet (it is healthier than the standard American diet and can protect you from diseases such as heart disease and cancer). This represents a major step forward. The proceedings will be published and the main articles should appear soon in the *American Journal of Clinical Nutrition.*

Worthington now has a professional public relations (PR) agency. They can up-link onto a satellite and send a video to various TV news companies. Worthington feels an increasing need to find the best way to communicate their message in a way that people can really hear and accept it.

Worthington has been doing a lot of focus groups related to meat consumption among 3 groups of people. (1) The meat restrictors, comprising 40% of the U.S. population, are trying to cut back on red meat consumption; most of them replace it with poultry; (2) The vegetarians; (3) Morningstar Farms users. The goal to is find out how Worthington can best communicate its message to each segment, label and package its products, etc. For example, what is the effect of writing "meatless" versus "vegetarian" on a package. Worthington has found that vegetarians are now much more accepting and less critical of people who are partial vegetarians but still eat some flesh foods. Most people become vegetarians for health reasons, but they soon add other reasons such as ethical reasons related to eating animals or to protect the environment. Address: Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

2999. Dinshah, H. Jay; Dinshah, Freya. 1991. How Jay and Freya got involved with the vegetarian and vegan movements in the USA (Interview). *VegeScan Notes.* Oct. 18. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Jay's father, who was from India, was a

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vegetarian teacher in America. He specialized in color therapy, but vegetarianism was very much a part of his life and teachings. He raised his whole family as lifetime lacto-vegetarians. Jay learned about veganism when he was about age 23 and soon after that, in 1957, he became a vegan. Jay got involved with vegetarianism as a movement through a book by Geoffrey Rudd titled *Why Kill for Food.* He imported copies to the USA from England and sold them. In May 1960 he published the first issue of Ahimsa–which is still being published. Jay founded the American Vegan Society in 1960 (which he believes is the second oldest existing American national vegetarian society after the American Natural Hygiene Society [ANHS]. Note: For a differing view, see K. Akers. 1991. Re: The oldest vegetarian society in America), then the North American Vegetarian Society (NAVS) in the early 1970s. Jay helped to organize the North American Vegetarian Society, which was created with two goals: (1) To bring about a complete renaissance of the vegetarian movement in the United States and Canada, and (2) To organize the 23rd Congress, which was held 16-28 Aug. 1975 at the University of Maine, Orono, Maine.

Freya, a lifetime vegetarian, has been a vegan since 1959, and the Secretary of the American Vegan Society since 1960. Married to AVS President H. Jay Dinshah, she is an accomplished author, lecturer, and teacher.

Jay is quite interested in the history of vegetarianism, but is too busy working to educate people about vegetarianism now that he doesn't have the time to historical research. He feels vegetarians owe a great debt of gratitude to Seventh-day Adventists for their pioneering work in vegetarianism and health foods. He has a lot of books on vegetarianism but all are in boxes for lack of space. Address: American Vegan Society, 501 Old Harding Highway, Malaga, New Jersey 08328. Phone: 609-694-2887.

3000. Register, U.D. 1991. Work with vegetarian diets at Loma Linda University (Interview). *VegeScan Notes.* Oct. 21. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Dr. Mervyn G. Hardinge did pioneering work with vegetarian diets at Harvard Univ. with Dr. Fredrick J. Stare. Dr. Hardinge has retired from Loma Linda University but he still lives in the area.

There is now a vast body of medical research on Seventh-Day Adventists based in part on two large SDA Health Studies. These are mostly epidemiological studies on a large number of vegetarian and non-vegetarian Adventists. The first study started in 1960 and the second in the mid-1970s. Contact Dr. Paul Mills, or Dr. Gary Fraser at the closely related Center for Health Research, both at Loma Linda University. More than 180 studies have been published.

The Seventh-day Adventist Dietetic Association is still active (Box 75, Loma Linda, California 92354. Phone: 714-824-4599. Contact Georgia Hodgkin).

In about 1970 Dr. Register gave a speech on vegetarian diets in California. Following that speech there seemed to be a rapid rise of interest in vegetarianism among nutritionists and dietitians. Then he spoke to the Michigan Dietetic Association, the Massachusetts Dietetic Association, and the American Dietetic Association. At each speech he distributed various publications on vegetarianism, such as Dr. Hardinge's articles, 3 weekly diet plans, etc. The talk was published in March 1973 on the *Journal of the American Dietetic Association.*

Concerning Ellen G. White's teachings on vegetarian diets, Dr. Register thinks that her view is most clearly expressed in her book *Counsels on Diet and Foods.* She felt that "the original diet" for humans was the one described in the Bible in Genesis, consisting of grains, fruits, nuts, and vegetables. It was contrary to God's plan to have the life of any creature taken. But in the chapter titled "Extremes in Diet" she discusses the potential dangers of going to a total vegetarian diet too rapidly. She said that the time may come when we will have to dispense with milk and eggs in the diet, but we must wait until the Lord prepares the way. Part of this preparation may have been the discovery of vitamin B-12 and dissemination of the knowledge of its importance to those who consume no animal products. Most Adventists are lacto-ovo-vegetarians. He is now conducting a study on the levels of methylmalonate and homocysteine in the blood of 19 total vegetarians [vegans]; six of them have low serum vitamin B-12. There is a substance called methylmalonate, and in order to metabolize it the body needs a B-12-dependant enzyme. Elevated levels of methylmalonate in the urine indicating a low serum level of vitamin B-12 and a metabolic limitation. Other studies on people who were unable to absorb vitamin B-12 properly showed that they developed elevated levels of homocysteine in the blood and urine.

Note: Homocysteine is a naturally occurring amino acid not found in proteins. When methionine loses its methyl group, it becomes homocysteine. Methylmalonate is an important intermediate in fatty acid metabolism. Address: Dep. of Nutrition, Loma Linda Univ., Loma Linda, California 92354. Phone: 714-824-4365.

3001. McDermott, Ron. 1991. Early history of Loma Linda Foods and other companies acquired by Worthington Foods (Interview). *SoyaScan Notes.* Oct. 22. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** After Worthington purchased Loma Linda Foods, 2 pallets loaded with storage boxes of old Loma Linda records and documents arrived. Ron, who used to work at Loma Linda in the early 1970s, has been going through these carefully for the past 6 weeks. There are some very interesting materials from both the Loma Linda history and the product manufacturing viewpoints. He is trying to save and file valuable materials (such as letters from Dr.

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Harry W. Miller), and discard what is not important.

When he is done with this, Worthington will have, in addition to its own history and that of its decade of work with Miles Laboratories, a wealth of information on the history of Loma Linda Foods, International Nutrition Research Foundation (INRF, started by Harry Miller and given to Loma Linda Foods), Battle Creek Foods, and Madison Foods, all filed in their archival vault.

The goal of the World Food Service in Washington, DC, is to disseminate the best product formulas and technology worldwide to Adventist food companies. Address: Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

3002. Mills, Paul. 1991. The Center for Health Promotion at Loma Linda University (Interview). *SoyaScan Notes.* Oct. 31. Conducted by William Shurtleff of Soyfoods Center. [2 ref]

• ***Summary:*** The Center for Health Promotion at Loma Linda University was established in 1983 by Dr. Richard H. Hart, a physician graduate of Loma Linda, who is still the director. He also had a Doctor of Public Health degree from Johns Hopkins University. It has a strong clinical orientation, focusing on lifestyle intervention activities. For example, they have 6-7 different programs aimed at people who want to change one or more aspects of their lifestyle. They have programs in smoking cessation, weight reduction (using the Optifast program), stress reduction, alcohol and drug recovery (called Clear View), executive fitness (wellness type programs in which they bring in corporate executives based on contract). The Center is an independent for-profit, client-oriented institute within the university. Address: Loma Linda Univ., Loma Linda, California 92354. Phone: 714-824-4496.

3003. Mills, Paul; Beeson, Larry. 1991. Seventh-day Adventist health studies (Interview). *VegeScan Notes.* Oct. 31. Conducted by William Shurtleff of Soyfoods Center. [2 ref]

• ***Summary:*** Two major epidemiological studies on Seventh-day Adventists (SDAs) have been conducted by Loma Linda University. In 1958 two researchers at Loma Linda University, Richard T. Walden and Frank R. Lemon, wanted to gather information on lifestyles among SDAs. So they collected addresses, probably starting with church directories or the mailing list of the *Pacific Union Recorder* (a church periodical). In 1958 they mailed out a very short (3 inches long) and simple demographic questionnaire, asking only questions such as the name, date of birth, place of birth, sex, and education etc. for each person in the family. No questions concerning "exposure" or lifestyle (diet, frequency and amount of meat or dairy product consumption, exercise) were asked. From the response, they identified about 58,000 SDA individuals in California.

Then in 1960 Dr. E. Cuyler Hammond, an American Cancer Society administrator, obtained a random sample of 1 million people across the USA and sent them a 4-page dietary/lifestyle questionnaire. Waldon and Lemon got this 4-page questionnaire from Dr. Hammond, added 2-3 Adventist-specific questions at the end (such as age of baptism into the church, etc.), then in 1960 sent it to their list of 58,000 SDAs. Of those, about 25,000 SDAs (17,000 females and 8,000 males) were willing to participate and responded by filling out the lifestyle questionnaire and returning it. The researchers gathered incomplete death certificate statistics from 1958 and 1959; it is not clear who funded this first phase of the project. Then from 1960 to 1965 they did intensive "death certificate ascertainment." All the "tracing" was done by hand, without computers, with phone calls once a year to each person to ascertain if they were living or dead; if they were dead Walden and Lemon wrote to Sacramento for a death certificate. In 1965 the funding ran out. Then Dr. Phillips and Dr. Kuzma got extra funding from NIH to continue following that cohort/group through 1980. After 1965 "record linkage" was conducted using computers with the State of California death certificate files.

This first major epidemiological study of chronic disease in Seventh-day Adventists was called the "Adventist Mortality Study." It ran from 1960 to 1980. Initially funded and administered by the American Cancer Society, it studied all causes of death in 1 million Americans, including 25,000 SDAs in California who participated. Recently, additional funds were obtained by Loma Linda from an outside organization to update the mortality data for the SDA group through 1986–by ordering death certificates from those who died from 1980 to 1986.

In about the mid-1970s Loma Linda University School of Health published an undated 2-page leaflet titled "Summary of Results of Adventist Mortality Study–1958-65." (It as re-issued in 1981, unchanged except that it was now dated.) It states that "During the period 1958-65 a study was conducted by Loma Linda University among approximately 50,000 California Seventh-day Adventist church members. [Note: 25,000 of these SDAs did not fill out the 4-page questionnaire, but the causes of their death were ascertained from death records.] During this eight year period all deaths among Adventists were identified and the cause of death was determined." Graphs on the leaflet shows that, compared with non-Adventist Californians matched for age and sex, Adventists age 35 and over have (among other things) only 20% as much lung cancer, 13% as much liver cirrhosis, 55% as much coronary heart disease, 53% as much stroke, 55% as much diabetes, 13% as much suicide, and 72% as much breast cancer. The life expectancy for all California men and women at age 35 was 71 and 77 years respectively, whereas for SDA men and women at age 35 it was 77 and 80 years respectively.

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The second major epidemiological study on SDAs, funded by the National Institutes of Health (NIH) and conducted by Loma Linda University, is called the "Adventist Health Study" or "New Cancer Incidence Study." It started in the 1974 and was designed and implemented by Dr. Roland L. Phillips of the Department of Biostatistics and Epidemiology, Loma Linda University. He worked most closely with Dr. Jan W. Kuzma.

One major aim of this study was to determine which components of the SDA lifestyle may account for their lower risk of death from many different diseases not strongly related to smoking or drinking. Adventists have a high interest in health; many are vegetarians and make frequent use of unrefined foods. Other possible factors that might influence the low death rates are high educational background, good medical care, and less stress and anxiety.

This study was conducted solely on 34,198 SDAs throughout California. Dr. Phillips had these Adventists fill out a much more detailed questionnaire than the earlier 4-page questionnaire, specifically on dietary habits as they may be related to cancer incidence–that is newly diagnosed cancers. Only 4,000-5,000 SDAs in the second group were also in the first group. Roughly half of the SDAs are vegetarians, mostly lacto-ovo-vegetarian, and none of them smoke or drink alcoholic beverages. An important part of the study involved comparing cancer in Adventists and non-Adventists, including non-smoking non-Adventists. He obtained millions of dollars throughout his career to keep that study going. 1982 was the last year for which cancer incidence data was gathered, due to lack of funding from NIH. It is not clear why NIH discontinued the funding and efforts to determine why give a vague response. Thus no new data has been gathered since 1982, but Loma Linda had staff in the field until 1985 analyzing hospital cancer records for those people who were hospitalized up to 1982. And Loma Linda continues to analyze the data that was gathered up to 1982.

A number of popular articles resulted from the results of the second study, for example a March 1984 article in *Saturday Evening Post* titled "The Church Whose Members Have Less Cancer."

Paul has a bibliography titled "Bibliography of Health-Related Studies on Seventh-day Adventists Worldwide," which contains about 200 references. A great many of the citations in that bibliography are from the two studies discussed above.

The Center for Health Research, directed by Dr. Gary Fraser (who is both a cardiologist and an epidemiologist), was established as a research resource for all faculty within School of Public Health–not just of the epidemiology and biostatistics people who had traditionally done most of the research in the School of Public Health. They are not presently conducting any large or long term studies except for Dr. Fraser's work described above. But Dr. Fraser has just gotten a grant from the National Institute on Aging to do some studies of longevity in vegetarians using the data from the two major studies discussed above. Address: 1. Assoc. Prof. of Epidemiology, Dep. of Preventive Medicine; 2. Data manager, Adventist Health Study. Both: Loma Linda Univ., Loma Linda, California 92354. Phone: 714-824-4496.

3004. DE-VAU-GE Gesundkostwerk GmbH. 1991. Soja-Drinks und -Desserts [Soya drinks and desserts (Leaflet)]. Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany. 2 panels each side. Each panel: 20 x 20 cm. Undated. [Ger]

• ***Summary:*** See next page. Page 1 of this color leaflet shows three milkshakes surrounded by fruits. "The alternative. Non-dairy. Cholesterol-free. GranoVita–in Harmony with nature." Exclusive Neuform certification symbol. Page 2 describes how GranoVita soya drinks and desserts are made, and lists their benefits. Color photos show a field of soybean plants and a handful of yellow soybeans. Page 3 is titled "Exactly right for high-quality nutrition." Photos show Labels of 8 GranoVita products: Bio-Soja-Drink (unsweetened, or sweetened with apple extract without added sugar), Caroba Drink, Soja-Drink (strawberry flavored), Soja-Dessert (vanilla, or chocolate). Six of these products are different; four bear the Exclusive Neuform certification symbol. Two pairs are the same product, but one bears the Exclusive Neuform certification symbol. Page 4 compares the nutritional value of sweetened GranoVita Soja-Drink with whole cow's milk (3.5% fat), including the fatty acid composition. Recipes are given for Salad marinade, Strawberry muesli, and Cauliflower in sauce. Address: Lueneburg, West Germany.

3005. **Product Name:** Granose Tofu Paté [Tomato, Herb, or Mushroom]. Relaunched and renamed Granose Vegetarian Patés in late 1992.
Manufacturer's Name: Granose Foods Ltd.
Manufacturer's Address: Howard Way, Newport Pagnell, Buckinghamshire, MK16 9PY, England. Phone: (0908) 211311.
Date of Introduction: 1991 October.
Ingredients: Incl. organic tofu, vegetable oils and fats, spices and seasonings.
Wt/Vol., Packaging, Price: 200 gm squeezable tubes.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: SoyaFoods (ASA, Europe). 1991 2(2):7. "Tofu pate's from Granose." The patés have a shelf life of 9 months unopened and will keep for up to 4 weeks refrigerated after being opened.

Spot in SoyaFoods. 1992. Autumn. p. 5. "Vegetarian Cheese Spreads and Patés in a Tube." The launch of Granose's 3 new cheese spreads "coincides with the relaunch of Granose Vegetarian Patés, with improved recipes and smoother textures." Soya flour is now used in place of tofu.

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The name of one of the three flavors has been changed to Italian Style Tomato, and the tube has been reduced in size to 150 gm. One tube retails for £1.15.

3006. McDermott, Ron. 1991. New developments with Worthington Foods, Seventh-day Adventists, and vegetarianism (Interview). *SoyaScan Notes.* Nov. 5. Conducted by William Shurtleff of Soyfoods Center. Address: Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

3007. McDermott, Ron. 1991. The use of wheat gluten in foods by Seventh-day Adventist food companies (Interview). *SoyaScan Notes.* Nov. 25, and 23 Oct. 1992. Conducted by William Shurtleff of Soyfoods Center.

Summary: Most of the early meat alternatives made by Seventh-day Adventist food companies were based on wheat gluten, or wheat gluten and peanuts. His recollection is that Worthington Foods first used wheat gluten in Choplets, introduced in 1941. He is sure that Choplets contained wheat gluten from the day they were launched. Before Fry-Chik, an early Worthington product containing spun soy protein fibers, introduced in about 1965, most of Worthington's products were based on wheat gluten. In 1968-70 Worthington developed a new generation of products containing wheat gluten; the first of these was Prosage (rhymes with "Sausage"). For the first time, fresh (not dried) wheat gluten was combined with spun soy protein fibers and textured soy protein concentrates to give improved texture, flavor, and

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nutritional value (through protein complementarity). Later the spun soy protein fiber was removed but the textured concentrate remained. Miles Laboratories, which bought Worthington in March 1970, did a lot of further development on Worthington's products; Breakfast Links, Breakfast Patties, etc. Morningstar Farms Breakfast Patties, a meatless sausage, which are an improved version of Prosage, were introduced to the mass market in 1974, still featuring the gluten-soy combination. In 1979 Morningstar Farms Grillers (a meatless hamburger patty based on gluten and soy; the Worthington equivalent is FriPat) were also introduced into the mass market, again featuring the gluten-soy combination. More than any other company, Worthington took gluten-based products to new levels of sophistication, with improved flavor, texture, and nutritional value, by combining gluten and soy protein using proprietary techniques. In the early 1980s the gluten-soy combination came to be used in a host of Worthington's products.

Today, of Worthington's 180 products, approximately 90% contain wheat gluten. Many of the products contain a combination of textured soy protein (soy concentrates or flour or spun soy protein fiber) or soy protein isolates with the gluten. The process by which the soy and wheat are combined and the desired texture is developed is proprietary information. Whereas many companies would use only textured soy protein, Worthington prefers the soy-gluten combination for the 3 reasons given above.

The technical aspects of gluten use are interesting. In the Seventh-day Adventist (SDA) companies, there was a gradual evolution from the process requiring the washing of flour and dough (to wash the starch out, yielding fresh gluten), to the use of dry vital wheat gluten, which causes much less pollution into the sewage system.

Ron will look in Worthington's extensive files to try to find out when John Harvey Kellogg, Worthington Foods, and Loma Linda Foods first used wheat gluten in a commercial food product.

Trudy Cravens at Worthington is now developing a computerized database of their products, which they call an "elimination list." For example, if someone wanted to eliminate wheat from their diet, they could print a list of all products in which neither wheat nor gluten was an ingredient. Address: Vice President Research & Technology, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

3008. Worthington Foods, Inc. 1991. Add a Natural Touch to every meal (Ad). *Vegetarian Times.* Nov. p. 5.
• ***Summary:*** This full-page, color ad, with a 30 cent coupon, shows color photos of prepared Okara Patties, Harvest Bake, and Kaffree Roma (a toasted grain beverage). Address: Worthington, Ohio 43085.

3009. Lindsted, Kristian D.; Tonstad, S.; Kuzma, J.W. 1991. Self-report of physical activity and patterns of mortality in Seventh-day Adventist men. *J. of Clinical Epidemiology* 44(4/5):355-64. [47 ref]
• ***Summary:*** "The Adventist Mortality Study provides 26-year follow-up through 1985 for 9,484 males who completed a lifestyle questionnaire in 1960." Moderate activity was associated with a protective effect on cardiovascular and all cause mortality using two types of mortality. For all cause mortality, moderate activity was protective to age 95.6 years, and for cardiovascular mortality it was protective to age 91.5 years. Address: School of Public Health, Loma Linda Univ., Loma Linda, California 92350.

3010. Mohr, Teddric J. 1991. Since 1866: Battle Creek Adventist Hospital. Battle Creek, Michigan. 15 p. Illust. 28 x 14 cm.
• ***Summary:*** This booklet commemorates the hospital's 125th anniversary. It opened in Battle Creek, Michigan, on 5 Sept. 1866 under the name Western Health Reform Institute in response to the foresight and urgings of Ellen G. White. It was a small 2-story frame building with a 10-bed capacity; Patients were charged $5-7 per week for room, board, and medical care. Initially, it was under the medical leadership of Dr. Horatio Lay, an Adventist physician who specialized in hydrotherapy. James and Ellen White encouraged John Harvey Kellogg to enroll in medical school and provided financial support for his studies. In 1875, at age 23, John Harvey graduated from Bellevue Hospital Medical School, then recognized as the nation's leading medical teaching institution. He took over as head of the Institute on 1 Oct. 1876, at which time it contained only 20 patients. In 1876 Kellogg had renamed the organization Battle Creek Sanitarium. He explained that the new name, a variant of "sanitorium," would come to mean a "place where people learn to stay well."

The San reached its peak of development in 1928 with the completion of the Twin Towers addition. During this "grand hotel" era the staff numbered 1,800 and the San could accommodate 1,500 patients with its 32 buildings located on 27.5 acres of land. Dr. Kellogg called his medical philosophy "biologic living." Focusing on caring for the "whole person" (body, mind, and spirit), he espoused regular exercise, abstinence from smoking and drinking, plenty of fresh air and sunshine, the total elimination of meat from the diet, and the importance of whole grains–practices we consider enlightened today.

"Over the years, and especially in the 'roaring twenties,' the San guest list read like a virtual who's who of medical professionals, business leaders, sports legends, and entertainers. Henry Ford, John D. Rockefeller, J.C. Penney, President William H. Taft, Thomas Edison, Will Durant, Johnny Weissmuller, William Jennings Bryan and Amelia Earhart were just a few of the rich and famous who put themselves in the capable healing hands of Dr. Kellogg and

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the Battle Creek Sanitarium."

Also discusses the development of peanut butter and Granose Flakes, Lenna Cooper (one of the founders of the American Dietetic Association) and Dr. David Paulson (founder of the Hinsdale Sanitarium), W.K. Kellogg and the Sanitas Nut Food Co.

"As the principles of wholistic health care became accepted throughout the world, many new institutions arose, copying the techniques and therapies started by Dr. Kellogg and practiced at the San. The incentive for people to travel all the way to Battle Creek for treatment diminished. With the onset of the Great Depression in the '30s, the average number of patients fell from 1,300 to 300 and the San began to experience financial troubles.

"In 1942, after nearly a decade in receivership, the San twin tower complex was sold to the government to serve as an Army surgical and rehabilitation hospital.

"Yet the San continued to operate, moving its operations that same year into the nearby Fieldstone Building, which had been purchased by Dr. Kellogg in 1913. Though not as grand or large as the twin towers building, the facility was unique in its own right, as the largest fieldstone building in the United States. The San remained there until 1972."

"Today, there are 568 Adventist health care facilities operating in 88 countries and the Adventist Health System includes some of the most prominent hospitals in the U.S., such as Loma Linda University Medical Center, Kettering Memorial, Florida Hospital and Hinsdale Hospital... Battle Creek Adventist Hospital, has become southwest Michigan's leading provider of mental health and addiction treatment." It has the capacity to treat over 150 people on an inpatient basis. Address: Battle Creek, Michigan.

3011. Rucker, Chris; Hoffman, Jan. 1991. The Seventh-day diet: How the "healthiest people in America" live better, longer, slimmer–and how you can too. New York, NY: Random House. 232 p. Foreword by John Scharffenberg, M.D. Index. 24 cm. [46 ref]

• ***Summary:*** This book introduces the Seventh-day Adventist low-fat vegetarian diet and health principles without their religious underpinnings but with many quotations to the writings of Ellen G. White, an Adventist pioneer. For example, concerning what is now called atherosclerosis, she wrote in 1896: "Both the blood and the fat of animals are consumed as a luxury. But... these should not be eaten. Why? Because their use would make a diseased current of blood in the human system.

Adventists, whether vegetarian or not, are less likely to get cancers of the breast, ovaries, bladder, prostate and pancreas than the rest of the U.S. population. Male Adventists live an average of 8.9 years longer than non-Adventists, and women 7.5 years longer. And the differences between vegetarian and nonvegetarian Adventists provide some of the best evidence of the health advantages of a vegetarian diet. For example, studies show that whereas nonvegetarian male Adventists get only 56% as much heart disease as the U.S. average, vegetarian Adventists who eat eggs and dairy products get only 39%; and those who avoid all animal products 12%.

Page 105 notes that a major study involving more than 25,000 Adventist adults over a period of 20 years indicated that an Adventist woman aged 25 will, on average, live to age 88, which 9 years longer than her non-Adventist counterpart, and an Adventist man aged 25 will, on average, live to age 84, which is 12 years longer than his non-Adventist counterpart. Moreover, "It appears that the earlier one embraces the complete Adventist life-style, the greater quality of life and longevity once can expect."

In a section titled "Guide to creating your own meatless roast" (p. 116-17), tofu, shredded soy cheese, and soy flour are listed as protein sources. Soy-related recipes include: Pesto tofu manicotti (p. 121). In the "Natural Foods Shopping Guide" (p. 207) descriptions are given of Soyagen, soy cheese, soy milk, and tofu.

3012. Loma Linda University, School of Public Health. 1992. Bibliography of health-related research studies among Seventh-day Adventists. Loma Linda University, Loma Linda, California 92350. 10 p. Unpublished manuscript. Updated: 1 Jan. 1992. [208 ref]

• ***Summary:*** This bibliography gives access to a vast body of medical research on the health of Seventh-day Adventists, worldwide, who do not smoke or drink, and 50% of whom are vegetarians–mostly lacto-ovo. Most of these publications have appeared in peer-reviewed journals. Address: Loma Linda, California.

3013. *Health Food Business* (*London*). 1992. Haldane Foods is facing a German food invasion. Jan. p. 5.

• ***Summary:*** Haldane Foods finds itself battling with the very church from which it purchased Granose Foods in Jan. (or Feb.) 1991. With that multi-million pound deal, Haldane established itself overnight as Britain's major health food manufacturer. At the time, Peter Archer was managing director of Granose. "But now the German equivalent of Granose Foods [DE-VAU-GE], owned by the German branch of the Seventh Day Adventists, is launching itself in the UK against Granose with a range of similar products.

"The Germans have not only set up a UK company, but have also convinced Nigel Phillips, the Haldane Foods marketing and sales director, to become its managing director!"

A large color photo shows Graham Keen in front of the Granose offices and sign. He has joined the Haldane Foods Group as Sales and Marketing Director. For the previous 14 years he was sales director of Northumbrian Fine Foods.

3014. *Health Food Business* (*London*). 1992. GranoVita

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launches 34 products and signs exclusive six-month deal with Brewhurst. Jan. p. 5.
• ***Summary:*** GranoVita UK will be launching 34 products in its first wave in Dec. 1991. In Jan. or Feb. 1992 they plan to add another dozen or so products to their line. Nigel Phillips, the company's managing director, is putting soya milk products at the forefront of GranoVita's launch. "The majority of the business Granose used to do with Germany was soya milk based. Once this was switched to the UK (after Haldane purchased Unisoy), then GranoVita felt they must compete in the UK." GranoVita has given sole distribution rights to the independent health food trade to Brewhurst for 6 months.

3015. Persky, Victoria W.; Chatterton, R.T.; Van Horn, L.; Grant, M.D.; Langenberg, P.; Marvin, J. 1992. Hormone levels in vegetarian and non-vegetarian teenage girls: Potential implications for breast cancer risk. *Cancer Research* 52(3):578-83. Feb. 1. [75* ref]
• ***Summary:*** "Previous studies have suggested that hormonal factors associated with early age at menarche, late age at menopause, and late age at first full-term birth increase the risk of breast cancer in women. Cross-cultural studies have indicated that high-fat westernized diets may also be associated with increased breast cancer risk."

This study found that vegetarian diets in girls are associated with increased levels of DHS (dehydroepiandrosterone sulfate); it is present in both phases of the menstrual cycle, independent of other risk factors, and consistent with an increasing body of literature suggesting that DHS may be protective against cancer risk. Address: Epidemiology/Biostatistics Program, School of Public Health, Univ. of Illinois at Chicago, Box 6998, Chicago, Illinois 60680.

3016. Moulton, LeArta. 1992. Gluten malt is said to have therapeutic properties (Interview). *SoyaScan Notes.* Feb. 8. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** A woman (Rev. Grace Gordon, who sounded a bit cranky) has been calling her for 2 years telling her how gluten malt (consumed as a drink for 3-4 months) gets rid of wrinkles and makes one's natural hair color come back. Shirley, who owns a health food store, told her that an elderly nurse at Loma Linda Hospital in California is giving this gluten malt drink to patients who are very sick. Since she started taking it, she is less tired than usual. It is not a commercial product and it is not malted. It is a raw gluten-flour milk shake. One can make it at home as follows: Mix 3/4 cup gluten flour (not high gluten wheat flour; she buys 50 lb at a time of an Australian brand), 2½ cups of water, ¼ cup of nonfat dried milk, ¼ teaspoon Red Star active yeast (not nutritional yeast), ¼ teaspoon vinegar, 1 tablespoon lecithin (typically soy lecithin). Whirl in a blender. Add a natural sweetener to taste, then (if desired) carob powder and/or fruits (such as melon). Address: Provo, Utah. Phone: 801-377-2239 (in 1990).

3017. Lee, C.H. 1992. Re: Companies presently making soymilk in Australia. Letter to William Shurtleff at Soyfoods Center, Feb. 17–in reply to inquiry. 1 p. Typed, with signature.
• ***Summary:*** Sanitarium Health Food Co. (Wahroonga, NSW) makes So Good. Berrivale Orchards Ltd. in Berri, SA, makes Soypreme. Dairy Farmers Co-OPerative Ltd. in Wetherhill Park, NSW, makes Sungold. Tixana Pty Ltd. in Campsie, NSW, makes Soybev and Soy Kink. Queensland Soybean Food Products Pty. Ltd. in Brisbane, QLD, makes an unknown brand, and Blissquik Food Products in Townsville, QLD, makes Wonder-Vite Soymilk Drinks (plain or flavoured). Address: Owner, Blissquik Food Products, P.O. Box 197, Garbutt [37 Hammett St.], Townsville, QLD, Australia.

3018. Hodgkin, Georgia E. 1992. Re: Diet Manual. Letter to William Shurtleff at Soyfoods Center, Feb. 20–in reply to inquiry. 1 p. Typed, with signature on letterhead. [1 ref]
• ***Summary:*** "Yansee Wong's section of the Diet Manual was completed with the first listing of completed sections which was August 24, 1989. The project was voted at the Board meeting in February 1988. In talking with Yansee, she remembers turning in her rough copy around Christmas which would have been Christmas of 1988.

"You ask if the list is exactly as it was in the previous edition. It is not. I will send xerox copies of the 1982 edition, 1978, 1975, and 1971 revisions as well as the first edition, 1960 list of ingredients.

"The list of ingredients from the first edition is enclosed along with the title page of that manual." Address: Ed.D., R.D, Past President, Seventh-day Adventist Dietetic Association, Box 75, Loma Linda, California 92354.

3019. McDermott, Ron. 1992. Update on Worthington Foods (Interview). *SoyaScan Notes.* Feb. 20. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The Second International Congress on Vegetarian Nutrition will be held in Arlington, Virginia from 28 June to 1 July 1992. It is sponsored by Loma Linda University. Worthington sees a rapid growth of interest in vegetarianism, both professional and popular, in America.

1992 will be a watershed year in Worthington's history in terms of sorting out strategies, technologies, and approaches to the market. That will be followed by many new product launches.

Worthington had manufacturing problems with its line of tofu products. Their plant is now running at 150% of capacity, so they didn't have space for the tofu products. It was frustrating for the sales force and all concerned not to be able to put the necessary effort into the tofu products. Zoning

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restrictions in Worthington prevent them from expanding the size of the "footprint" on their property. They do not own any other land in Worthington, but they are about to start a second plant in the Zanesville area, about 50 miles to the east. Address: Vice President Research & Technology, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

3020. Lebowitz, Michael. 1992. America's best sources of information on Dr. John Harvey Kellogg (Interview). *SoyaScan Notes.* Feb. 27. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** As an antiquarian and former owner of Mt. Zion Books, Michael used to collect documents and material related to Dr. John Harvey Kellogg, but he sold (at cost) the entire collection, about 1,500 books to James Nix at the Loma Linda University Library. James is a superb source of information on this subject, and many other subjects related to the history of Seventh-day Adventism. He keeps much of what he knows in his head, but he travels a lot and thus is sometimes hard to get hold of. Michael had some catalogs and price lists from the 1930s and 1940s, but he recalls that there were also 4-5 pages of catalogs (both food and medical) in the back of some of Kellogg's larger books.

Jeff Reich in Sandpoint, Idaho, reprints many of Kellogg's old works and he owns many of Kellogg's books.

The University of Michigan also has a very complete collection of Kellogg materials.

There is also a Seventh-day Adventist man named David Lee in Loma Linda (P.O. Box 1844) who has studied Kellogg's material, made different synopses, and put them in his own booklet form, which he publishes privately. He is a wealth of information. He has studied that period of Adventist history, especially when they were starting to develop a medical school and how they went against their own belief system. Jim Nix would know how to contact him.

Lenny Jacobs has heard that there is a Kellogg library in Battle Creek, Michigan, maybe at the Kellogg Company (of breakfast cereal fame). Address: Chiropractor, Mt. Zion, West Virginia 26151. Phone: 304-354-6141.

3021. *Healthy Appetite* (*The*). 1992--. Serial/periodical. Worthington, Ohio: Worthington Foods, Inc. Vol. 1, No. 1. Feb. 1992. Frequency: Biannual. *

• ***Summary:*** Continues: *Tomorrow's Foods Today.* Address: Worthington, Ohio.

3022. Kushi, Michio. 1992. Introduction to *Culinary Treasures of Japan,* by John and Jan Belleme. 16 p. Jan. Unpublished manuscript.

• ***Summary:*** This manuscript, which was published in a condensed form in the actual book, tells the story of Mitoku and their work to export traditional Japanese natural foods to the Western world. Michio Kushi was instrumental in getting Mr. Akiyoshi Kazama involved in this work. Mr. Kushi, who became a World Federalist after World War II, came to the U.S. in Nov. 1949 to study at Columbia University. He continuously sought ways of establishing world peace, and increasingly came to believe that a proper diet is the basis for health, happiness, and peace.

In April 1966 the author's wife, Aveline, opened a small store named Erewhon in Boston. Michio began to search for a Japanese source for foods that Erewhon would sell. He was introduced to Mr. Kazama (who lived in Tokyo) through a Japanese friend, Mr. Obayashi, who resided at that time in New York City. Michio felt that Mr. Kazama understood his desire for foods of high quality. So Mr. Kazama "began his search for food producers and manufacturers who were sincere and willing to supply the kind of quality we requested. I know that for him, at that time, it was a great gamble. It was also a painstaking and slow step-by-step process."

Mr. Kazama was born on 1 Feb. 1930 in Yamanashi prefecture. He graduated from Waseda University in Tokyo, then was selected to study business in the United States. After arriving in Chicago, Illinois, he was drafted by the U.S. government to serve in the American Army in Korea and in Japan from 1956 to 1958. Upon his return to Japan, he settled in Tokyo where he became an import agent for a German company dealing in optics and electronics. After the Kushis contacted him, he became involved in the emerging natural food business. [He founded a company named Mitoku. Mi = Michio. To = Tomoko (Aveline's given name in Japanese). Ku = Kushi].

In 1968 Mr. Kazama made his first shipment of Japanese natural foods to Erewhon; the order was worth $3,000. The Kushis first met Mr. Kazama in Boston in 1970. Over the years, the volume of Mitoku's exports steadily grew, and expanded to Europe, Australia, and the Middle East. Today Mitoku ships its products to about 35 countries. Approximately 40% of Mitoku's exports go to America, 40% to Europe, and 20% to Australia and other regions. Annual sales are about $10 million. Among the major suppliers are Sendai Miso Shoyu Co. Ltd., Hatcho Miso Co. Ltd., Hagoromo Miso, Ltd., Hanamaruki Miso Co. Ltd, San Iku Foods Co. Ltd.

Distributors of Mitoku's products include the following: In the USA: Westbrae Natural Foods Inc., Great Eastern Sun Inc., U.S. Mills Inc., Tree of Life Inc., and Shojin Natural Foods (Hawaii). In Canada: Koyo Foods Inc., Flora Distributors Ltd., and Timbuktu. In Costa Rica: Distribuidora de Productos Macrobioticos S.A. In England: Sunwheel Foods Ltd, Clearspring Natural Grocer, Meridian Foods Ltd. In France: Celnat, Tama. In Belgium: Lima N.V. In the United Arab Emirates: Emirates Trading & Marketing Est. In South Africa: Key Health. In Austria: Naturkostladen, Lebenszeichen. In Switzerland: S'lotusbluemli, Terrasana, Futonhaus. In Sweden: Kung Markatta. In Norway:

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Alternative Import. In Finland: Makro Bios. In Portugal: Armazens Da Matinha. In Spain: Kunga. In Italy: La Finestra Sul Cielo, Probios S.R.L., Dalla Terra al Cielo, Solo Natura. In Israel: Tivoli Ltd. In Australia: Pureharvest. In New Zealand: Enso. In Singapore: Nature's Best. In Yugoslavia: General Export. In Japan: Seibu Department Stores Ltd., Tokyu Department Stores Ltd. Among the countries reached indirectly through trans-shipment are Hungary, reached through Austria, various South American countries reached through the United States, and other countries such as Poland, Czechoslovakia, Iceland, Andorra, Ireland and the Caribbean Islands.

As Mitoku developed its international operations, Mr. Kazama hired many students from Western countries, including Blake Rankin (USA), Ferro Ledvinka (Italy), Christopher Geoffrey Dawson (New Zealand, starting 1979), Robbie Swinnerton (England), Terrie Adams (USA), and Michelle Harbroun (France).

"For the past 10 years, Mitoku has echoed and supported the macrobiotic perspective with its motto 'Isshoku-Dogen.' These words, though they have been forgotten in the last few centuries by the very people in the health care field who should remember them well, mean literally 'medicine and food have the same source,' and can be translated as 'food *is* medicine.' This saying has been used and known as part of the ancestral heritage of wisdom transmitted from generation to generation for several thousand years in Oriental countries such as China, Korea and Japan.

"In an attempt to preserve Japanese traditions, Japan has instituted a 'Living Treasures' program granting official recognition and support to [living masters in] various cultural areas such as theater, music, dance, sculpture, carpentry, weaving... and arts and crafts. Ironically, though, Japan has not granted the same official recognition to its traditional methods of food processing and production in spite of the fact that increasingly large numbers of people throughout the world are now appreciating traditionally processed Japanese food products and have become aware of their important health benefits. The Japanese traditional arts of producing miso, soysauce, tofu, natto, amazake, rice vinegar, sake, mirin, condiments and pickles as well as cooking methods and preparation are unique among the culinary practices of the world... These foods are also works of art... It is my hope and recommendation that official recognition and support be granted by the 'Living Treasures of Japan' to those who have dedicated their life to the traditional art of food production and processing in spite of the hardships and commercial disadvantages they are compelled to face in business competition and present-day economical conditions." Address: 62 Buckminster Rd., Brookline, Massachusetts 02146.

3023. Loma Linda University, Dept. of Nutrition, School of Public Health. 1992. The Second International Congress on Vegetarian Nutrition: Program (Brochure). Loma Linda, California 92350. 3 p.
• ***Summary:*** The Second International Congress on Vegetarian Nutrition will be held in Arlington, Virginia (at the Crystal Gateway Marriott, near Washington, DC) from 28 June to 1 July 1992 (Sun-Wed). It is sponsored by Loma Linda Univ. For details contact Pat Johnston, Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California 92350. Among the many big names in the field who will be making presentations are: T. Colin Campbell, Dean Ornish, Johanna Dwyer, Gary Fraser, James Whorton, Vernon Young, and many others.

The first international congress, a landmark event, was held on 16-18 March 1987. The American Dietetic Assoc. now has a vegetarian practice group. Address: Loma Linda, California.

3024. **Product Name:** Fromage de Soy (Soy Cheese with Casein).
Manufacturer's Name: Nutrition Specialties International, Inc.
Manufacturer's Address: Riverside, California. Phone: (909) 781-4401.
Date of Introduction: 1992 February.
Ingredients: Soy base (organic soybeans, filtered water), canola oil, casein, sea salt, calcium phosphate, sodium phosphate, natural non-dairy flavors, citric acid, carrageenan.
Wt/Vol., Packaging, Price: 8 oz. or 5 lb.
How Stored: Refrigerated.
New Product–Documentation: Anders Lindner. 1992. Spring. SoyaFoods (ASA, Europe). 3(2):6-7. "Soyafoods at Natural Products Expo West." The 12th annual Natural Products Expo West took place at the Anaheim Convention Center, from 10 to 13 April 1992. Interesting new products include: Fromage de Soy (soya cheese alternative in 6 flavors) from Nutrition Specialties International Inc./ Ltd., headed by Mr. Patrick E. Cochran. Profits go to the International Nutrition Research Foundation Inc., a Seventh-day Adventist organization promoting a rational, healthy, dietary and life-style.

Note: This product was renamed Soy Gourmet in early 1993.

3025. Perry, Patrick. 1992. Diet for a longer life. *Saturday Evening Post* 264(1):26, 28, 91. Jan/Feb. [1 ref]
• ***Summary:*** Discusses the health benefits of Seventh-day Adventists' vegetarian diet.

3026. **Product Name:** Natural Touch Garden Pattie.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1992 February.
Ingredients: Textured vegetable protein (soy protein

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concentrate, wheat gluten), mushrooms, egg whites, water chestnuts, onions, corn oil, carrots, cooked brown rice, green and red bell peppers, rolled oats, calcium caseinate, black olives, soy sauce (water, soybeans, salt), corn starch, onion powder, natural flavors from vegetable sources, soy protein isolate, spices, garlic powder, celery extract.
Wt/Vol., Packaging, Price: 9.5 oz (269 gm) box contains 4 patties.
How Stored: Frozen.
Nutrition: Per 1 pattie (67 gm): Calories 120, protein 11 gm, carbohydrate 8 gm, fat 4 gm (percentage of calories from fat 34%, polyunsaturated 2 gm, saturated 1 gm), cholesterol 0 mg, sodium 300 mg, potassium 160 mg.
New Product–Documentation: See next page. Ad in Natural Foods Merchandiser. 1992. Feb. p. 27. "Natural Touch introduces something completely new in vegetarian patties. Vegetables. New Natural Touch Garden Pattie is the first vegetarian pattie with real garden vegetables." This ad carefully avoids mentioning the main ingredient in the product–textured soy protein concentrates–which hardly have a "natural" image.

Talk with Worthington Foods. 1992. Feb. 10. This products was introduced about 1 week ago. The tofu version of this product has been discontinued. Leaflets sent by Evelene Callahan of Worthington Foods. 1992. Feb. 11. List ingredients and nutritional information.

3027. Kurata, J.H.; Nogawa, A,N,; Abbey, D.E.; Petersen, F. 1992. A prospective study of risk for peptic ulcer disease in Seventh-day Adventists. *Gastroenterology* 102(3):909-09. March. *
Address: Dep. of Family Medicine, San Bernardino County Medical Center, California.

3028. Prevedell, Donna. 1992. Soybeans: So organic? These farmers substitute management for pesticides to fill market niches. *Soybean Digest.* Mid-March. p. 38-39.
• ***Summary:*** Glen Spray and his brother Rex have been growing soybeans organically for 20 years on their 700 acres of their farm in Mt. Vernon, Ohio. They earn $10.50 to $12.00 a bushel and get yields of 50 bu/acre, "The Organic Crop Improvement Association reports only about 90,000 soybean acres, less than 0.2% of the U.S. total, were farmed organically in 1990. Why so few farmers are willing to devote so few acres to highly profitable organic soybeans is a mystery to veteran organic growers. From Nebraska to Ohio they routinely raise 40- to 60-bushel per acre crops, earn 15% to 100% over market prices and spend less on inputs than their mainstream neighbors. And they do it with the same machinery and practices found on conventional farms." Spray notes that 50 years ago all farmers grew their soybean organically. On level ground, they use a 4-year rotation of corn, soybeans, wheat or oats, and red clover. Aside from bedding from the cattle barn, no commercial fertilizer or lime has been applied for 2 decades. They plant Amsoy and Vinton varieties for the white hylum and higher protein content required by the tofu market. Details of the crop cycle are given. Four other farmers growing organic soybean can be found in Edgar, Nebraska.

3029. Kushi, Aveline. 1992. The origin of seitan and how it came to America (Interview). *SoyaScan Notes.* April 9. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Aveline thinks George Ohsawa coined the term "seitan," but Aveline is not sure when he coined it. Since he died on 23 April 1966, he probably coined it in the early- to mid-1960s. She first heard the term from George Ohsawa, she thinks in the early 1960s while she and Michio were still living in New York; they moved to Massachusetts in 1963. Shortly after hearing about seitan, she bought some canned gluten-based meatlike products made by Seventh-day Adventist food companies, probably in New York. She does not remember how, where, or when she first learned to make seitan. Beginning shortly after her last son was born in 1964 in Boston, she taught many of her macrobiotic students how to make seitan starting with high-protein wheat flour. She taught seitan-making in almost all of her cooking classes, and she taught how to use the starch like kuzu as a thickener to make creamy soups. Starting in about 1984-85 she started to use the starch, together with rice syrup, to make sweet dumplings for desserts.

The first seitan imported to America was made by Marushima Shoyu Co. on Shodoshima in Japan. George Ohsawa went to visit the company, talked with Mr. Mokutani (who is still the chairman, and a close friend of the Kushis, and a great admirer of Ohsawa), and showed him how to make it. Marushima began to make seitan commercially in the late 1960s. It was imported to America by Muso Shokuhin at about the same time the first miso and shoyu were imported. She thinks it came in small jars, and was so salty that she used it as a seasoning in place of soy sauce in stews (such as soybean stews) or cooked it with vegetables; this cooking made it softer. She is not sure which Japanese company (Muso or Mitoku) exported this seitan to America, or which American company imported it, but it probably started to be imported in about 1969.

Concerning wheat gluten, about 15 years ago, the Kushis, through Mr. Kazama, convinced a Japanese manufacturer of dried wheat gluten (*fu*) to make the product from whole wheat flour. Since that time it has been imported to America by various importers of macrobiotic foods.

Follow-up talk with Aveline. 1992. July 8. She has just talked with Lima Ohsawa (age 93) by phone in Japan. Lima has no recollection of ever making seitan in a cooking class in America, or of ever teaching anyone in America how to make it. Initially Aveline thought she might have learned to make seitan from Lima, but after talking with Lima she thinks she may have learned to make it herself by trial and

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error, after she moved to Boston. Address: 62 Buckminster Rd., Brookline, Massachusetts 02146. Phone: 617-232-6869.

3030. Johnson, Lawrence A.; Meyers, D.J.; Burden, D.J. 1992. Soy protein's history, prospects in food, feed. *INFORM* (*AOCS*) 3(4):429-30, 432, 434, 437, 438, 440, 442-44. April. [54 ref]

• ***Summary:*** "This is the second part of a review that chronicles the individuals and the historical and economic factors noteworthy in the development of soy protein as food and feed ingredients." Contents: Introduction. Early Western food uses (whole and defatted soy flour, enzyme-modified isolated soy proteins as whipping agents, whipped toppings, cereal-soy blends). Soy flour and grits. Protein concentrates and isolates (Griffith Laboratories, Central Soya Co., Mead Johnson and Co., Central Soya). Dairy analogs (Dr. Harry W. Miller, Loma Linda Foods, Mull-Soy and Borden, Vitasoy, Edensoy, Worthington Foods and Soyamel, Prosobee and Mead Johnson, Rich Products and Chill-Zert, Tofutti). Spun fibers (Robert Boyer and the Ford Motor Co., Temptein, Worthington Foods, Bontrae, Bac*O's, Bac-O-Bits, Miles Laboratories, Morningstar Farms). Textured soy protein and meat analogs (W. Atkinson, ADM and TVP, General Mills and frozen Bontrae, the U.S. School Lunch Program). Nutritional advances in soy products. Today's world soybean and soy protein production (consolidation among manufacturers of modern soy protein ingredients: ADM, Cargill, Central Soya Co., Protein Technologies International, A.E. Staley Mfg. Co.). Future of soy protein products.

Tables show: (1) Soy meal consumption in the USA by type of animal: Poultry 41.1% of total 18.9 million metric tons, swine 27.4%, beef cattle 9.0%, dairy cattle 9.0%, other livestock 9.5%, human food 3.2%, industrial 0.5%. Thus, industrial (nonfood, nonfeed) uses for soybeans presently comprise no more than 0.5% of the protein produced from soybeans grown in the United States. (3) U.S. companies supplying protein in 1948-50 versus 1990 (industrial and edible flours, concentrates, and isolates). 23 companies then vs. 5 in 1990.

Note: Talk with Ed Milligan of EMI by phone. 1992. May 5. This article contains some misleading information. It refers to an article by Ken Becker written in 1971. In 1958-59 USDA developed a laboratory prototype of flash desolventizing. In 1959 they contacted EMI corporation in Des Plaines to commercialize the flash desolventizing system for production of light-colored, edible soybean flakes, for soy flour and grits, with a maximum PDI (protein dispersibility index). At that time Ed Milligan was just a newly hired member EMI, which undertook the project. Ed designed and installed the world's first commercial flash desolventizing system for Honeymead Products Corp. in Mankato, Minnesota, in 1960. Note that this system was used to make food, rather than feed. All but 2 systems have been used exclusively to make foods. All such systems produce a flake with a very light color and controlled PDI, whereas a DT (desolventizer-toaster) produces a golden colored flake. He is leaving for India in a few weeks to commission EMI's 22nd such unit. He has designed, installed, and started every one of the 22. Address: Center for Crops Utilization Research, Iowa State Univ., Ames, Iowa 50111.

3031. Worthington Foods, Inc. 1992. First quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 3 panels each side. Each panel: 22 x 9 cm. Address: Worthington, Ohio. Phone: (614) 885-9511.

3032. Buchmeier, John E. 1992. A sticky subject. *Heritage Battle Creek.* Spring. p. 58-61.

• ***Summary:*** An interesting, documented history of the origins and early history of peanut butter. The best available documentary evidence indicates that this popular and versatile food was developed in 1893 by John Harvey Kellogg at the Seventh-day Adventist Sanitarium in Battle Creek.

Richard W. Schwarz, in his book titled *John Harvey Kellogg, M.D.,* states that "Shortly after 1890 he [Dr. Kellogg] had a quantity of roasted peanuts ground up into a paste for use by patients who had difficulty in masticating nuts or peanuts (which are a legume) well enough to digest them properly. Later he decided that roasting caused the fat content to begin to decompose, irritating the digestive organs. From that time forward the sanitarium made its peanut butter from steam-cooked rather than roasted peanuts. Kellogg also devised a variety of nut butters, which he claimed were 'sweeter, more palatable, and more digestible' than regular butter. Making no attempt to secure patents which would let him control the production of either peanut butter or any of his nut butters, he announced that he believed that they were products that 'the world ought to have; let everybody that wants it have it, and make the best use of it.'

Bernice Lowe, in *Tales of Battle Creek,* states that peanut butter was on the menu of the Battle Creek Sanitarium as early as 1893. "The Atlanta-based Peanut Advisory Board says that a St. Louis [Missouri] doctor is responsible for peanut butter's debut in 1890. But the board does not have a name for the inventor. Dr. J.H. Kellogg was issued two patents for the invention of peanut butter. On 4 Nov. 1895 he filed an application for a patent on titled "Food Compound" (No. 567,901) which was granted on 15 Sept. 1896. Also on 4 Nov. 1895 he filed an application for a patent titled "Process for Preparing Nutmeal" (No. 580,787) which was granted on 13 April 1897.

A photo shows a can of "Nut Butter" (the caption says that it contains peanut butter) made by the Sanitas Food Co. of Battle Creek. Note: Several key questions remain: (1) In what year did Kellogg introduce peanut butter as a

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commercial product? (2) Where was the product sold? At retail stores, or only at the Battle Creek Sanitarium, or only by mail order from the Sanitarium? (3) How much of the product was sold? Address: Battle Creek, Michigan.

3033. Lindner, Anders. 1992. Soyafoods at Natural Products Expo West. *SoyaFoods* (*ASA, Europe*) 3(2):6-7. Spring.
• ***Summary:*** "The 12th annual Natural Products Expo West took place at the Anaheim Convention Center, from 10 to 13 April 1992. Some 900 exhibitors and 40 seminars with expert speakers attracted 12,000 visitors... Some 35 companies exhibited soya foods in Anaheim."

Interesting new products include: Edamame (frozen green soybean in the pod) from Miyako Oriental Foods. Fromage de Soy (cheese alternative in 6 flavors) from Nutrition Specialties International Ltd. (headed by Mr. Patrick E. Cochran; profits go to the International Nutrition Research Foundation Inc., a Seventh-day Adventist organization promoting a rational, healthy, dietary and life-style), Shedd's Willow Run soya margarine from Van den Bergh Foods (Mic-Ellen Associates Ltd.). The Vitasoy–Nasoya Group had a large stand at the show headed by Yvonne Lo and John Paino. White Wave Soyfoods Inc. and the SoyFoods Association of America sponsored a lecture titled "Vegetarianism and Soyfoods" by Michael Klaper, M.D. The Association represents about 30 companies within the soyfoods industry. Address: Director, Lactasoy Agency, Helsingborg, Sweden.

3034. *SoyaFoods* (*ASA, Europe*). 1992. Helfex '92. 3(2):4. Spring.
• ***Summary:*** "The International Health Food Exhibition, Helfex '92, was held at Wembley, London on 26 and 27 April. Over 160 companies concerned with health, diet, fitness and nutrition exhibited and several new soya products were launched.

"The Haldane Foods Group displayed their new range including a new Light Soya Milk, a new Soya Creem, a vegetarian cheese spread, burger and sausage mixes, and 6 new varieties of tinned products. JRJ Trading (The Redwood Company) had an interesting and tasty range of tempeh-based products including dips, spreads, patés and vegetarian rashers. Soya milks and desserts from Granovita, Haldane, Sojasun (Triballat), Vitasoy were also on display. Berrydales' No Cream Ices, made from fresh organic tofu and soya milk, introduced their new 4-pack which will allow consumers to purchase four different ices in one pack. Plamil Foods launched a new non-dairy chocolate bar, *Martello* and Marigold Health Food, manufacturers of canned braised tofu and other delicacies, also had a stand."

3035. Stoltz, Garth "Duff". 1992. A taste of cereal. *Heritage Battle Creek.* Spring. p. 46-57. [5 footnotes]
• ***Summary:*** This excellent two-part article documents the history of 101 cereal manufacturing companies (makers of breakfast cereals), that started in Battle Creek, Michigan. Part I is a history and part II is a table that lists the 101 companies alphabetically by company name. For each company is given the name, date of legal incorporation, products, and notes (such as succeeded by, dissolved, renamed, moved to, etc.).

The Battle Creek cereal boom was in its heyday during the years 1900-1905. Battle Creek became the home and center of America's breakfast food industry primarily because of three men, all great persuaders: Dr. John Harvey Kellogg, surgeon, health evangelist, and food inventor; Charles W. Post, shrewd capitalist and hypnotic advertiser; and Will Keith Kellogg, Dr. John Harvey Kellogg's younger brother. C.W. Post was the person most responsible for starting Battle Creek's food "gold rush" shortly after the turn of the century, but it was Will Keith who eventually made the greatest impact on the cereal business. Some important pioneering cereal companies, listed in chronological order, are: The American Cereal Co. of Chicago, Illinois, founded in 1888, made Zest flaked cereal. As part if a conglomerate of seven cereal companies, it became Quaker Oats in 1906.

Battle Creek Health Food Co. was founded in 1895 with C.W. Post as treasurer and primary stockholder; it dissolved in 1903.

Postum Cereal Co., founded by C.W. Post, started manufacturing "Postum Cereal Food Drink" on 1 Jan. 1895, and was incorporated on 26 Oct. 1896. Other early products included "Grape Nuts Food." The company was purchased by General Foods in 1929. General Foods was succeeded by Phillip Morris Co. in 1985, which merged with Kraft Foods to become Kraft General Foods in 1989–It is still manufacturing foods in Battle Creek.

Battle Creek Cereal Food Co., founded in 1897, made cereal coffee. It was succeeded by Cream of Cereal Co. in 1901.

The A.B. Barnum Cereal Co., founded in 1898, made Grain-O cereal coffee. It was succeeded by Grocer's Specialty Mfg. Co. in 1902.

Battle Creek Sanitarium Health Food Co. was incorporated in 1898 (However health food products, including cereals, were manufactured in the Battle Creek Sanitarium Bakery from 1877. The foods were produced not only for the patients at the San but also for former patients who ordered the products through the mail.) The company, whose name was changed to Battle Creek Sanitarium Food Co. in 1901, made health foods, corn flakes, Granose, Granola, and Caramel Cereal Coffee. It was succeeded by the Kellogg Food Co. in 1908 (it made nut butters, cereals, and meat substitutes); the name was changed to Battle Creek Food Co. in 1921.

Sanitas Nut Food Co. was founded in 1899 by Dr. John Harvey Kellogg. It made "Sanitas" corn flakes, nut butter, and health foods. It merged with the Battle Creek Sanitarium

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Health Food Co. to become the Kellogg Food Co. in 1908. It began operating in July 1908 with Dr. J.H. Kellogg owning all but 2 of its 15,000 shares of stock. Soon all the company's products were sold under the trade name "Kellogg's."

The Battle Creek Toasted Corn Flake Co. was founded in 1906 by Will Keith Kellogg, with much of the financing from C.D. Bolin, a St. Louis insurance executive; this was his first company run independently from his brother, Dr. J.H. Kellogg. It made Corn Flakes, after Will Keith convinced his brother to relinquish Sanitas' rights to the product. The company name was changed to the Toasted Corn Flake Co. in 1907, the Kellogg Toasted Corn Flake Co. in 1909, then the Kellogg Co. in 1922. The Kellogg Co. is today one of America's leading manufacturer's of breakfast cereals.

In this list of 101 cereal manufacturers we find two companies founded by Joseph and Almeda Lambert, who pioneered commercial production of peanut butter in America. No. 60 is the Lambert Nut Food Co. Date of legal incorporation: 1900. Products: Products: Peanut butter crackers, nut products, and machinery for making nut products. Notes: Name changed to Lambert Good Food Co. in 1901. No. 59 is The Lambert Good Food Co., Date of legal incorporation: 1901. Products: Same as above. Notes: Moved factory to Marshall [Michigan] in 1902; dissolved in 1930. No. 60 is another Lambert Co. The name was changed to the Lambert Good Food Company in 1901.

An endnote (p. 57) concerning the legal date of incorporation states that "companies often existed before they actually filed legal papers. Conversely, companies filed legal papers of incorporation and then never progressed beyond that stage to manufacture a product."

Contains many photos of cereal boxes, plus J.H. Kellogg, C.W. Post, W.K. Kellogg, and the Sanitas Nut Food Co. in 1901. Illustrations (line drawings) show the Postum Cereal Company factory in 1903 and John T. McCutcheon's cartoon of 1903 from the Chicago Tribune. Founding dates are the dates of legal incorporation.

Page 5, "About the contributors," notes that the author "is the official historian and archivist of the Battle Creek Sanitarium and Seventh-day Adventist Church in Battle Creek. He is founder and president of the Adventist Historical Society and a member of the Board of Directors of the Historical Society of Battle Creek. He serves as Vice-President of the national Adventist Historic Properties and is responsible for three historic properties and the Sanitas SDA Museum Building in Battle Creek. As a result of his interest in the health food industry originated by the Seventh-day Adventists in Battle Creek, Stoltz has an extensive collection of cereal and health food company memorabilia."

Talk with "Duff" Stoltz. 1999. Jan. 23. The first 50 entries were compiled by Ross Coller, a Battle Creek historian, who gleaned them from articles of incorporation in old city newspapers. Duff compiled the remaining entries.

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Address: Battle Creek, Michigan.

3036. Worthington Foods, Inc. 1992. What's a tasty burger doing in a magazine like this? (Ad). *Vegetarian Times.* May. p. 3.
• ***Summary:*** A full-page, color ad, with a $1.20 coupon. "Surprise? Don't be. It's Grillers from Morningstar Farms." In the top half of the page is a color photo (close-up) of a meatless burger with lettuce and sliced tomatoes, between buns. Color photos across the bottom also show the front panels of: Cholesterol Free Breakfast Patties. Cholesterol Free Breakfast Links. Cholesterol Free Breakfast Strips.

This ad also appeared in the Sept. 1992 issue (p. 5), and in the May 1993 issue (p. 29). Address: Worthington, Ohio 43085.

3037. *Natural Foods Merchandiser.* 1992. Accredited nutrition program for physicians announced. June. p. 22.
• ***Summary:*** A newly accredited program called the Institute for the Advancement of Nutrition Education and Research, which aims to further physicians' knowledge about nutrition and health, was unveiled at Natural Products Expo West in April.

"The Institute's founder, Michael Klaper, M.D., made the announcement during his seminar called Soyfoods and Vegetarianism. Klaper is a nationally known author and lecturer on the nutritional advantages of a plant-based diet."

"The Institute's flagship course, a three-day intensive seminar entitled Let Food Be Your Medicine, has been accredited by the American Academy of Family Practice and the College of Family Physicians of Canada. The courses will be offered at various locations throughout North America.

"Staff members of the Institute include Klaper; Neal Barnard, M.D., assistant clinical professor at George Washington University School of Medicine; John McDougall, M.D., medical director of the McDougall Program at St. Helena Hospital... and Paulette Eisen, associate director, educator, author and co-founder of the Institute for the Advancement of Nutrition Education and Research. For more information contact the Institute for the Advancement of Nutrition Education and Research, 2611 Vanderbilt #2, Redondo Beach, California 90278. Phone: 310-318-8092. Fax: 310-318-8092."

3038. Dawson, Sue. 1992. New product introductions aimed at heart, sweet tooth. *Dispatch* (*Columbus, Ohio*). July 1. p. 6H. Food section.
• ***Summary:*** "Worthington Foods, which has been making an egg substitute called Scramblers for many years [since about 1979], is introducing another substitute called Better 'n Eggs. It is available both in frozen and refrigerated varieties.

"The new product has a different formula and less fat than the old one. Although the label lists zero fat and cholesterol (rounding down is allowed when the amount of fat is less than half a gram per serving), the product does contain corn oil. Eight ounces of the frozen product sell for around $1.19, while the 16-ounce packages of refrigerated retail for around $2.19."

3039. Worthington Foods, Inc. 1992. Second quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 3 panels each side. Each panel: 22 x 9 cm. Address: Worthington, Ohio. Phone: (614) 885-9511.

3040. *SoyaScan Notes.* 1992. Two TV ads by The Kellogg Co. depict tofu negatively, as if it symbolized a food used only by health nuts (Overview). Aug. 22. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** In one Kellogg TV ad, a wife gives her husband a Nutri-Grain Bar. He asks: "Is it tofu?" She says no. Another Kellogg cereal ad also uses tofu in much the same way.

3041. Nordquist, Ted A. 1992. Re: Overview and details on new developments with AB Winner and with Aros in Sweden. Letter to William Shurtleff at Soyfoods Center, Aug. 26–in reply to inquiry. 2 p. Typed, with signature on letterhead.
• ***Summary:*** "I formed Aros Sojaprodukter AB in August of 1990 with Erik Kennhed, a business man from Eskilstuna, Sweden. I was VD or President with 51% to his 49%. Aros AB bought soybase from Trensums Musteri AB and sold it to Winner AB. Winner made Tofuline ice-cream and sold it to Aros AB. Aros AB in turn sold Tofuline to Ingman Foods, Finland, Nutana in Sweden, Nutana in Denmark and Nutana in Norway. Since I designed the soybase plant for Trensums, I had an exclusive contract with them on soybase. I worked with Winner to develop soy-based products, the ice-cream was the first.

"I did not have time for tofu. I sold Aros Sojaprodukter KB to Trensums and moved the Tofu plant to Trensums in July of 1991. Trensums Musteri AB is owned by Blekinge Invest and is situated in Tingsryd, about 30 minutes by car from Karlshamn where Winner is located.

"Then in August of 1991 Nutana in Denmark and Norway went bankrupt. Winner had about 100,000 dollars of ice-cream in stock. Trensums and Winner did not like my powerful position while I, according to the contracts, had no financial liability. I just took the profits. So they started talking to each other about me, or more specifically about Aros Sojaprodukter AB. Blekinge Invest forced Erik to sell his 49% to Blekinge Invest for a song, threatening him with possible losses if both Winner and Trensums decided to drop soya altogether. Once they bought out Erik I was next.

"I reached an agreement with Winner and Blekinge Invest in April of 1992. I sold my shares to Blekinge Invest who now owns 100% of Aros Sojaprodukter AB and KB. I work as a consultant for Winner until the end of this year.

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"Aros AB (Trensums) delivers soybase only to Winner. Winner sells Tofuline ice-cream directly to Nutana Sweden and Ingman Foods in Finland. They sell via their own Winner name to England.

"AB Winner, 374 82 Karlshamn, Sweden. Tel: 46-454-82000. Fax: 46-454-11375. International sales contact is Leif Andersson. President is Håkan Johnsson.

"Aros Sojaprodukter AB, Box 112, 36201 Tingsryd, Sweden. Tel: 46-477-11920. Fax: 46-477-18034.

"Aros (Trensums) does not want to actively sell soybase. They are happy to sell only to Winner AB. There is no President, but Jan Hallberg, vice-president of Trensums handles the paper work. Aros Tofu is off the market. Dansk Tofu is now sold in Sweden and Norway.

"Winner is in the process of being sold. The plot thickens!

"Anders Lindner, Erik Kennhed and I look on in interest as all this unfolds."

Note: Attached are photocopies of three Tofuline soy ice cream labels, sold by Nutana in Sweden. Address: President, TAN AB, Eningbölevägen 54, S-740 82 Örsundsbro, Sweden. Phone: +46 171 605 68. Fax: +46 171 604 56.

3042. *Dispatch* (*Columbus, Ohio*). 1992. Worthington Foods sued over Veggie Burger name. Sept. 1. p. 2E. Business section.

• ***Summary:*** "An Oregon company that makes hamburgers out of vegetables has filed a $500,000 trademark infringement lawsuit in federal court against Worthington-based Worthington Foods Inc. Wholesome and Hearty Foods Inc. of Portland, Oregon, calls its product a Gardenburger and claims Worthington Foods has infringed on the trademark with a product called Garden Pattie, which was introduced in February" [1992].

Paul Wenner, age 45, owner of the Portland company, is a vegetarian who in 1984 "ran the Garden House restaurant in Gresham, Oregon, when his line of veggie burgers was born. He said he began making Gardenburgers commercially in March 1985 with a production run of 800 patties."

3043. Worthington Foods, Inc. 1992. Natural Touch: Where great taste comes naturally (Ad). *Natural Foods Merchandiser.* Sept. p. 61.

• ***Summary:*** A full-page, color ad. "Natural Touch products are regularly promoted with 40¢ coupons in full-page, 4-color ads appearing in *Vegetarian Times, New Age Journal, Body, Mind and Spirit, Delicious,* and *The Utne Reader* (Over 80% of the readers of these magazines shop in natural food stores regularly)."

A large photo shows a meatless patty on a bed of lettuce on a plate. Other small photos show the front of four Natural Touch packages. Address: Worthington, Ohio 43085.

3044. Amatos, Christopher A. 1992. Worthington Foods sees healthy future. *Dispatch* (*Columbus, Ohio*). Oct. 3. p. 1D. Business section.

• ***Summary:*** After Miles Laboratories purchased Worthington Foods (a manufacturer of meat and egg substitutes) in 1970, they installed high-speed, high-volume equipment, but they were never able to achieve the economies of scale needed to make money. According to Dale E. Twomley, Worthington Foods' president and CEO, "They never saw black ink the whole time they owned us–12 years–and we saw a profit the first year" after the current management team bought back the company from Miles in 1982. The new setup gives Worthington much greater versatility and the flexibility to make 150 different products in one plant.

"Worthington, which earlier this year conducted its first public stock offering, is about to complete a new facility in Zanesville, Ohio, that will allow it to dramatically increase production of a new egg substitute, as well as make better use of its facility at 900 Proprietors Rd."

"One line that will be affected by the Zanesville facility is Better 'n Eggs, an egg substitute that Worthington is rolling out nationwide to compete with the market leader, Egg Beaters. Capacity restraints limit Better 'n Eggs production to 5 gallons a minute at the Proprietors Road facility, Twomley said, noting that production at Zanesville will be 25 gallons a minute.

"The new facility is expected to be operating during the first quarter of 1993. Better 'n Eggs, made up of 98 percent egg whites, complements the company's Scramblers egg substitute, which is 80 percent egg whites. Better 'n Eggs has zero percent fat, while Scramblers contains 3 percent.

"Worthington isn't saying much about other plans for the new plant, but more news is expected later this month. Twomley said it will play a role in the company's annual growth plan of 15 percent in revenues and 20 percent in net income... In 1991, Worthington's revenues were $70.2 million and net income was $2.8 million, or 77 cents a share. The company's stock, after hitting the market at $12 a share, has been trading in the $10 range recently. Yesterday it closed at $10.25, up 25 cents."

3045. Nix, James R.; Davis, Jean. 1992. Good sources of information in Battle Creek, Michigan, on early Seventh-day Adventist work with health reform, vegetarianism, and soyfoods (Interview). *SoyaScan Notes.* Oct. 22. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** The people who are working on restoring the original Sanitas Nut Food Co. building in Battle Creek are a good source of information. This large and sturdy 3-story building (with 18-inch-thick lower walls) was constructed in 1901 by Will Keith Kellogg for his brother Dr. John Harvey Kellogg. It was used for producing early health foods, then later W.K. used it to produce Corn Flakes. The oldest existing Kellogg food factory, it is located right across the

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street from the current Adventist hospital in Battle Creek. It operated for 13-14 years as a cereal company, then the company got too big and moved; Dr. Kellogg last used the building as a hospital. Adventist Historic Properties, a division of the church, has purchased the building and is raising money to restore it and put an Adventist health and heritage museum into it. The City of Battle Creek is also creating a cereals museum which, in some sense will compete with this one. The Kellogg Co. is funding the latter museum.

In Battle Creek there are people who are very much into the history of the Adventist health food work such as: (1) Garth "Duff" Stoltz, who has taken the lead in restoring the building, has done extensive on the early food companies. He works as head of security for the Battle Creek Adventist Hospital. Phone: 616-964-7121. He has lots of information in his head and he has a lot of source material, including a huge collection of early food product packages, but it is not systematically organized. He is extremely busy with a full-time hospital job plus work on the new museum and as president of the local Adventist Historical Society. He is very good in providing leads and sources. He came to Battle Creek 10-15 years ago, became enthralled with early Adventist history, and started collecting. (2) Jean Davis. Phone: 616-964-3955. She is interested in documenting early SDA church history and early Battle Creek history. She has less interest in the health and food work but she is very detailed and meticulous, and an expert on SDA history in Battle Creek. She has extensive files of early Adventist-related documents. A housewife, she and her husband Glen have made this their hobby for 20 years. She does not publish.

In Battle Creek, Stoltz and others are working on an article on the history of all the various 100+ food companies (both Adventist and non-Adventist) that were started in Battle Creek, cloned after Kellogg. Mary Butler and Duff Stoltz are taking the lead on that project. For sources, they use the two Michigan University Libraries and the Willard Public Library in Battle Creek. Address: 1. Assoc. Univ. Archivist, Vernier-Radcliffe Library, Heritage Collection, Loma Linda, California 92354; 2. Battle Creek, Michigan. Phone: 714-824-4550 or 616-964-3955.

3046. **Product Name:** GranoVita Vegetable Frankfurters.
Manufacturer's Name: DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1992 October.
Ingredients: Water, vegetable oils and fats, onions, egg protein, wheat protein, soya protein, spices, seasonings, sea salt, gelling agents (guar gum and carob gum), wheat flour, glucose apples, smoke spice, okara, oat flakes, bread crumbs, herbs, milk protein, soya sauce.

Wt/Vol., Packaging, Price: 200 plastic tube. Retails for £1.65.
Nutrition: Per 100 gm.: Energy 1,121 Kjoules / 265 Kcal (calories), protein 9.3 gm, carbohydrate 3.2 gm, fat 23.9 gm.
New Product–Documentation: Label sent by Anthony Marrese. 1994. May. The manufacturer's name and address do not appear on the product, which is imported to England by "GranoVita UK Ltd., 34/36 Bromham Road, Bedford MK40 2QD, England. Produce of Germany." Label. 2 by 5½ inches. Red, black, green, and yellow on white. An illustration shows vegetables under a tree on a grassy hillside with the moon rising. "Suitable for vegetarians. Important–Please remove skin before cooking." Best used by 10 Oct. 1992.

Note: This product may well have been made by DE-

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VAU-GE in Germany.

3047. Shurtleff, William; Aoyagi, Akiko. comps. 1992. Bibliography and sourcebook on Seventh-day Adventists' work with soyfoods, vegetarianism, and wheat gluten, 1866-1992: Detailed information on 835 published documents (bibliographic), 602 commercial food products, 207 unpublished archival documents, 158 original interviews (many full text) and overviews. Lafayette, California: Soyfoods Center. 407 p. Subject/geographical index. Author/company index. Language index. Printed Oct. 15. 28 cm. [1606 ref]

• ***Summary:*** This is the most comprehensive book ever published on the work of Seventh-day Adventists (SDAs) with soyfoods, vegetarianism, or wheat gluten. In each of these closely-related areas SDAs have been the pioneers and leaders over a period of 70 to 130 years, and they have had the good fortune to be able to watch their visionary ideas gain increasing worldwide acceptance. Moreover, they have founded and successfully run many pioneering food companies that have transformed their ideas into commercial products and made them available to consumers worldwide.

The scope of this book includes all known publications, commercial food products, and archival documents, plus many original interviews, from earliest times to the present, worldwide. Thus it is also the single most current and useful source of information on this subject available today, since 83% of all references (and most of the early and current ones) contain a summary/abstract averaging 131 words in length.

This is one of more than 40 bibliographies on soybeans and soyfoods being compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyfoods Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features: 33 different document types, both published and unpublished; every known foreign language publication on the subject–including 55 in German, 25 in Spanish, 23 in French, etc.; extensive translations of many of the Japanese and European works; 158 original Soyfoods Center interviews and overviews never before published. Thus it is a powerful tool for understanding the development of these subjects and related products from their earliest beginnings to the present, worldwide.

Compiled one record at a time over a period of 17 years, the bibliographic records in this book feature (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English publications together with an English translation, month and issue of publication, and the first author's first name (if given).

It also includes details on 602 commercial food products, including the product name, date of introduction, manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as references to and summaries of advertisements, articles, patents, etc.) are also given.

Details on how to use the bibliography, a complete subject and geographical index, an author/company index, a language index, and a bibliometric analysis of the composition of the book (by decade, document type, language, leading periodicals or patents, leading countries, states, and related subjects, plus a histogram by year) are also included. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

3048. Worthington Foods, Inc. 1992. Third quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 3 panels each side. Each panel: 22 x 9 cm.
Address: Worthington, Ohio. Phone: (614) 885-9511.

3049. Morton, Charles. 1992. Update on Madison College (Interview). *SoyaScan Notes.* Nov. 4. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** A self-supporting group of which he is a part is starting to grow herbs on former Madison College land. He runs an herbal medicine correspondence course with about 350 students studying at home. They teach what the Bible says about herbs and what Ellen G. White says about herbs. She taught extensively about herbs. He feels that most people, including Seventh-day Adventists (SDAs) do not realize that Jethro Kloss was a Seventh-day Adventist as well as an SDA minister. Dr. Philip S. Chen's daughter is still alive in California. He publishes a newsletter that reaches about 900 Madison College alumni.

Late last year and in early 1992, the SDA church tore down all the Madison College buildings except for two–because they were old. The food factory was demolished several years ago and the library was torn down in Jan. 1992. The laundry, and the gym / classrooms are still standing and operating. Everything is new. The church still owns the land, which is now only several hundred acres. They have a 280-bed hospital (where herbs are used extensively), and a vegetarian cafeteria. The old vegetarian cafeteria in Nashville is still there. It is self-supporting and called Country Life–the oldest Country Life in the business. It is run by Mr. Wilson, a black man. Address: Madison Alumni Assoc., Box 5843, Madison College, Tennessee 37116-5843. Phone: 615-868-1974.

3050. Paolucci, Danny. 1992. Work with Swan Foods Corp. in Miami, Florida. The sad story of Robert Brooks and Mary Pung, founders of Swan Foods (Interview). *SoyaScan Notes.* Nov. 5. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Danny grew up in Miami. He became a vegetarian in 1970 at age 18, and soon began to buy

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10-pound bags of soybeans, which he pressure cooked. "They made me feel great." He went to practice Rinzai Zen with Sasaki roshi in Los Angeles at Cimarron Zen Center, the city center for lay practitioners at 2505 South Cimarron St., Los Angeles, California 90018. It is the mother temple for all Sasaki roshi's centers nationwide (Mt. Baldy monastery; Ithaca, New York; Jemez hot springs, New Mexico, etc.). There he was the head cook (*tenzo*) for 18 months during 1972-74. He cooked for an average of 10 people/day and he served many recipes (such as soyburgers) based on cooked whole soybeans. He also made his first batch of tofu (curded with lemon juice) while tenzo; he learned from a recipe in *The Soybean Cookbook* (a blue book) by Dorothea Van Gundy Jones. When he served the tofu to Sasaki roshi, the roshi said "Not so good; it's sour." One person at Cimarron who wanted to start a tofu company as a Zen Center business was Gentei (Sandy Stewart); but he couldn't do it because the Japanese had a tight grip on the market.

After leaving Mt. Baldy, Danny returned to his home town of Miami. He worked for a while in the produce section of one of the chain grocery stores; he needed money. The idea of starting a tofu company stayed in his mind. In late 1977, when he heard that Robert Brooks and Mary Pung had been running Swan Foods for about 1 year in Miami, he went over and said he would like to work for them. He soon became their production manager–despite his complete lack of experience. Robert would pay the employees using fistfuls and huge rolls of cash. Later Danny found out that Robert was dealing drugs. The business was not making money because no one was marketing the products, and there were far too many products. Also many of the products (including refreshing teas) spoiled very quickly due to a junky old refrigeration system that was not strong enough; even after it was replaced, the new system could not prevent widespread spoilage. Basically, they lost money every day on almost every product they made. Nobody in the company knew what they were doing; no one was "steering the ship." Mary was working on a cookbook, that was never published. Mary and Robert were both doing a lot of new product R&D, and playing with a clam-jaw-type vacuum packager. One worker, Jimmy Wilks, was an original partner. He invested $50,000 of his inheritance in the business and it was quickly all gone; his family never forgave him. Actually he left before Swan Foods went bankrupt because of an accident in the plant. One day, while he was working near the pressure cooker, the top blew off and he was covered with scalding-hot soy slurry. His coworkers dumped him into the cooling tank, where the water cooled him off. His burns were not that bad; he left the company more out of shock than for medical reasons. He later worked at Popeye's Health Foods in Miami.

Danny was hired just after Wilks left to manage the plant. Danny's stepfather, Marias, who is a financial analyst, was thinking of buying Swan Foods as it was near bankruptcy. Robert Brooks wanted $100,000 for the company. Marias went over their books and found that they lost something like $200,000 during the brief life of the business. Marias and Danny waited until Swan Foods went out of business. Danny bought all equipment that had not been sold. He also cleaned out the office, and kept any interesting documents–which he still has. Robert bought a moped and moved into Coconut Grove (Danny does not know whether or not Mary was with him), rented a room somewhere, and just buzzed around. "He was really wacked out." He may have had big debts and was hiding from his debtors. Danny still has a file on Swan Foods. He may still have some product sheets and recipes.

Danny thinks that Robert and Mary were never married. Mary (who was about age 23 in 1977) got pregnant, but Robert didn't want the baby, and wouldn't marry her. It was a boy who they named Osland (perhaps spelled Aslan, Ausland or Auslan). They were Premmies, and devotees of Guru Maraji. Dick McIntyre of Swan Gardens was also a Premmie and is still an active devotee in Miami. Five years ago Mary contacted Danny. 3-4 years ago she was a down-and-out alcoholic living in shelters for the homeless–completely destitute. She was probably arrested in Miami many times for prostitution and drugs. What a tragedy. Danny has no idea how to reach her, but he thinks she still lives in the greater Miami area.

After Swan Foods went under, Danny, financed by Marias, started Sunshine Soy Company, Inc. (see separate interview). Address: 2219 S.W. 59th Ave., Miami, Florida 33155. Phone: 305-266-0830.

3051. *Food Business* (*Chicago, Illinois*). 1992. Meatless goes mainstream. Nov. 23. *

• ***Summary:*** This cover story discusses the trend toward vegetarianism among mainstream Americans. It notes that: Morningstar Farms Grillers, a meatless burger made by Worthington Foods, are sold in 95% of U.S. grocery stores and supermarkets. Sales of soyfoods are expected to top $1.4 billion by the year 2000. In a survey of what is "in" among teens, 28% of respondents said that vegetarianism is "in," compared with 22% a year ago. A National Restaurant Association study found that the trend toward reducing meat consumption peaked in the over-65 age group. In a 1992 poll, 12.4 million adult Americans considered themselves vegetarians, almost double the number in 1985. One in five restaurant patrons won't even go to a restaurant unless there is a vegetarian option on the menu. One British company [Haldane Foods] sells 70 million packaged soyburgers a year in the U.K.

3052. **Product Name:** Tofu, Okara (Fresh, or Dry), Soysage, Okara Burgers.
Manufacturer's Name: Wesner's Tofu Farm.
Manufacturer's Address: West 14505 Coulee Hite Rd., Spokane, WA 99204. Phone: 509-467-7253.

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Date of Introduction: 1992 November.
New Product–Documentation: Talk with Roberta Wesner, co-owner. 1992. Nov. 17. She and her husband, Bruce, who are Seventh-day Adventists, started selling these products on 11 Nov. 1992. They sell about 100 lb/week.

3053. Soyfoods Assoc. of America. 1992. Soyfoods 2000: Merchandising soy products into the next century (Ad). *Natural Foods Merchandiser.* Dec. 16-page color special supplement, 8½ by 11 inches, inserted after p. 28.
• ***Summary:*** Contains full color ads by Morinaga Nutritional Foods, Inc. (Mori-Nu Tofu, Firm and Extra Firm), Lightlife Foods, Inc. (5 types of tempeh, Tempeh Burgers [Lemon Grill, American Grill, Barbecue Grill], Tofu Pups, Vegetarian Chili, Sloppy J, Foney Baloney, Fakin Bacon, Lean Links), Worthington Foods, Inc. (Natural Touch Okara Pattie, Garden Pattie, Dinner Entrée, Lentil Rice Loaf), Sovex Natural Foods, Inc. (Better Than Milk, Tofu Ice Cream [Vanilla or Strawberry], Good Shepherd Spelt, Millet-Rice Flakes, For Goodness Flakes!), Vitasoy (U.S.A.) Inc. (Light Vanilla, Original, and Cocoa soy drinks).

Contains black-and-white ads by White Wave, Inc. (Five Grain Tempeh, Meatless Tofu Steaks, Soya A Melt Soy Cheeses [Regular or Fat Free] and Singles, Lemon Broil Tempeh, Amaranth Tempeh, Teriyaki Burgers, Organic Tofu, Dairyless Non-Dairy Yogurts, Tempeh Burgers, Sea Veggie Tempeh, Meatless Healthy Franks, Snack'n Savory Tofu), Cemac Foods Corp. (Unbelievable brand Cheesecake; based on nonfat baker's cheese; contains no soy, no fat, no cholesterol), Solait International Ltd. (Solait Powdered Soy Beverage), Tofutti Brands, Inc. (Lite Lite Tofutti, Tofutti Cuties, Land of the Free [Non-dairy frozen desserts, free of fat and sugar, sweetened with fruit juice], Tofutti Egg Watchers, Better than Cream Cheese, Sour Supreme [Non-dairy sour cream], Premium Tofutti, Tofutti Soft Serve Mix), Sharon's Finest (TofuRella), American Natural Snacks (Soya Kaas), Great Eastern Sun (Miso Master brand misos), The Macrobiotic Wholesale Company, Turtle Island Foods, Inc. (Keep It Simple Stirfry–Diced Marinated Tempeh), Betsy's Tempeh (Tempeh), Quong Hop & Co. (The Soy Deli–9 Tofu Burgers, 3 Savory Baked Tofu, Pacific Tempeh, 3 Tempeh Burgers, 7 fresh water packed and vacuum packed tofu), MYCAL Group (natural dehulled soybean flakes).

Articles and sidebars include: "Welcome to the future: Soyfoods 2000." "Soyfoods Association names new executive director" (Virginia Messina, whose photo is shown). "Soyfoods Association mission statement." "The modern evolution of soyfoods," by Michael Whiteman-Jones and William Shurtleff (Shurtleff's photo is shown). "Unraveling the soyfoods merchandising mystery," by Michael Whiteman-Jones. "Research shows soyfoods may help prevent cancer," by Mark Messina, PhD (whose photo is shown). "Key reasons to buy soy: Environmental, nutritional, economic."

This attractive insert was coordinated by Franke Lampe and edited by Lisa Turner, both of NFM.

3054. Havala, Suzanne. 1992. Vegetarian congress recap. *Vegetarian Journal* (*Baltimore, Maryland*) 11(6):11. Nov/Dec.
• ***Summary:*** A 1-page summary of the second International Congress on Vegetarian Nutrition, which was "held in Arlington, Virginia, from June 28th to July 1st, 1992, as a joint effort of Loma Linda University and Medical Center and the Seventh-day Adventist Dietetic Association. Over 400 people from around the world convened, including researchers from Australia, Canada, England, Norway, Germany, the United States, and the Netherlands.

"The first significant event cited by the program chair was the creation of the Vegetarian Nutrition Dietetic Practice Group within The American Dietetic Association (ADA). The establishment of this group signifies recognition by ADA of vegetarian nutrition as a specialty area within the field of nutrition. Other notable additions to the program included presentations by Steven Lewis, special representative from UNICEF, speaking about world hunger issues, and Joan Gussow of Columbia University, speaking about vegetarianism and the environment. The choice of both topics demonstrates that the scientific community is becoming more aware of and interested in global food issues and the interrelatedness of food choices and the health of people and the planet.

"Possibly the best-received presentation at the Congress was Dean Ornish's session, 'Can Lifestyle Changes Reverse Heart Disease?'" Dr. Ornish presented strong evidence, based on his years of investigation on this subject, that they can.

3055. Mergentime, Ken. 1992. Retrospective: A century of natural products. The evolution of an industry. *Natural Foods Merchandiser* 13(11):1, 26-28, 30. Dec. [3 ref]
• ***Summary:*** An interesting history of today's natural products industry. The estimated number of retail stores selling natural products has grown from 150 in 1938, to 1,000 in 1960, to 6,500 in 1981, to 10,100 in 1991. Sales of natural products in the USA have grown from $1,900 million in 1980 to $2,900 million in 1986, to $4,640 million in 1991.

Health reform teaching began with Sylvester Graham in the 1830s, but the natural food manufacturing industry really began in the late 1800s in Battle Creek, Michigan. Two of the pioneers were Dr. John Harvey Kellogg and his brother Will Keith Kellogg–who in 1906 broke away from Dr. Kellogg and took Kellogg's Toasted Cornflakes mainstream.

The first health food stores (Martindale's in Philadelphia, Pennsylvania, and The Original Health Food Store in New York owned by Benedict Lust, M.D.) started in the mid-1920s and early 1930s. An early periodical was *Nature's Path*, published [1925-1953] by Dr. Lust. A key to

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the industry's establishment and growth was the acceptance and popularization of vitamins. Early health food companies included Sherman Foods in 1924, Fearn Soya Foods in 1925, El Molino Mills and Naturade in 1926, Ener-G Foods and Orjene (the first natural personal care company) in 1928. *Health Foods Retailing*, the industry's first trade publication, began in 1936 and continued until 1987. In about 1929 Andrew Rosenberger started a health food store named Nature Food Centre; the store is still open today–along with 101 others along the Eastern seaboard between Maine and Virginia. The publicly-owned chain, based in Wilmington, Massachusetts, now grosses nearly $50 million a year.

A sidebar discusses Anthony Berhalter of Chicago, Illinois, who in 1936 organized a consumer group named the American Health Foods Association. In the spring of 1937 in Chicago he organized America's first health foods convention, with 150 attendees, 10-15 booths, and many lecturers. At this meeting the National Health Foods Association was born. It was later renamed the National Dietary Foods Association, then the National Nutritional Foods Association (NNFA).

World War II spurred interest in vitamins and nutrition. A government program was called Vitamins for Victory. "By 1945, vitamins and supplements had become the most profitable product in health food stores. By the end of the decade the industry was, literally, quite healthy.

During the 1950s stores such as Lindberg Nutrition (Lindberg's Nutrition Service) became a beacon for retail innovations; it eventually grew into an 11-store chain.

"In 1952 a man named Joe D. Nichols, M.D., opened new doors for the industry when he presented a paper called Concept of Totality, in which he outlined a healing philosophy centered on the ideas of preventative medicine and nutrition, while considering environmental and psychological factors. This was the foundation of holistic medicine as we know it today. Nichols founded Natural Foods Associates (NFA) in 1953 to educate and change the eating habits of Americans. In 1954, he unveiled *Natural Food & Farming* magazine as forum for nutritional education and the fledgling organic industry...

"The ensuing decades saw a fundamental shift in consumers' perceptions of health and nutritional needs resulting in a phenomenal growth period for the natural products industry. Beginning in the mid to late 1960s, as the Baby Boom generation began to come of age, a new generation of well-educated consumers became aware of a need for natural foods... By the mid 1970s and early 1980s, the industry saw the migration of products, such as yogurt, granola and rice cakes, into mainstream markets."

Photos show: A health food store inside the Battle Creek Sanitarium in the 1870s. The Sanitarium at the height of its prosperity in 1903. Organically grown fruit and vegetables featured in a produce case in the mid-1950s. The inside of the Battle Creek Food Co. in the early 1920s. Dr. John Harvey Kellogg. Lindberg Nutrition's second store, circa 1952. Portraits of Gladys Lindberg (1950s) and Sam Reiser, owner of Balanced Foods (ca. 1935).

3056. Whiteman-Jones, Michael; Shurtleff, William. 1992. The modern evolution of soyfoods. *Natural Foods Merchandiser.* Dec. Soyfoods 2000 special supplement insert. p. 4-6.
• ***Summary:*** A colorful overview of the history of soybeans and soyfoods from 1100 B.C. to the present, worldwide. Discusses the history of tofu, Samuel Bowen, Benjamin Franklin, T.A. Van Gundy, Madison College, Henry Ford, Seventh-day Adventists, Erewhon, Asian Americans, Kikkoman, the $1,000 million soyfoods market in America, countries with the highest per-capita consumption of soyfoods, the future of soyfoods. Address: 1. NFM; 2. Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

3057. Coon, Roger W. 1992. The great visions of Ellen G. White. Hagerstown, Maryland: Review and Herald Publishing Association. 157 p. No index. 23 cm. [58 + 200+ footnotes]
• ***Summary:*** In Volume 1, Chapter 7 is titled "The health reform vision: 'The cure.'" It contains a long, detailed discussion of the context for this vision of 6 June 1863, the vision itself, and Ellen G. White's response to it.

Note: Each of Ellen White's first three health visions is described earlier, in a separate record, at the date that it happened. (1) 1848 autumn. (2) 1854 Feb. 5. (3) 1863 June 5 or 6. Address: Highland, Maryland.

3058. Health & Heritage Museum. 1992. The Health & Heritage Museum (Leaflet). Battle Creek, Michigan. 3 panels each side. Each panel: 22 x 9 cm.
• ***Summary:*** This Seventh-day Adventist museum is housed in the building formerly occupied by the Sanitas Nut Food Co., Battle Creek's oldest existing Kellogg cereal factory, built in 1901. In 1914, due to soaring demand for its products (especially toasted flaked cereal), the company moved to a larger factory constructed south of the Kalamazoo River. "When the cereal cookers were moved out of the building, hospital beds were moved in and the Sanitas Nut Food Company spent 50 years as a hospital surgical and obstetrical annex. In 1990 the building was purchased by Adventist Historic Properties."

The museum is open to the public, free of charge, on Saturdays, 2-5 P.M. It contains early cereal and Sanitarium memorabilia.

Note: According to *The History of Adventist Historic Properties, Inc.* (p. 13): "On December 29, 1989, the trustees [of the AHP] signed a contract to purchase for $36,000 the former Sanitas Nut Food Company building in Battle Creek. Funds for the down payment came from Duff Stoltz's parents, Mr. and Mrs. Garth H. Stoltz, of Bradford,

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Pennsylvania. This three-story building, with its massive masonry walls and solid concrete floors, was constructed in 1901 by W.K. Kellogg for his older brother, J.H. Kellogg, M.D., to house the food factory of the Battle Creek Sanitarium." Address: 169 W. Emmett St., Battle Creek, Michigan 49016. Phone: 616-968-7386.

3059. Numbers, Ronald L. 1992. Prophetess of health: Ellen G. White and the origins of Seventh-Day Adventist health reform. A revised and enlarged edition. Knoxville, Tennessee: University of Tennessee Press. lxviii + 335 p. Illust. Index. 21 cm. [400+* ref]

• ***Summary:*** Included in this revised paperback edition of the 1976 original hardcover edition, is a very interesting "Preface to the Revised Edition" (p. xix-xxiii, by the author) plus two new chapters–also extremely interesting in that they open a window into the soul of the Seventh-day Adventist (SDA) church.

One is the "Introduction: The Historian as Heretic" (p. xxv-lxviii), by Jonathan M. Butler, a friend and an American church historian; it is a history of the response to this book by the SDA church and by Prof. Numbers' parents. The book created an uproar in the SDA church. Prof. Numbers' father thought the book was "satanic" and he was divorced from his wife, in part because of the book. His maternal grandfather had been president of the International Adventist Church and many of his relatives were quite well known in the church. The main point is that a true believer often lacks the critical qualities of a good historian.

The second new chapter is an "Afterward: Ellen White on the Mind and the Mind of Ellen White" (p. 202-27) by Prof. Numbers and his wife (who is a clinical psychologist); it is on the psychology of Ellen White. Address: Prof. of the History of Medicine and the History of Science, Univ. of Wisconsin, Madison.

3060. Numbers, Ronald L. 1992. The creationists. New York, NY: Alfred A. Knopf. xvii + 458 p. + [16] unnumbered pages of plates. Illust. 25 cm. *

• ***Summary:*** This is a history of creationism in America. The Seventh-day Adventists have played a major role in initiating and sustaining the creationist debate. Basically, they started it. Some 25-30% of this book is Seventh-day Adventist history. The author looks most carefully at those creationists who possessed or claimed to possess scientific credentials, and how they dealt with matters of evidence, etc. He consciously stays away from making scientific, religious, or philosophical judgements, and makes only historical judgments. Address: Prof. of the History of Medicine and the History of Science, Univ. of Wisconsin, Madison.

3061. **Product Name:** Solait (Powdered Soy Beverage) [Original flavor].
Manufacturer's Name: Devansoy, Inc. Renamed Devansoy Farms by July 1994.
Manufacturer's Address: 202 West 7th St., P.O. Box 885, Carroll, IA 51401. Phone: 1-800-747-8605.
Date of Introduction: 1993 January.
Ingredients: Aug. 1994: Soybeans, brown rice syrup, sunflower oil, calcium carbonate, sea salt, natural flavor, lecithin.
Wt/Vol., Packaging, Price: 3.8 oz foil pack makes 1 quart. 26 oz can makes 6 quarts. Or 60 lb nitrogen flush bag.
How Stored: Shelf stable.
Nutrition: Per 1 oz. powder or 8 oz. liquid: Calories 135, protein 6 gm, carbohydrates 13 gm, fat 7 gm, sodium 145 mg, calcium 50 mg.
New Product–Documentation: This product was introduced in May 1987 by Miller Farms Food Co. located at 314 Main St., Cedar Falls, IA 50613. The company later changed its name to Solait International Inc. By April 1992 the company name was Solait International Ltd., P.O. Box 885, Carroll, Iowa 51401.

Ad (full-page, black-and-white) for "Solait Powdered Soymilk" in Soya Bluebook. 1993. Sept. p. 58. The company name is now given as Devansoy, Inc. located at 202 West 7th St., P.O. Box 885, Carroll, Iowa 51401. Phone: 1-800-747-8605. Talk with Bev Tierney of Devansoy. The company changed its name from Solait International Inc. to Devansoy, Inc. in Jan. 1993. The president is now Elmer Schettler. They make only one product–Solait Powdered Soy Beverage–however in about June 1992 they started selling soy flour, tofu powder, and textured soy flour made by other companies.

Ad (¼ page, blue, black, and white) in Natural Foods Merchandiser. 1994. July, p. 16 and Aug., p. 12. "New. Delicious, nutritious, and 100% Devansoy." the product advertised is Solait "Milk of the Sun" instant soy beverage, from Devansoy Farms, Carroll, Iowa. For information call 1-800-747-8605.

Product with Label sent by Beverly Tierney of Devansoy Farms. 1994. Aug. 22. Stand-up foil retort pouch containing powdered soymilk. 3.5 by 6.75 inches. Dark blue, light blue, orange, green, and black on white. Logo shows a farmhouse and barn in a field. with the sun rising over a hill. "Solait. 'Milk of the Sun.' Instant soy beverage. Devansoy Farms, Carroll, Iowa. Original flavor. Quick. East. Delicious. Low fat. Cholesterol free. Lactose free. 100% natural. Makes 1 quart."

News release sent by Devansoy Farms. 1994. Aug. 22. "More than a milk substitute, Solait 'Milk of the Sun' is a tasty ingredient for all cooking and baking needs." Elmer Schettler is president of Devansoy Farms.

Recipe booklet titled "Cooking with Solait" sent by Devansoy Farms. 1994. Aug. Contains 8 pages of recipes by various chefs.

3062. **Product Name:** Soy Gourmet (Soy Cheese with

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Casein) [Cheddar, Mozzarella, Chili Pepper, or Herbs & Garlic]. Previously named Fromage de Soy (Feb. 1992).
Manufacturer's Name: Nutrition Specialties International, Inc.
Manufacturer's Address: 1660 Chicago Ave., Suite P-11, Riverside, CA 92507. Phone: (909) 781-4401.
Date of Introduction: 1993 February.
Ingredients: Soy base (organic soybeans, filtered water), canola oil, casein, sea salt, calcium phosphate, sodium phosphate, natural non-dairy flavors, citric acid, carrageenan.
Wt/Vol., Packaging, Price: 8 oz. or 5 lb.
How Stored: Refrigerated.
Nutrition: Per 1 oz.: Calories 50, protein 5 gm, carbohydrates 5 gm, fat 1 gm, cholesterol 0 mg, sodium 198 mg, potassium 15 mg, calcium 170 mg.
New Product–Documentation: Two-page leaflet from Natural Products Expo West. 1993. Feb. "New update effective January 1993." The company's president, Patrick Cochran, has over 23 years experience in the specialty foods industry. Note: According to one industry observer, this product is made by Phil Leisac & Sons of Portland, Oregon.

Leaflet (8½ by 11 inch, brown and black on beige) sent by Patricia Smith from Natural Products Expo West (Anaheim, California). 1994. March 10-13. "Soy Gourmet. Simply the best! The gourmet quality non-dairy cheese alternative made from organically grown soybeans... Less than one ounce of fat per serving." "We do not use spray-dried or modified tofu products as many of our competitors do." The company address has changed to Suite P-13 from Suite P-11. The ingredients have also changed–more casein is used than canola oil: Soy base (organic soybeans, filtered water), casein [dairy milk protein], canola oil, sea salt, calcium phosphate, sodium phosphate, natural non-dairy flavors, citric acid, carrageenan. A new size is 20 lb. Note: This brochure claims that the product is non-dairy even though it uses casein as a major ingredient.

Talk with Patrick Cochran, owner of NSI. 1994. April 19. This product line was launched in March 1993 at the Natural Products Expo West in Anaheim. It no longer claims to be non-dairy. It is sold refrigerated. Patrick was formerly with Loma Linda Foods. This is still the company's only product line. The source of the company's soymilk is confidential.

Talk with Kevin Cross of Stonecrest Natural Foods. 1998. Nov. 13. Kevin now owns this Soy Gourmet product line. He bought the company–a small L.A. firm that just didn't have the finances to get the product going. They were about to go under, so Kevin's company basically just bought the inventory and the label/brand. They had it in some supermarkets in the Los Angeles area. It has always been sold mostly in the Los Angeles area, in Ralph's, Whole Foods, Wild Oats, Pavilions, etc., and at Andronico's in northern California. It has an upscale-looking label with gold foil around it. He plans to introduce a "Rice Gourmet" line of cheese alternatives next month.

3063. Worthington Foods, Inc. 1993. Annual report 1992. 900 Proprietors Rd., Worthington, OH 43085. 16 p. 28 cm.
• ***Summary:*** See next 2 pages. This is the company's first annual report to shareholders since it went public. "Sales: Total sales reached $75.6 million in 1992, an increase of $6.3 million or 9% percent over 1991. Sales gains were recorded in each of the Company's four national brands."

"Earnings: Net income for 1992 was $2.8 million, an increase of 9.1% over 1991."

On the inside rear cover, the Company's four product lines are described and the logo for each displayed.

"Since 1939 Worthington Foods has been owned by a growing number of investors." "Common Stock: We successfully completed an initial public offering of 1,750,000 common shares on April 16, 1992, at a price of $12 per share, of which 1,410,000 were sold by the Company and 540,000 were sold by selling shareholders. This provided over $15 million of capital to the Company which was used to significantly reduce our debt and broaden our shareholder base. These accomplished objectives have strengthened the Company's financial resources which will significantly help us in achieving our aggressive growth and profit objectives for the future." Address: Worthington, Ohio. Phone: (614) 885-9511.

3064. Worthington Foods, Inc. 1993. Form 10-K. 900 Proprietors Rd., Worthington, OH 43085. 39 p. 28 cm.
• ***Summary:*** This is the version of the company's annual report submitted to the U.S. Securities and Exchange Commission. Address: Worthington, Ohio. Phone: (614) 885-9511.

3065. Meyer, Edwin W. 1993. How Ralston Purina got into the soy protein isolate business (Interview). *SoyaScan Notes.* April 7. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Ralston Purina began with industrial isolates which were used for coating paper and sold under the brand name ProCote. They probably heard about Glidden's activities with food-grade isolates so they probably just went ahead and began making edible isolates. Any specialist in this field would have known how to go from industrial to edible isolates. Ed thinks (but is not sure) that Bob Boyer arrived at Ralston Purina from Ford after Ralston Purina started making edible isolates; he was instrumental in showing Ralston how to use their edible isolates to make edible spun soy protein fiber. In the late 1950s Boyer went around trying to sell interest in and licenses to his patent for making spun soy protein fibers. A number of companies took a nonexclusive license including General Mills, Worthington Foods, etc. He may have approached either Glidden or Central Soya. Finally he went to Ralston and sold them the residual exclusive. Address: 1701 N. Sayre Ave., Chicago,

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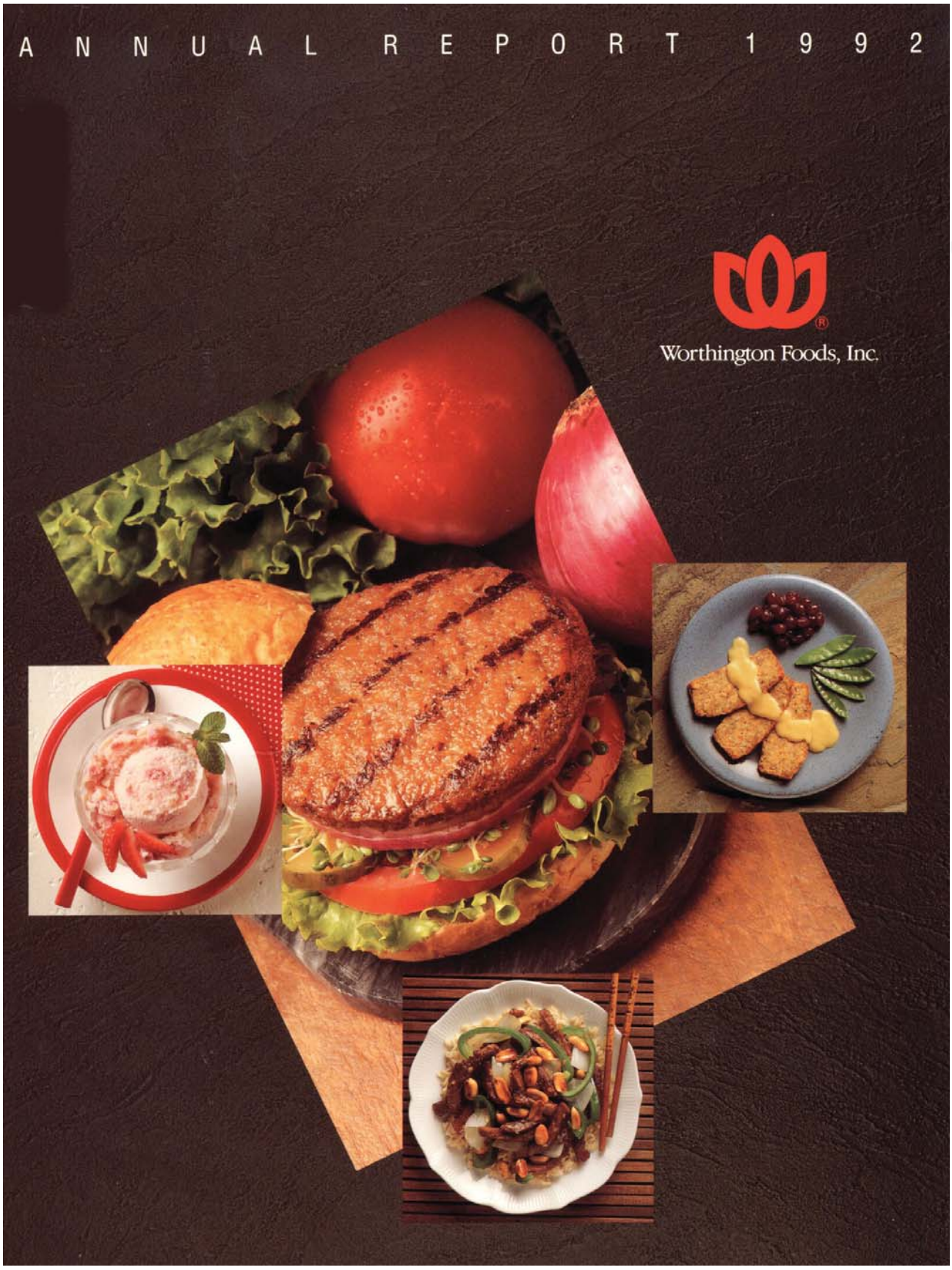

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Worthington Foods produces more than 150 different items to provide healthier alternatives to meat, eggs and dairy products. These food items are free of meat, animal fat and cholesterol.

Worthington Foods markets its products nationally under four brand names:

*The **Worthington**® brand satisfies the preferences of consumers seeking premium quality meat substitutes. The line is sold in health and specialty food stores.*

*The **LaLoma**® brand (formerly Loma Linda Foods) complements the Worthington products by offering nutritious meat analogs to health and specialty food shoppers.*

*The **Natural Touch**® brand meets the needs of health food shoppers seeking products free of artificial additives, flavors or colors. These products are made from all-natural ingredients with minimal processing.*

*The **Morningstar Farms**® brand is the most widely available line of zero-cholesterol alternatives to processed meats and whole eggs. They are distributed nationally through supermarkets. Scramblers® and Better'n Eggs™ egg products can be used in virtually all applications calling for whole, shell eggs.*

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Illinois 60635. Phone: 312-637-0936.

3066. McDermott, Ron. 1993. The effect of the work of Henry Ford and his researchers on Worthington Foods today (Interview). *SoyaScan Notes.* April 13. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Robert Boyer, who worked for many years with Henry Ford, brought the technology for making spun soy protein fibers (SPF) to Worthington Foods. Today, as far as Ron knows [and as far as Soyfoods Center knows], Worthington is the only company in the world making SPF. They are used in about 15-20% of Worthington's meat alternatives, and they are especially useful in chicken-like products. More specifically, they are used in about 15% of their Morningstar Farms line of products (they are not used in Grillers, Breakfast Patties, and Breakfast Links), and in about 20% of their other canned and frozen meat alternatives. A new Morningstar Farms Breaded Chicken Patty, which is in expanded test market, also contains spun soy protein fiber.

In April 1992 Worthington had their first public stock offering to finance their new plant, so their financial figures are now available. The stock is traded on the open market over the counter (OTC) under the symbol WFDS for about $9.75 per share. The company total sales for 1992 were $76 million. Of this, meat alternatives accounted for about two-thirds of the total sales, or about $51 million. If SPF account for 17.5% of this, then they have a retail value of about $8.8 million.

Most of Worthington's meat alternatives are made from a combination of wheat gluten and textured soy protein concentrate. SPF work best in simulating the texture of long muscle fibers, as are found in chicken-like products, such as chicken breast or drumsticks. They also work well to simulate fish cutlets or non-ground red meat (such as roast beef), but there is not much demand for these types of products from Worthington customers. Most beeflike forms are burgers made to simulate ground beef. Moreover plain SPF has a better, more bland and less beany flavor than soy protein concentrates, and they hold and bind other added flavors better.

Why doesn't the company use more SPF? Because they are a very expensive ingredient, and Worthington's growth is in low-tech products, both from a consumer preference and a cost viewpoint.

But Ron is quick to add that SPF have had a major impact on the overall growth of Worthington Foods that is not at all adequately expressed by the present 15-20% figure. First, "the initial impact was huge." Before Bob Boyer came along and brought this technology from Henry Ford, Worthington was making mostly canned wheat gluten products for a very small and specialized denominational market. The first SPF products propelled Worthington into a new level of technology, the mainstream market including supermarkets, and into frozen foods. Second, the new SPF technology was a major factor in attracting Miles Laboratories, which purchased Worthington in March 1970s and took the company into the big leagues–in every area of business from accounting to quality control, from manufacturing to marketing. Third, when trying to deliver a full line of products to consumers, having meatless alternatives to chicken has given Worthington an important competitive advantage. Now that Americans consume more chicken than beef, this becomes increasingly important. Address: Vice President Research & Technology, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

3067. McDermott, Ron. 1993. Increasing use of wheat gluten in foods in America (Interview). *SoyaScan Notes.* April 13. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Ron sees the use of wheat gluten increasing in the USA. Steve Demos of White Wave is starting to use more gluten. [Note: In June 1989 White Wave launched Meatless Healthy Franks, a tofu hot dog which had wheat gluten as the third ingredient. In Sept. 1990 White Wave introduced Meatless Healthy Bologna, a tofu-based product which also had wheat gluten as the third ingredient. In Feb. 1993 White Wave launched Traditional Style Seitan, in which wheat gluten was the main ingredient.] Ivy Foods also makes some nice gluten products. There are a number of advantages of using wheat gluten and soya together. The wheat gluten often improves the texture and flavor in meat alternatives, while sometimes lowering the fat content of the combination. The soya generally reduces the cost of the combination.

About a year ago ADM (Archer Daniels Midland Co.) purchased Ogilvie (pronounced OH-gul-vee) Mills in Keokuk, Iowa. So now ADM is one of the world's largest manufacturers of wheat gluten, but most of this gluten is going into the bread baking industry. Address: Vice President Research & Technology, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

3068. Butke, Charles. 1993. The Drackett Company's work with soy proteins (Interview). *SoyaScan Notes.* April 15 and May 7. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** When the Ford Motor Co. sold its soy protein operations to The Drackett Co. in Nov. 1943, Robert Boyer, Frank Calvert, William Atkinson, and Charles Robinette went to Drackett as part of the deal. Charles (now age 71) started working for Drackett in 1946 in the R&D lab at Cincinnati as a chemist and chemical engineer; he had never worked for the Ford Motor Co. For the first 6 months, Fred Wilson from Ford worked in the same lab with him; then Fred moved out to production. His work was to try to increase the amount of protein extracted from the defatted soybean meal.

There was a man named J.F. Johnson who was a very

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well educated and competent man. He was one of the first graduates of MIT [Massachusetts Institute of Technology, Cambridge, Massachusetts]. From Procter & Gamble, he came to work for Mr. H.R. Drackett, the company's president. He designed Drackett's original soybean crushing and protein extraction plant on Spring Grove Ave. in Cincinnati. His design and process was different from that used previously by Ford. At this plant Drackett processed soybean oil meal, oil, and Drackett Soybean Lecithin (in 55 gallon drums by 1945). Johnson designed a system whereby the oil was extracted from the soybeans using hexane solvent, and the crude soy oil was run into huge tanks and allowed to settle for 7 days. The good oil was decanted off the top and the foots on the bottom were reprocessed and yielded lecithin. Johnson's good soy oil was good enough to use in home cooking; it was used in consumer sampling but it was never sold commercially.

When Ford's soy protein operations went up for sale, H.R. Drackett thought that his soybean crushing operations and Ford's technology for spinning soy proteins would make a perfect marriage.

First Drackett set up an experimental soy protein plant at Spring Grove, then they made it into a commercial plant next to their soybean extraction plant at Sharonville, Ohio, which was crushing about 55,000 bushels/day of soybeans. This plant was later said to be at Evendale (even though it never moved) either for tax purposes or because city boundaries moved.

Charles had a spiral-bound catalog titled "Drackett Proteins" (which he sent to Bob Griffin at Drackett about 6 weeks ago in response to an enquiry related to Drackett company history) that described the three types of industrial isolated soy proteins made and sold by Drackett when he arrived in 1945–Protein 110, Protein 112, and Protein 220. The first two were low-viscosity proteins of low molecular weight used in paper coatings and sizings. The Protein 220 was used very widely in water-based paints. The names of these proteins were later changed to Ortho Protein–of which there may have been different types. A man named Sam Wise (now deceased) held one of the original patents for making water-based paints. Mr. Drackett sold that patent to a big paint company so that they could get into the water-based paint business.

Drackett made and sold Soybean Azlon (spun soy protein fibers) from about 1946 to 1949. Their main customer was the American Hat Corporation (in Connecticut), which used it in felt hats. Chuck is absolutely certain that the Azlon was sold commercially because he was in charge of approving the shipments to go out. It had very good felting properties. Drackett made about 1,000 to 1,500 lb/day of Soybean Azlon, cut the fibers into lengths of about 2½-3½ inches as desired by the hatter, tied them into loose uncovered bales with cord, and shipped them. There were also two other smaller companies that used Azlon. At the time, H.R. Drackett had suits and hats made for his sales force that contained Azlon.

Drackett also had a small operation that made plastics, and he is sure that they received 1-2 orders for these in the form of 3-foot diameter bases for large industrial fans. Not much of the plastic was sold and Butke thinks this was the only application for which it was sold commercially. He does not recall which company ordered the plastic bases.

In 1949 Drackett shut down its plant that was manufacturing Azlon, quit making isolated soy protein, and also shut down some of its soy protein research. Charles was moved out of soybean research into the laboratory doing research on soybean oil. Bob Boyer left Drackett, then rewrote the patents for making Azlon to make them suitable for production of edible soy protein fibers. When Boyer left, Frank Calvert became director of research for Drackett.

Drackett did considerable work on edible soy protein products–a fact that is not well known. Bill Atkinson's TVP grew out of this work. It started when a group of Seventh-day Adventists from Worthington Foods of Worthington, Ohio (located just north of Columbus, Ohio) came to Drackett (in Cincinnati, Ohio) and asked if Drackett could develop an edible soy protein–because they didn't eat meat. They even gave Drackett some seed money to work on the project. Bill Atkinson took charge of the project in about 1956; he worked with Ed Lankheit (pronounced LANG-kite, he is now age 76 and lives in Park Hills, Kentucky) and a lady researcher. Drackett sold granules all the time. To make these granules they took the flakes from the solvent extraction plant, ran them through an alkali extraction process to extract the protein, which is ten precipitated with an acid. It is filtered and dried to make small and hard granules of isolated soy protein. They then used a hot water or steam extraction on the granules to try to get rid of their raw beany flavor–to no avail. So they mixed the granules with beans and chili sauce to mask the beany flavor. The texture of the cooked granules closely resembled that of ground meat, but the flavor was pretty poor. This product was never commercialized, but it did evolve into the TVP developed later by Atkinson at ADM.

In mid-1957 Drackett sold its soybean operations to ADM. ADM wanted Drackett's two industrial soy protein products, Atkinson's work with edible textured soy proteins, and the other people and expertise in the edible area. ADM also bought Drackett's library, laboratory notebooks, etc. Roger Drackett had hired a group from Ohio State University survey the future potential of soy proteins. They concluded that another 25 years of R&D would be needed to make the soy protein operations financially successful. Drackett took the money from the sale to ADM and invested it in TV ads for consumer products like Windex and Drano.

Charles went to ADM as part of the deal–along with about 9 other researchers, including William Atkinson. Charles worked for ADM at the plant in Evendale from 1957

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to 1960. The soybean crushing and soy protein operations were continued as before except that ADM added a new Ortho Protein product–which was less expensive because it was not bleached as much with hydrogen peroxide. Bleaching was one of the most expensive steps in the process. In 1960 Charles left ADM and went back to work for Drackett at their plant in Spring Grove, where they made Windex, Drano, etc. At some point ADM moved the soybean crushing and protein equipment out of the plant in Evendale but he does not know where they took it. They sold the soybean and grain storage facilities to Central Soya, and they sold the many empty buildings to other small industries. Address: 9541 Flick Rd., Cincinnati, Ohio 45247. Phone: 513-741-4289.

3069. Bryan, Ford R. 1993. Robert Allen Boyer (Document part). In: Ford R. Bryan. 1993. Henry's Lieutenants. Detroit, Michigan: Wayne State University Press. 321 p. See p. 44-51. Great Lakes Series. April. [10 ref]

• ***Summary:*** This biographical sketch of Boyer (1909-1989), Henry Ford's top soybean man, is well researched and full of original material. Robert Boyer was born on Sept. 30, 1909 in Toledo, Ohio. In 1916 he moved with his parents to Royal Oak, Michigan, where he attended grade school while his father worked in the accounting department of the Ford Motor Co. in nearby Highland Park. When Henry Ford bought the Wayside Inn in Massachusetts in 1923, Frank Campsall suggested to Ford that Earl Boyer would be an appropriate business manager for the Inn. So the Boyers, including young Robert and his three sisters, moved into a Ford-owned house near the Inn. Robert then attended high school at Framingham, Massachusetts, where he graduated in 1927. Robert met Henry Ford while skating at the Inn. Ford suggested that he come to Dearborn for some work experience before going to college at Dartmouth as planned. So in Sept. 1927 Robert arrived in Dearborn where he was enrolled in the Henry Ford Trade School at the Rouge plant.

"Henry Ford had taken recent trips to Europe and had been impressed with the agricultural prosperity in some of those countries. Returning to Dearborn, Ford wanted to set up an experimental agricultural chemical factory to determine what products could be obtained from plants. The experimental chemical factory became a one-quarter size model of Ford's mammoth wood distillation plant at Iron Mountain, Michigan. The model was constructed at Iron Mountain and moved to Greenfield Village in late 1928. About then Ford asked, 'Bob, how would you like to supervise this model plant–to stay another year or two and live at the Sarah Jordan Boarding House in Greenfield Village.'

"Boyer had had little formal training in chemistry, but he was provided with tutors from the University of Michigan, and from 1929 to 1933 attended the Edison Institute of Technology, a school founded by Henry Ford and Thomas Edison as a school for inventors... Ford's purpose was to find industrial uses for farm crops. A farm depression was imminent. During the depression year of 1931, Robert Boyer married Elizabeth Szabo of Detroit. During the next few years they had three children...

"In 1931, soybeans became one of the plants investigated at the Chemical Laboratory... Usually the beans were pressed to obtain the oil, and the remaining 'cake' was fed to animals. The Boyer group, however, developed a solvent extraction procedure whereby soy protein as well as oil could be produced...

"By this time Henry Ford was growing rather old, approaching seventy. Design of the V-8 Ford in 1931 seems to have been his final great interest in automobile mechanics. His Edison Institute Schools, Greenfield Village, and soybean research now largely occupied his time. In 1932 he began to plant hundreds of acres of soybeans on his Dearborn farm lands and began procuring thousands more acres in Southeastern Michigan. Several additional processing plants were located in outlying towns where he promised to buy even more soybeans from local farmers to use in automotive paints and plastics. Boyer was largely responsible for Ford's advancement in soybean technology.

"Henry's vegetarian eating habits led him to hire his old gradeschool friend, Dr. Edsel Ruddiman, an organic chemist, to devise tasty dishes containing soybean ingredients for the dining room. And Ford's executives, including Boyer, were coaxed by Ford to try them–soybean milk, soups, bread, croquets, simulated meats, butter and ice cream. Most were not very palatable, however, because of the tendency of the soy oil to be slightly rancid."

Boyer was in charge of the "Industrialized American Barn" demonstration at the 1934 Chicago World's Fair. And in May 1935 when the first chemurgy conference was held at the Dearborn Inn, Boyer was in charge of arrangements. During the second chemurgy conference in Dearborn, Boyer led the groups of participants through his Soybean Laboratory at Greenfield Village. At about this time Boyer developed soy protein fibers which were blended with wool (35% soy and 65% wool) and woven into cloth. The resulting cloth was given to Ford's own tailor, and suits of soy fiber were worn by Ford on occasion–and highly publicized. "Boyer admits that the tensile strength of soy fiber was only 85% of wool, however, behooving the wearer to avoid strenuous movements, bending down for example very cautiously.

"Boyer's fiber was ideal for felt hats, however. All of the fiber Boyer could produce was wanted by the Hat Corporation of America. The soy fiber blended well with rabbit fur, was less expensive and much cleaner to work with. To produce fiber in larger amounts and to develop fiber of higher tensile strength, a modern air-conditioned laboratory was built on Village Road in Dearborn. In this plant not only fiber producing equipment was installed but

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complete weaving equipment as well."

Between 1939 and 1941 Boyer worked on Ford's "plastic car" made from soybean plastic. It also drew widespread media publicity. "Boyer drove the car a few weeks before it was abandoned. (People are still wondering what became of that plastic car.) A major defect never corrected, according to Boyer, was the strong odor reminiscent of a mortuary...

"The soy protein fiber facility was operating nicely when in 1943 the U.S. Air Force demanded the air-conditioned building for precision measurement of aircraft engine parts. When his building was thus usurped, Boyer was out of a job involving soybeans. He then transferred to Ford's Willow Run Bomber Plant at Ypsilanti, Michigan, where, because of his knowledge of plastics, he was given responsibility for protecting the plastic windshields on the B-24s during assembly of the planes."

In 1943 Drackett Products Co. in Cincinnati, Ohio, purchased the Ford fiber processing equipment and Boyer went to work for Drackett in Cincinnati–he was never again in direct contact with Henry Ford. Boyer wanted to develop edible soy protein fibers. When H.R. Drackett died in 1949, Boyer left The Drackett Co. so he could pursue his goal of receiving a pioneer patent for texturizing vegetable (soy) protein. He was granted this patent in 1949. As many as 30 corollary patents were subsequently obtained.

"Boyer had developed methods for producing soy fiber that was thoroughly washed and tasteless. In 1951 he became a consultant to several food processors who were licensed to use his patents in their operations. These firms included Worthington Foods, Swift & Company, Ralston Purina, Unilever Company of England, National Biscuit Company [Nabisco], General Foods, and General Mills. Dozens of high-volume foods were, and still are, produced using Boyer's procedures... Robert Boyer worked full time for Ralston Purina in St. Louis, Missouri, from 1962 until 1971.

"In February 1963, Elizabeth Szabo Boyer died, and in April 1965, Boyer married Nancy Ann Miller, a recent widow living in St. Louis. Boyer retired from general consulting work in 1971 after his patents had expired in 1966, but continued consulting with Worthington Foods until 1977. In 1973, Nancy and Robert retired to downtown Dunedin, Florida.

"The Boyers did considerable traveling. But in the early 1980s Robert's eyes began to fail, and then his chief hobby became baking, an occupation he had always enjoyed. In 1985 he dictated his oral reminiscences [8 hours on tape with David R. Crippen] as requested by the Henry Ford Archives. Boyer died in Dunedin on November 11, 1989. The body was cremated and the ashes scattered over the Gulf of Mexico."

Photos show: A portrait of Boyer in his later years (Ford Archives photo ID No. P.0.19429). The Chemical Laboratory building at Greenfield Village at Dearborn (No. 0.6213) in 1930. Henry Ford discussing soybean work with Boyer in the Chemical Laboratory on Ford's birthday, July 30, 1937 (No. 188.21320. Ford is seated on a stool by a lab. bench reading and Boyer has one elbow on the bench behind him.) Boyer and Ford with the "plastic car" at Dearborn in 1941 (No. 189.16352).

Talk with Ford Bryan. 1992. Nov. 12. He is now working to get Robert Boyer's soybean research laboratory, the Chemical Plant of the Edison Institute, restored at Greenfield Village and interpreted as to its history and significance. The building is in fairly good shape; the exterior is in good shape but all the equipment has been removed from the interior. Address: 21800 Morley, Apt. 1203, Dearborn, Michigan 48124.

3070. Rattenbury, Jeanne. 1993. All hail fiber! A long unappreciated foodstuff finally gets some respect. *Vegetarian Times.* April. p. 47-50, 52.

• ***Summary:*** This excellent article starts: "It's everywhere! It's everywhere! Dietary fiber, vaunted for its heroics in reducing the risk of heart disease and colorectal cancer, is now being pumped into sandwich breads, breakfast cereals, even potato chips and cookies." This is quite a reversal of fortune for something that has been systematically removed from processed foods since the start of the Industrial Revolution–bringing us white bread, white rice, etc. "Although it lacks nutritional value and calories and it cannot be digested, fiber nonetheless has been a key component of human diets since prehistoric times."

Color photos shows the front panels of boxes of: Kellogg's Cooked Bran. Kellogg's Bran. Kellogg's All-Bran Post's Bran Flakes. Kellogg's Raisin Bran. Also: A color ad for Grape Nuts.

A sidebar, about Dr. Denis Burkitt, is titled "The father of fiber." "Now 81, Burkitt spent 20 years (from 1946 to 1966) as missionary surgeon based in Uganda. During those years he rarely, if ever, saw the medical problems that plague affluent Western societies: Heart disease, colon cancer, diabetes, hemorrhoids, varicose veins, appendicitis and diverticular diseases. Inspired by a colleague who believed that refined foods are the culprit in these diseases of affluence. Burkitt collected extensive data about Africans' eating habits and helped develop a revolutionary hypothesis about the relationship between diet and disease: that fat is promotive and fiber is protective." Long retired, Burkitt now lives in Gloucester, England, with his wife. "In 1962 there were only 10 scientific papers about fiber; in 1980 there were 500."

A large table (p. 50), titled "Fiber in bulk" shows the grams of fiber per serving in many different common foods, grouped by food type as follows: Breads, vegetables, fruits, breakfast cereals, grains, legumes, and nuts and seeds.

Experts recommend consuming 25 to 30 grams of fiber per day. Most Americans get much less. Dietary fiber is the

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nutrient in shortest supply in the American diet. Address: Chicago.

3071. **Product Name:** Morningstar Farms Country Crisps (Chicken-like Patties).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1993 April.
Ingredients: Textured vegetable protein (Soy protein isolate and concentrate), egg whites, wheat flour, soybean oil, corn oil, water, corn flour, salt, monosodium glutamate, natural and artificial flavors from non-meat sources, dextrose, hydrolyzed plant protein, partially hydrogenated soybean oil, sugar, spices, yeast, paprika, vegetable gum, leavening (sodium acid pyrophosphate, sodium bicarbonate), onion powder, whey, nonfat milk, corn starch, turmeric, garlic powder, corn sweeteners, niacin, iron (as ferrous sulfate), vitamin B-1 (thiamine), vitamin B-6, Red 3 for color, vitamin B-2 (riboflavin), vitamin B-12.
Wt/Vol., Packaging, Price: 10 oz (284 gm) paperboard box. Retails for $2.19 (6/93, Lafayette, California).
How Stored: Frozen.
Nutrition: Per 71 gm patty: Calories 220, protein 8 gm, carbohydrate 13 gm, fat 15 gm (63% of calories from fat, polyunsaturated 11 gm, saturated 2 gm), cholesterol 0 mg, sodium 620 mg, potassium 70 mg.
New Product–Documentation: Product with Label purchased at Lucky Foods supermarket in Lafayette, California. 1993. June 1. 8 by 4 by 1¼ inch box. Red and black on white. Color photo of one patty on a bun and lettuce, topped by two tomato slices, with another sesame bun beside it. Morningstar Farms logo in top left corner. "Cholesterol-free. Vegetable protein patties. Contains no chicken. No animal fat. Only 220 calories. Keep frozen. Microwavable."

3072. **Product Name:** Morningstar Farms Meatless Chik Patties (Chicken-like Patties).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1993 April.
Ingredients: Textured vegetable protein (Soy protein isolate and concentrate), egg whites, wheat flour, water, corn oil, soybean oil, corn flour, natural and artificial flavors from non-meat sources, salt, potassium chloride, dextrose, hydrolyzed plant protein, partially hydrogenated soybean oil, sugar, spices, yeast, paprika, vegetable gum (carrageenan), leavening (sodium acid pyrophosphate, sodium bicarbonate), onion powder, whey, nonfat milk, corn starch, garlic powder, corn sweeteners, niacin, iron (as ferrous sulfate), vitamin B-1 (thiamine), vitamin B-6, vitamin B-2 (riboflavin), vitamin B-12.
Wt/Vol., Packaging, Price: 10 oz (284 gm) paperboard box. Retails for $2.19 (6/93, Lafayette, California).
How Stored: Frozen.
Nutrition: Per 71 gm patty: Calories 170, protein 8 gm, carbohydrate 13 gm, fat 10 gm (53% of calories from fat, polyunsaturated 6 gm, saturated 2 gm), cholesterol 0 mg, sodium 590 mg, potassium 200 mg.
New Product–Documentation: Product with Label purchased at Lucky Foods supermarket in Lafayette, California. 1993. June 1. 8 by 4 by 1¼ inch box. Dark green, light green, tan, red, and blue on white. Color photo of a patty with lettuce and tomato between two buns on right half of front panel. Morningstar Farms logo in top left corner. "Artificial chicken flavor. No animal fat. Microwaveable. Zero cholesterol. Keep frozen."

Talk with Trudy Cravens of Worthington Foods. 1993. June 30. The Chick Patties are replacing the Country Crisps. Worthington introduced 4 new products in April 1993 as extensions of the Morningstar Farms line: Chik Patties, Prime Patties, Deli Franks (which replaces the old Deli Franks), and the Garden Vege Patties. Worthington would like them to be marketed at supermarkets and mainstream grocery stores in the frozen meat case (along with regular chicken patties, fish sticks, etc.) rather than the frozen breakfast section like most of the other Morningstar Farms products. The products are still in test market. Also in April, all other original products in the Morningstar Farms line had their labels redesigned to the new green label except for Scramblers.

Product with Label purchased at Safeway supermarket in Lafayette, California. 1994. May 18. Price: $2.89. Frozen.

Product with Label (new design) purchased at Safeway supermarket in Lafayette, California. 1995. Aug. 17. Price: $2.79. Frozen. 4 patties, 10 oz. Blue, white, red, and gold on green. The front pane text reads: "Chik Patties–A meatless alternative to chicken. Made with vegetable & grain protein." The name "Chik Patties" is written in white letters on a blue band. Soyfoods Center product evaluation. 1995. Aug. 19. 1. Taste/organoleptic: Texture is excellent, flavor is too spicy. Package/label design: Excellent.

3073. **Product Name:** Natural Touch Vege Frank.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1993 April.
Ingredients: Wheat gluten, water, natural flavors (paprika, onion powder, garlic powder, salt, autolyzed yeast), corn oil, spices, vegetable gums (carrageenan, gum arabic, xanthan gum), natural hickory smoke flavor.
Wt/Vol., Packaging, Price: 12.7 oz (360 gm) plastic wrap.
How Stored: Frozen.
New Product–Documentation: Ad (full-page, color) with coupon in Vegetarian Times. 1993. June. p. 17. "If you've

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ever been burnt by vegetarian franks and burgers, you'll flip over these." Talk with Trudy Cravens of Worthington Foods. 1993. June 30. This product was launched in April 1993.

Label sent by Trudy Cravens of Worthington Foods. 1993. July 1.

3074. **Product Name:** Natural Touch Vege Burger.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1993 April.
Ingredients: Textured vegetable protein (wheat gluten, soy protein concentrate and isolate), corn oil, egg whites, calcium caseinate, natural flavors from vegetable sources, corn starch, raisin juice, onion, soy sauce (water, soybeans, sea salt), carob, onion powder, soy lecithin, garlic powder, spices, sea salt.
How Stored: Frozen.
New Product–Documentation: Ad (full-page, color) with coupon in Vegetarian Times. 1993. June. p. 17. "If you've ever been burnt by vegetarian franks and burgers, you'll flip over these." Talk with Trudy Cravens of Worthington Foods. 1993. June 30. This product was launched in April 1993.

Label sent by Trudy Cravens of Worthington Foods. 1993. July 1.

3075. **Product Name:** Morningstar Farms Meatless Prime Patties.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1993 April.
Ingredients: Textured vegetable protein (Soy protein concentrate and isolate, wheat gluten), natural and artificial flavors from non-meat sources, egg white solids, calcium caseinate, partially hydrogenated soybean and cottonseed oil, corn oil, modified food starch, sucrose, onion powder, salt, caramel colors, emulsifiers from vegetable sources (mono- and diglycerides, glyceryl lacto esters of fatty acids), methylcellulose, ascorbic acid (vitamin C), disodium inosinate, disodium guanylate niacin, iron (as ferrous sulfate), vitamin B-1 (thiamine), vitamin B-6, vitamin B-2 (riboflavin), vitamin B-12.
Wt/Vol., Packaging, Price: 9 oz; 4 patties in a paperboard box.
How Stored: Frozen.
New Product–Documentation: Talk with Trudy Cravens of Worthington Foods. 1993. June 30. Worthington introduced 4 new products in April 1993 as extensions of the Morningstar Farms line: Chik Patties, Prime Patties, Deli Franks (which replaces the old Deli Franks), and the Garden Vege Patties. Worthington would like them to be marketed at supermarkets and mainstream grocery stores in the frozen meat case (along with regular chicken patties, fish sticks, etc.) rather than the frozen breakfast section like most of the other Morningstar Farms products. The products are still in test market.

Label sent by Trudy Cravens of Worthington Foods. 1993. July 1.

Product with Label purchased at Safeway supermarket in Lafayette, California. 1994. May 18. Price: $3.19. Frozen.

3076. **Product Name:** Morningstar Farms Meatless Deli Franks.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1993 April.
Ingredients: Wheat gluten, water, corn oil, natural flavors from non-meat sources, hydrolyzed oat flour, egg whites, natural hickory smoke flavor, salt, brown sugar, corn syrup solids, mustard, spices, partially hydrogenated vegetable oil, dextrose, maltodextrin, sugar, molasses, onion powder, garlic powder, hydrolyzed vegetable protein, propylene glycol, autolyzed yeast, vegetable gums (carrageenan, gum arabic, xanthan gum), soy extractives, paprika, wheat starch, modified corn starch, red 3 and blue 1 for color.
Wt/Vol., Packaging, Price: 12.7 oz (360 gm) plastic wrap.
How Stored: Frozen.
New Product–Documentation: Talk with Trudy Cravens of Worthington Foods. 1993. June 30. Worthington introduced 4 new products in April 1993 as extensions of the Morningstar Farms line: Chik Patties, Prime Patties, Deli Franks (which replaces the old Deli Franks), and the Garden Vege Patties. Worthington would like them to be marketed at supermarkets and mainstream grocery stores in the frozen meat case (along with regular chicken patties, fish sticks, etc.) rather than the frozen breakfast section like most of the other Morningstar Farms products. The products are still in test market.

Label sent by Trudy Cravens of Worthington Foods. 1993. July 1.

3077. **Product Name:** Morningstar Farms Meatless Garden Vege-Patties.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1993 April.
Ingredients: Textured vegetable protein (Soy protein concentrate, wheat gluten), mushrooms, egg whites, water chestnuts, onions, cooked brown rice, carrots, corn oil, rolled oats, green and red bell peppers, calcium caseinate, soy sauce (water, soybeans, salt), black olives, onion powder, corn starch, salt, natural and artificial flavors from non-meat sources, sucrose, soy protein isolate, spices, garlic powder, jalapeno pepper powder, celery extract.
Wt/Vol., Packaging, Price: 9.5 oz (4 patties in a paperboard box).
How Stored: Frozen.

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New Product–Documentation: Talk with Trudy Cravens of Worthington Foods. 1993. June 30. Worthington introduced 4 new products in April 1993 as extensions of the Morningstar Farms line: Chik Patties, Prime Patties, Deli Franks (which replaces the old Deli Franks), and the Garden Vege Patties. Worthington would like them to be marketed at supermarkets and mainstream grocery stores in the frozen meat case (along with regular chicken patties, fish sticks, etc.) rather than the frozen breakfast section like most of the other Morningstar Farms products. The products are still in test market.

Label sent by Trudy Cravens of Worthington Foods. 1993. July 1.

Product with Label purchased at Safeway supermarket in Lafayette, California. 1994. May 18. Price: $3.15. Frozen. Ad (full page, color) in Vegetarian Times. 1994. June. p. 3.

3078. **Product Name:** Natural Touch Nine Bean Loaf.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1993 April.
Ingredients: Beans and barley (blackeye, green & yellow split peas, pink, great northerns, pearled barley, kidney, red, pinto, and turtle blacks), brown rice, tomatoes, onion, corn oil, carrot, corn, egg whites, cheddar cheese alternative (organic tofu, canola oil, calcium caseinate (protein), sea salt, citric acid, natural cheddar cheese flavor, soy lecithin, guar gum, annatto), jalapeno cheese alternative (organic tofu, canola oil, calcium caseinate (protein), jalapeno peppers, sea salt, citric acid, soy lecithin, guar gum), celery, defatted wheat germ, ripe olives, soy lecithin, Italian & cheese seasoning (tomato, natural flavor, Parmesan cheese, Romano cheese, corn starch, onion, spices, garlic, paprika extract, salt, lactic acid), green & red bell peppers, yeast.
How Stored: Frozen.
New Product–Documentation: Label sent by Trudy Cravens of Worthington Foods. 1993. July 1. "Made with a variety of 9 beans, organic tofu cheese, tomatoes, & brown rice."

3079. **Product Name:** Natural Touch Garden Grain Pattie (With Soy Cheese).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1993 April.
Ingredients: Mushrooms, onion, brown rice, rolled oats, bulgur, cottage cheese (grade A pasteurized cultured skim milk, milk, salt, guar gum, locust bean gum, carrageenan, natural flavors), mozzarella cheese alternative (organic tofu, canola oil, calcium caseinate (protein), sea salt, citric acid, soy lecithin, guar gum), corn oil, walnuts, cheddar cheese alternative (organic tofu, canola oil, calcium caseinate (protein), sea salt, citric acid, natural cheddar cheese flavor, soy lecithin, guar gum, annatto), egg whites, corn starch, soy lecithin, onion powder, calcium caseinate, sea salt, spices, garlic powder, celery extract.
Wt/Vol., Packaging, Price: 9 oz. (4 patties in a paperboard box).
How Stored: Frozen.
New Product–Documentation: Label sent by Trudy Cravens of Worthington Foods. 1993. July 1.

3080. Worthington Foods, Inc. 1993. First quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 4 panels each side. Each panel: 22 x 9 cm.
• ***Summary:*** Net sales increased $19.6 million, up 13.4% compared with the first quarter last year. Sales increased in all four major product categories. Sales of Morningstar Farms meat alternatives to supermarkets rose 19.1%. Net income rose to $810,000, up 26.4% compared with the first quarter last year.

"Four new Morningstar Farms meat alternative products (Prime Patties, Deli Franks, Chik Patties and Garden Vege-Patties) began shipping earlier this month into selected test markets. Importantly, these products are located in the meat case sections of the grocery stores and are the first items to be shipped in the new packaging for Morningstar Farms brand products. Four similar products are now being introduced into the natural food market under the Natural Touch brand.

"Phase I of the Zanesville, Ohio production facility is on schedule for completion later this quarter. Initial shipments of refrigerated Better 'n Eggs will begin at that time, enabling the Company to introduce this product to the remaining 53 percent of the nation's supermarkets. Nationally, nearly all the growth in egg substitute sales for all competitors has taken place in refrigerated products in the past two years.

"On April 21, we announced that the Company has entered into an agreement with Burger King Corporation to test the Morningstar Farms Grillers product in a restaurant unit in Watkins Glen, New York." Address: Worthington, Ohio. Phone: (614) 885-9511.

3081. Machlis, Mark. 1993. New developments with seitan and gluten at Ivy Foods (Interview). *SoyaScan Notes.* May 24. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** His company now has national distribution via 28 natural- and health food distributors. Since Jan. 1993 the company has been making a profit. Ivy Foods still does about $4,000/month in mail order business, but he is now encouraging his customers to buy from their local retail store, but many consumers who live in rural areas have no retailer nearby. Ivy Foods now sells about $40,000 to $50,000 a month of gluten products, so the mail order business is only about 10% of the total. He plans to continue the mail order service, and the company now has a toll-free

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number for mail order: 1-800-280-1313. His most popular mail order products are the 5-pack sampler (which gives you one pound of each product) and the 10-pack. So the minimum order would be $30.00 (Five 1-lb 5 packs x $5.95/lb including air shipping and handling). He makes more money selling direct by mail order, but he wants to support his retailers who do 9 times as much volume.

All of his retail products are frozen. To ship frozen products by mail he uses Airborne Express second day air, with the products packed in an insulated foam box (without any dry ice). The shipping cost is about $1.00/lb. The total cost of the product, delivered to the consumer's door, is $6.00/lb versus $4.40 to $5.39 at retail stores. If the customer sends the insulated box back to Ivy foods, he or she gets a free pound of product next time. The cost to ship back the box via the post office is about $2.90. Quite a few people ship back (recycle) the foam boxes.

His two flavored dry mix products (Meat of Wheat Chicken Style, and Sausage Style, which were introduced in about May 1993) are also sold by Bob and Cindy Holzapfel of The Book Publishing Co. in Tennessee in their Mail Order Catalog. To make these products the homemaker just adds water, kneads it, keep it in a roasting bag, then steam it.

In June Ivy Foods will run its first ad (in *Vegetarian Times*) aimed at getting consumers to but the company's products in retail stores. In the past he has been running mail order ads. *Vegetarian Times* is the only periodical in which an ad pays for itself; a typical ad of his in *Vegetarian Times* will generate 400 calls per month.

A direction for Ivy Foods will be to sell to food manufacturers for use as an ingredient in their food products. He plans to sell to Gary Barat of Legume. In about Sept. 1992 Barat bought part of Heart and Soul; the former owner, Andy Harrison, ran into financial problems. Barat is now buying Ivy Foods' Chicken Style; he plans to come out with a meatless chicken salad and several entrees.

His latest product is a prepared Chicken Chili. He no longer has a policy of donating a certain percentage of his profits to a worthy cause. He ended up poring nearly $500,000 into the company during its first 2 years in business, mostly just to keep the company alive.

John Marsh (not sure of his last name), Andrew Harrison's old partner, is one of Mark's competitors. He used to be the manufacturer for Heart & Soul, with Andy Harrison in charge of marketing. John ended up leaving and starting his own company in California, which left Andy without a product. At the last Natural Foods Merchandiser trade show (Feb. 1993 at Anaheim) John introduced a sliced deli meat similar to that formerly under the Heart & Soul brand. John Belleme is not a major competitor because his prices are higher in retail stores. Ivy Foods' biggest markets are on the East Coast and in Texas. Ivy Foods does not make traditional seitan; he pre-flavors his dough before his products are steamed (not boiled in a broth). Three years ago at the Anaheim trade show he learned the key secret to financial success from some people from Worthington Foods, who came to him and said: "Don't think about rinsing your own gluten." Use vital wheat gluten. Address: Office: Ivy Foods, 7613 S. Prospector Dr., Salt Lake City, Utah 84121. Phone: 801-943-7664.

3082. Shurtleff, William; Aoyagi, Akiko. comps. 1993. Henry Ford and his researchers' work with soybeans, soyfoods, and chemurgy–Bibliography and sourcebook, 1921 to 1993: Detailed information on 439 published documents (extensively annotated bibliography), 79 unpublished archival documents, 71 original interviews (many full text) and overviews, 13 commercial soy products. Lafayette, California: Soyfoods Center. 249 p. Subject/geographical index. Author/company index. Language index. Printed May 19. 28 cm. [567 ref]

• ***Summary:*** This is the most comprehensive book ever published about the work of Henry Ford and his researchers with soybeans and soyfoods. It has been compiled, one record at a time over a period of 18 years, in an attempt to document the history of this subject. It is also the single most current and useful source of information on this subject, since 96% of all records contain a summary/abstract averaging 286 words in length.

This is one of more than 40 books on soybeans and soyfoods being compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyfoods Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features: 30 different document types, both published and unpublished; every known publication on the subject in every language; 66 original Soyfoods Center interviews and overviews never before published. Thus, it is a powerful tool for understanding this subject from its earliest beginnings to the present.

The bibliographic records in this book include 439 published documents and 79 unpublished archival documents. Each contains (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English publications together with an English translation of the title, month and issue of publication, and the first author's first name (if given).

The book also includes details on 13 commercial soy products, including the product name, date of introduction, manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as references to and summaries of advertisements, articles, patents, etc.) are also given.

Details on how to make best use of this book, a complete subject and geographical index, an author/company

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index, a language index, and a bibliometric analysis of the composition of the book (by decade, document type, language, leading periodicals or patents, leading countries, states, and related subjects, plus a histogram by year) are also included. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

3083. Leiss, Richard S. 1993. History of the use of spun soy protein fibers at Worthington Foods (Interview). *SoyaScan Notes.* June 30. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Richard (whose last name is pronounced like "lease," as in "to lease a house") has worked for Worthington Foods in R&D for 28 years, from Aug. 1962 to 1968, then from 1971 to the present. He thinks that small amounts of the first commercial Worthington product to contain spun soy protein fibers were probably sold by late 1962 and definitely by 1963. These meatlike products were probably frozen at first, and then canned later. The first such product may have been the Minute Entree Fried Chicken Style in frozen form. Fri-Chik, which was canned and widely sold to Seventh-day Adventist food outlets, came a little later. The next 3 products that contained spun fibers (White-Chik, Beef Like, and Prosage) were all frozen and were introduced at about the same time (by Oct. 1963), but many Adventist food outlets did not have a frozen food case in those days so Worthington had to supply them with one. Following these, some additional products were made under the Worthington label, including Smoked Beef Style, Wham.

"When I first came to Worthington in 1962 there was a small R&D lab attached to the main food processing building; we didn't have a research facility like we have now. I recall that a new R&D building was completed in October 1964. Prior to Oct. 1964, I recall seeing a Fried Chicken Style product, containing spun fibers, being canned. After Oct. 1964 time, we began to spin our own soy protein for the first time using a pilot plant line in this building. Full-scale spinning of Worthington's Fibrotein soy fibers probably began in about 1965. Prior to that time my recollection is that Worthington purchased most of its spun protein from Ralston Purina Co.; it was manufactured in their Louisville [Kentucky] plant. But Worthington also purchased some spun soy fiber from General Mills; it was made at their James Ford Bell Research Center and was very experimental. I don't recall the name of that product.

"In the early 1960s, about 95% of Worthington's sales were through either the church or through stores in communities where there were heavy concentrations of Adventists. So it really wasn't a very big thing. One very big thing for the company was the first IFT meeting it attended in Kansas City [Missouri] in about 1963 or 1964. It was the first time that Worthington had demonstrated products at a national convention, and there was a lot of interest in these products.

In 1974 the first 3 Morningstar Farms products were introduced: Breakfast Patties, Breakfast Links, and Breakfast Slices. He is quite sure that initially they all contained spun soy protein fibers. However several years after they were launched, the decision was made to remove the spun soy fibers for two main reasons: (1) Making the fibers was an expensive, high-tech process which added too much to the price of each product; (2) Worthington was concerned that if, as anticipated, the Morningstar Farms line became very popular in mainstream national markets, their one spinning line would not be able to produce enough fibers to meet the demand. The "wet spun fiber" was replaced by textured soy concentrates and vital wheat gluten to give similar textures. In 1979 four more Morningstar Farms products were launched: Grillers (meatless burgers), Breakfast Strips (meatless bacon), Luncheon Slices (a new version of the 1974 Breakfast Slices), and Leanies (meatless hot dogs). None of these 4 products contained spun soy protein fibers. Thus, for most of their commercial lives, the Morningstar Farms products have not contained spun soy protein fibers.

Worthington has always had only one line for spinning soy protein fibers–located at their plant in Worthington, Ohio. This line was set it so that a second spinning table could be added to increase its capacity, but that has never been done. Even during the years when the company had a second plant at Schaumburg, Illinois (after Miles Laboratories took over Worthington in 1970), that plant never had its own spinning line.

At one point Worthington sold its Fibrotein spun soy protein fiber to an Adventist company outside the USA. Worthington never sold it to Loma Linda Foods. Initially Loma Linda may have purchased it from Ralston Purina or General Mills; then they got their own spinning line later, in the 1970s; they bought the equipment from Dawson Mills.

Concerning the total amount of spun soy protein fiber used in Worthington food products, it increased rapidly from 1965 to about 1975, then it fell somewhat after the first three Morningstar Farms products were reformulated in the mid-1970s–but it did not fall dramatically because the 3 products were still at the introductory stage. After the amount then stabilized, and remained fairly constant until recent years when the demand for vegetarian products has increased, and with it production of spun soy protein fibers. Today, about 15-20% of Worthington's meat alternatives contain spun soy protein fibers.

In Richard's opinion, the legacy that Henry Ford and his researchers left in terms of food uses of soybeans is mainly in the areas of soy protein isolates (especially functional isolates; the work done by Frank Calvert and Bob Boyer at Ralston Purina) and textured soy flour (the work done by William Atkinson at ADM). While spinning was certainly the most novel of the technologies, spun soy protein fibers are not nearly as important commercially as food-grade isolates and textured soy flour.

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Richard remembers fondly the pioneering days when Bob Boyer had a lab next to his office at Worthington Foods. Boyer told Richard many anecdotes about the times he worked for Henry Ford and Richard wrote them down in his journal. "Bob Boyer was truly a gentleman. I really enjoyed him a lot."

Richard does not recall any commercial product containing spun soy protein fibers that Ralston Purina launched during that time. They sold all their spun fibers as such to Worthington Foods.

"I'm kind of the keeper of the archives and unfortunately a lot of material has gotten out because during the years that Worthington was owned by Miles Laboratories past history was not considered to be very important." Perhaps a record might have appeared in the *Chopletter* (an internal newsletter published by Worthington Foods). Address: Director, R&D, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

3084. Leiss, Richard S. 1993. Recollections of work at Worthington Foods (Interview). *SoyaScan Notes.* June 30. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Art Schultz worked as a technician with Bob Boyer at Ralston Purina. He is mentioned in some of the patent literature. Art worked for Worthington Foods from about 1970-71 until about 1980.

When Worthington Foods bought Battle Creek Food Co. in 1960, only about 4 people were transferred from that company down to Worthington. One of them was Josephine Williams. She was a nutritionist who worked in the laboratory at Battle Creek, Michigan with Dr. John Harvey Kellogg. She was a very interesting resource, with many stories about working with Dr. Kellogg. She retired in about the early 1970s and may still be living in the Battle Creek area. Address: Director, R&D, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

3085. **Product Name:** Naturally Tofu–Better Than Burger? (Dry Mix).
Manufacturer's Name: Sovex Natural Foods, Inc.
Manufacturer's Address: P.O. Box 2178, Collegedale, TN 37315. Phone: 1-800-227-2320.
Date of Introduction: 1993 June.
Ingredients: Soy flour, oats, tofu powder (dehulled soybeans, calcium sulfate), garlic powder, dried onion, vegetable gum (guar gum blend), onion powder, vegetable protein, dill, parsley, basil, dried carrots, oregano, marjoram.
Wt/Vol., Packaging, Price: 12 oz (341 gm) paperboard carton.
How Stored: Shelf stable.
Nutrition: Per ½ cup (55 gm.): Calories 165, total fat 2 gm (3% daily value; saturated fat 0.5 gm), cholesterol 0 mg, sodium 52 mg (2%), total carbohydrate 25 gm (8%; dietary fiber 9 gm [36%], protein 20 gm, calcium 16%, iron 16%. Percent daily values are based on a 2,000 calorie diet.
New Product–Documentation: Ad (full page, color) in Health Foods Business. 1993. July. p. 26. Naturally Tofu–Better Than Burger? Sink your teeth into this! Also published in Natural Foods Merchandiser. 1993. Sept. p. 31.

Talk with Chris Durden of Sovex. 1993. Sept. 27. This product was launched in about June 1993. The only other products in the line are Better than Milk? and Ice Creme

Label sent by Sovex. 1993. Oct. 6. 5.5 by 8.25 by 2 inches. Paperboard box. Red, tan, white, and black. Color photo on front panel of a burger between buns with all the trimmings. On the back panel are 3 recipes and a product guarantee. To make a burger, mix the contents of this package (12 oz.) with 1.75 cups warm water and 3 tablespoons soy sauce. Mix, form into patties (24 oz. weight), and fry in vegetable oil.

3086. McDermott, Ron. 1993. History of the use of spun soy protein fibers by Loma Linda Foods (Interview). *SoyaScan Notes.* July 6. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Note: In about 1968 Loma Linda Foods started making meatlike products containing spun soy protein fibers. The first products were canned meatless slices (chicken-like, beef-like, turkey-like, or luncheon-like slices).

Ron started to work for Loma Linda Foods in 1973 as Director of Quality Assurance at the company's plant in Mt. Vernon, Ohio. In 1975 he left Mt. Vernon and went to Loma Linda's plant at Riverside, California. He thinks that Loma Linda got its first spun soy protein fibers from General Mills. Robert Boyer had licensed General Mills the rights to spin soy protein fibers, and they used these primarily to make their original line of Bontrae Products. At one point after 1973 Ron thinks that Loma Linda was purchasing spun fibers from three sources: Ralston Purina, General Mills, and Miles Laboratories–but the bulk of it came from General Mills. In about 1975-77 General Mills shut down their soy fiber spinning line and sold it to Dawson Mills. During this transition period, Loma Linda purchased a large inventory of frozen, neutralized (neutral pH) fiber from General Mills. The spun soy fiber sold by Miles Laboratories (Worthington) was called "acid tow"; it was refrigerated rather than frozen and the acidic pH prevented spoilage. Loma Linda would then adjust the pH to neutral shortly before use.

In early 1984 (according to documents Ron has in front of him), Loma Linda Foods bought a soy protein fiber spinning line from Dawson Mills. In mid-1984 the equipment was transferred to Loma Linda. Loma Linda probably started spinning their own fibers in California in late 1984 or early 1985. Loma Linda continued to spin their own fibers until the company was sold to Worthington Foods in Jan. 1990. Worthington still owns that line of spinning equipment, which is now dismantled and unused in storage.

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It could be re-activated if Worthington had a place to put it and a need to make more spun soy protein fibers.

Note: A brief chronology of spinning by General Mills, Dawson Mills, and Ralston Purina Co. 1959–General Mills starts research on textured soy proteins. 1962 Oct.–Ralston Purina Co. begins to make Textured Edi-Pro, a spun soy protein fiber, at its plant in Louisville, Kentucky. 1963 Nov.–The first of many patents for spinning soy protein are issued to General Mills. 1965 Dec.–General Mills introduces the Bontrae line of spun soy protein fiber products, starting with Bac-O*s (bacon-like bits). 1967–Ralston Purina stops spinning soy protein. 1969 June–General Mills breaks ground for major fiber spinning plant at Cedar Rapids, Iowa; It begins operation by late 1970. 1975–General Mills stops spinning, and sells its spinning technology and equipment to Dawson Mills. 1976–Central Soya now owns the Bontrae trademark, formerly owned by General Mills. 1979–Dawson Food Ingredients, a subsidiary of Dawson Mills, starts spinning soy protein fibers; Anaprime is on the market by March 1980. Address: Vice President Research & Technology, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

3087. Demos, Steve. 1993. New developments with soyfoods in America (Interview). *SoyaScan Notes.* July 31. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Vitasoy purchased Azumaya Inc. (America's largest tofu manufacturer, and the low-price leader) in May or June 1993 for an estimated $4-$5 million. Azumaya did not sell their building or the land on which their plant is situated. So now Vitasoy owns two large tofu manufacturers on both coasts of the USA: Nasoya in Massachusetts, and Azumaya in California.

Mr. Yamauchi sold the rest of his ownership in House Foods & Yamauchi, Inc. to House Foods of Japan. [Note: Another industry observer states that the sale took place in about April 1993 for about $2 million].

Bill Bolduc is now running a soymilk plant in the Midwest; he now makes Westbrae's soymilk. Steve sees the future of soymilk as being packaged in the new extended shelf life (ESL) gable-top carton and sold as a commodity for a lower price like cow's milk rather than as a specialty flavored beverage.

Anders Lindner told Steve in March that DE-VAU-GE wanted to sell their soymilk plant. He offered to sell the used plant to Steve for a good price in German marks. Steve never responded.

White Wave now makes about 100,000 lb/week of tofu (of all kinds). The company's reduced fat tofu is selling very well. Quong Hop is stating on two red-on-white stickers on their package that (1) their tofu is "The original reduced fat tofu;" and (2) "The original reduced fat–High protein tofu: Serving size 4 oz., Fat per serving 3 gm. Protein per serving 14 gm." Lab tests run by more than one company indicate that Quong Hop's tofu actually contains far more fat.

Steve bought Veggie Life from Leonardo Laudisio much more for the name than for the product (meatless burger) or its formula.

Update: 1993. Nov. 24. Talk with Leonardo Laudisio. On about November 8-10 White Wave secured preferred vendor status from Whole Foods Markets. They now are installing their cold-storage "set" in the individual stores; one is now in the Berkeley store. At the top in large letters is written "White Wave Vegetarian Cuisine" with the oval White Wave logo is bas relief. Address: President, White Wave Inc., 1990 North 57th Court, Boulder, Colorado 80301. Phone: 303-443-3470.

3088. *Health Foods Business.* 1993. Burger King to test meatless burgers. July. p. 80.
• ***Summary:*** "Worthington Foods, Inc... has entered into an agreement with Burger King Corp. to test its meatless burger, Morningstar Farms Grillers, in a restaurant in Watkins Glen, New York." The Griller test began in late April. The meatless burger will be flame-broiled and used to replace a product named Bean Burger currently in a test market in the same Burger King.

3089. Worthington Foods, Inc. 1993. A delicious way to cut down on meat without cutting down on your options (Ad). *Vegetarian Times.* July. p. 29.
• ***Summary:*** See next page. This full-page, color ad, with a $1.20 coupon at the lower right, shows new label designs for four Morningstar Farms meatless products: Breakfast Patties, Breakfast Links, Breakfast Strips, and Grillers. Address: Worthington, Ohio 43085.

3090. Worthington Foods, Inc. 1993. If you've been burnt by vegetarian franks and burgers, you'll flip over these (Ad). *Vegetarian Times.* June. p. 17.
• ***Summary:*** This full-page, color ad, with a coupon, shows two new Natural Touch products: Vege Frank and Vege Burger.

A similar ad (with a title that starts: "If your customers have been burnt...") also appeared in Natural Foods Merchandiser (July 1993, p. 71, and Oct 1993, p. 71). Address: Worthington, Ohio 43085.

3091. Worthington Foods, Inc. 1993. Second quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.
• ***Summary:*** "The Morningstar Farms meat alternative sales increased during the first half of 1993. The reformulated lower-fat products are now beginning to appear in the retail supermarkets nationally in the new packages."

"Today we announced three additional Burger King restaurants in New York State have added Grillers to their menu."

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A Delicious Way To Cut Down On Meat Without Cutting Down Your Options.

Crumble up our Breakfast Patties to prepare delicious Italian dishes like lasagna.

When you take something away, you usually have less. But the way we see it, now you have more. Because Morningstar Farms® offers you a way to eat less meat while giving you more delicious ways to enjoy your favorite meat dishes.

Made with wholesome grains and vegetable protein, these meatless foods are a healthier way to eat because they have no animal fat and zero cholesterol. Yet they taste so much like meat, you can enjoy your favorite meals the way you always have. Microwave them in minutes just the way they are, or use them to prepare delicious dishes for breakfast, lunch and dinner.

With our Breakfast Links, you can still enjoy your favorite morning meals.

Morningstar Farms has the most complete line of meatless products, including Grillers,® Breakfast Links, Breakfast Patties and Breakfast Strips. Look for them in your supermarket's frozen breakfast section. They're a delicious way to prove that less can be more.

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Worthington Foods, Inc.

Limit one per family. Allow 8 weeks for delivery.

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"The Zanesville, Ohio facility began producing refrigerated Better 'n Eggs during June, 1993." Address: Worthington, Ohio. Phone: (614) 885-9511.

3092. August, Amanda. 1993. Soya far, soya good. *Vegetarian Living.* Sept. p. 37-38.
• ***Summary:*** "For many vegetarians the decision to drop dairy products from their diet is a natural progression– whether it be for ethical or health reasons... The dairy cow has been described as the most hard-worked of all farm animals. Normally, she would only produce 5 to 7 litres of milk a day for her calf but intensive farming means that the quantity can now be anything from 25 to 40 litres. To keep the milk flowing, the cow is subjected to yearly pregnancies, each lasting 9 months. After giving birth she will be milked for 10 months, but in the third month she will be put in calf [inseminated] again. So for 6 to 7 months of each year the cow is milked whilst pregnant.

"Calves are taken away from their mothers after 2 to 3 days, causing much distress to both mother and baby. Some calves are kept for dairy herd replacement (25%), some are exported to Continental veal crates, and the rest are fattened up to produce beef. Although cows have a lifespan of around 20 years, most are worn out after only 5 years. At this stage they are killed for meat."

"Soya milk is a wonderful alternative to cow's milk... Many brands are fortified with calcium (some containing more than dairy milk) and the vitamins B-12 and D... Soya milk doesn't taste like dairy milk. If trying it for the first time it's worth knowing that its an acquired taste. You may find it to be quite floury, with a strange after-taste and a strong aroma. But there are many who swear by it and whose altered palates find dairy milk cloying, fatty and oversweet.

"The first soya milk came onto the market in 1965, prior to which there had been no alternative to cow's milk. It was launched by one of today's leading producers, Plamil. Other companies began to follow suit in the 1970s.

"The market is still growing. In 1991 soya milk manufacturers produced 10.5 million litres and it's estimated that by the year 2000 Britain will be consuming over 20 million litres per year. Supermarkets even have their own brands now. The Soya Milk Information Bureau's 1991 annual poll found that 39% of respondents were buying more soya milk than in 1990."

Color photos (p. 38) show 3 brands (Granose liter plastic bottles, Plamil 500 ml can, Provamel aseptic cartons), each with the words "Soya Milk" appearing as the product name on the front panel. The following brands are now available: Sainsbury, Safeway, Tesco, Waitrose, Co-op, Granovita, Granose, Sunrise, Plamil, Holland and Barrett, Unisoy, and Provamel [made by Alpro in Belgium]. Address: England.

3093. Worthington Foods, Inc. 1993. Third quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.
• ***Summary:*** Net sales are up 7.2% for the first 9 months of 1993 compared with the same period one year ago. Third quarter sales are up 8.3%. But net income (profits) are down 19.6% for the first 9 months, and down 25% for the third quarter. "Egg white prices have been the major factor for the decline in gross margins and net income during the first nine months of 1993 compared to 1992."

"Today we announced 34 additional Burger King restaurants in New York state have added Grillers to their menu, effective in early November. Griller sales continue to be strong in the 4 test restaurants." Address: Worthington, Ohio. Phone: (614) 885-9511.

3094. Crooks, Salle Richards. 1993. Burger King's experiment expands in Southern tier. *Star-Gazette* (*Elmira, New York*). Nov. 23. p. 4B.
• ***Summary:*** Burger King has expanded the test marketing of its meatless burger, the Griller, to a total of 38 restaurants in the Elmira-Rochester area of upstate New York. Made by Worthington Foods Inc. of Ohio, the product is flame broiled and kept separate from meat products. The Griller was introduced to satisfy customers in Watkins Glen connected with the Farm Sanctuary, which rescues abused farm animals. A large photo shows a little girls eating a meatless burger and liking it.

3095. Wilson, Don. 1993. The pioneering work of Aqua Agra in Florida with sprouts and soyfoods. Part I (Interview). *SoyaScan Notes.* Nov. 24. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Don is a Seventh-day Adventist who was a sergeant with a type of special forces (Force Recon) for 2 years in the U.S. Marine Corps during the Vietnam War. He joined the marines in 1964, several years before the U.S. got involved in Vietnam. He lived in a Vietnamese village with the local people for 18 months as part of his assignment, and he learned to speak Vietnamese. After he returned to America, many Vietnamese refugees came into the Orlando, Florida, area. The company for which he was working sponsored 10 families and because he spoke Vietnamese he "got volunteered" to help the refugees. He got irritated because the woman who owned the one Oriental food store in Orlando was selling nuoc mam at an exorbitant markup, buying it for $0.50/bottle and selling it for $5.00 a bottle. "I tried to persuade her to lower her prices, and when she wouldn't do it, I got mad and opened a store named the Oriental Grocery store. I sold everything at cost. We finally signed a peace treaty and I sold the store to her, on the agreement that she wouldn't gouge these Vietnamese refugees. My wife is Korean. I met her in Atlanta, Georgia, after Vietnam, where she was a nurse in a hospital. We have been married for 21 years.

"While we were running our Oriental Grocery, my wife

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and her mother decided they could grow mung bean sprouts in the bathtub and sell them in our store. One day a man from Superfoods (the Albertson's buying arm for fresh produce) called and said he wanted to buy bean sprouts from us. I went and talked to the buyer whose name was Tom Kern. Their offices were 60 miles away. They wanted 15 x 10 lb bags 3 times a week. I talked to my wife and we decided that I should turn our garage (at 1521 Avalon Blvd., Castleberry, Florida), into a bean sprout growing room. In Oct. 1976 we started growing mung beans in our garage and 2-3 weeks later he asked us to start growing soybean sprouts. One day the city came by and informed me that we must have a huge water leak on our property because we used 190,000 gallons of water. I got nervous and let them walk all around the outside of the house looking for the leak. They never found it. I was running the water off into a shallow well."

Next Don got his sprouts into Winn Dixie, a huge chain. In Orlando he visited Bill Bowman, who was a typical Winn Dixie produce buyer at that time. Don took him a sample of bean sprouts to which Bowman responded, "My God, them look like white worms. There's times when my huntin' dog gets them things crawlin' out his butt, and I take him to the doctor." Having taken enough abuse, Don was about to leave when Mr. Bowman said, "I'll tell you what. I figger anybody's got enough guts to come into my office with something this damn weird, I'm gonna have to order from you just one time. But you ain't gonna get no second orders. That way it won't be a waste of your time. We've got 120 stores out of this division so I'll want one 10-pound bag for every store. How many weeks do you need to get ready for this? You've got to grow the damn things don't ya?" It was Friday and Don replied he have the sprouts ready in about 3½ days. "He looked at me like I was totally crazy. Then he said, 'Do you mean to tell me you can deliver a crop to me next Wednesday and you haven't even got it planted yet?" Don said, "Yes sir." Bowman replied, "This is gonna be worth the price of admission 'cause there ain't nobody gonna plant no damn crop and have it ready by Wednesday." When Don delivered the sprouts at the agreed time, Bowman was out waiting on the dock. He said, "They ain't never gonna sell. Don't you dare expect no extra orders." Two days later Don got an enthusiastic phone call: "Don, this is R.D." "R.D. who?" asked Don. "R.D. Bowman, you know, Winn Dixie. Don, can you bring me some more of them white things over here?" Apparently Asian-Americans and hippies were surprised and delighted to find fresh sprouts at a local supermarket in Florida. Thus were sprouts (mung bean, soy and alfalfa) introduced into mainstream American supermarket chains–one of Don's pioneering contributions. Don needed more space to grow his sprouts, so they moved into a 4,000 square foot commercial location on Seminola Blvd., Castleberry, Florida. Then they introduced alfalfa sprouts. Soon they were sprouting just about everything that would sprout. In the beginning, the company was mainly a sprouting company.

Soon Don got a call from Winn Dixie's national buyer in Jacksonville, who said Mr. Bowman had spoken very highly of Don and his products. By this time he was selling the Orlando division's 120 stores in central Florida about 300 ten-pound bags a week of mung bean sprouts and 150 to 175 ten-pound bags a week. Don had no idea how big Winn Dixie was. While Don was waiting in the buyer's office in Jacksonville, the man ordered 35 railroad carloads of potatoes and 20 carloads of onions. "I began thinking. I am in trouble. There is no way I can grow this amount of sprouts. But he told me that my company and Winn Dixie could grow together, adding on divisions one at a time. You couldn't ask for a better company to do business with than Winn Dixie. They paid every bill before it was due. They even sent their trucks by to pick up the sprouts. Soon we were shipping our sprouts to all the different Winn Dixie divisions." Continued. Address: 2321 Virginia Dr., Altamonte Springs, Florida 32714.

3096. Wilson, Don. 1993. The pioneering work of Aqua Agra in Florida with sprouts and soyfoods. Part II (Interview). *SoyaScan Notes.* Nov. 24. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** "When we started talking about making tofu, it became very evident to me that we would need a bigger space, so in about March or April of 1977 we moved over to 100 Highline Dr., Longwood, Florida 32750. We went from 4,000 square feet of floor space to 50,000 square feet. We outgrew our plant on Seminola Blvd. in about 4-5 months." In June 1977 Don's first child, a son, was born. On Highline Drive, Don built rooms to grow the various sprouts and also diversified the company into chopping and packing huge amounts of fresh vegetables; there was a separate packet of sauce (such as teriyaki) in each bag for making stir-fries. All that was needed was some tofu to complete the stir-fry. Don bought his tofu equipment used from Robert and Mary Brooks, whose company Swan Foods in Miami had gone out of business. The purchase became a mess because Robert had failed to inform Don about the liens that were against his equipment due to Robert's unpaid bills. So Don started to make tofu in 1978. He sold it chiefly to the chain stores–first to Albertson's (the smallest group), then to Publix, and then to Winn Dixie (the biggest chain). He did not deal with restaurants or health food stores. At the height of production, Aqua Agra was making at least 25,000 to 30,000 lb/week of tofu. He was the first person to introduce tofu to supermarkets in Florida.

In the summer of 1979 Don attended the second annual Soycrafters Conference at Amherst College in Massachusetts. "I will never forget that as long as I live. Some of the major U.S. food companies, such as General Mills and a few others, sent representatives in 3-piece suits. I was standing in the back of the auditorium where these

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guys were and I'll never forget listening to their comments as they talked about what a bunch of dingdongs they had been sent to observe, and how this had absolutely no place in the American food chain whatsoever. I can remember walking away from that conference thinking to myself, 'I sure am glad these big guys think this way because all it would take is one big corporation to get involved in this and a lot of small businesses would soon go down the drain.'"

Aqua Agra grew rapidly. Many of his employees were Asian-Americans and they were wonderful workers. the copycats that tried to compete with him couldn't. About 2 years after Aqua Agra started making tofu, the *Sentinel Star* newspaper did a rather nice story on the company in 1980.

In early 1981 Don started making soymilk, which he sold in bulk to the nearby Seventh-day Adventist Florida Hospital–but not to any of the chain stores. He sold about 300 gallons a week.

At about the same time he started making soy yogurt in individual unprinted cups with a pressure sensitive label. Most of his sales were of plain yogurt, but he also sold strawberry, peach, and blueberry flavors. The yogurt was sold to local health food stores, to Del Champs in Alabama, and to a broker in New York named Marty Grossman, who sold a lot.

In late 1981 Aqua Agra began to make soy tempeh. They sold less than 100 lb/week, and only to a few health food stores in Orlando who had asked for it.

Don and his wife had to close the company in about mid-1982, after 6 years in business. At that time they were making about 75 products. He and his wife were each working 100 hours a week. "The doctor gave me a choice. He said, 'You can either get rid of that business and live, or you can keep it and die! But you're gonna do one of the two.'" Don was so sick and tired of everything at that time that he decided not to even sell the company–just to shut it down and walk away.

Don feels that he was a little bit before his time. "People found it amusing that a sergeant in the United States Marine Corps. was involved in making hippie food." Address: 2321 Virginia Dr., Altamonte Springs, Florida 32714.

3097. Drosihn, Bernd. 1993. Re: New developments with soyfoods in Germany. Letter to William Shurtleff at Soyfoods Center, Nov. 29. 2 p. Typed, with signature on letterhead.

• ***Summary:*** Viana has done a lot of work to improve the design of its labels and packaging. In Germany the soyfoods market is not growing at present, but neither is there a big recession. Germany's biggest soyfoods manufacturer, DE-VAU-GE, stopped production of tofu in early 1993 and now buys its tofu products from Heuschen-Schrouff B.V. in the Netherlands. That should make Heuschen-Schrouff one of the largest tofu manufacturers in the world. DE-VAU-GE plans to stop soymilk production in early 1994.

Some newer, small soyfoods manufacturers have recently started in Germany: Tofuhaus Eisenreich (Steinmetzstrasse 4, 93049 Regensburg, Germany. Owner: Mrs. Eisenreich. Phone: 0941/27 01 27), and Topas GmbH (Bollbergsr. 41, 72116 Moessingen [near Tuebingen], Germany. Owner: Klaus Gaiser. Phone: 07473/25515). Our old friend Klaus Gaiser, once the largest tofu manufacturer in Germany, is trying to make a comeback.

The market for soyfoods in Eastern Europe is developing very quickly. Bernd has had contact with a Polish company named Polsoja. Yesterday a person from Slovenia visited Viana. He wants to make tempeh there and he told Bernd that there are some soyfoods manufacturers in the former Yugoslavia. In Slovenia, which is relatively untouched by the war, there is one existing tofu company and more than 30 natural food stores.

Albert Hess (owner of Das Tofuhaus in Lautersheim) and Bernd are in the process of founding a new company, named Sojarella, which will start to make and sell soy cheeses in early 1994. The address will be the same as Viana. They have developed a method for making soy cheese products that contain no casein. Address: Founder and president, Viana Naturkost GmbH, Willi Graf Str. 88, 33881 Euskirchen-Kuchenheim, Germany. Phone: 02251-56076.

3098. Cheney, Susan Jane. 1993. Our favorite beginner [vegetarian] cookbooks: Essential titles for your kitchen library. *Vegetarian Times.* Nov. p. 80, 82-86. [29 ref]

• ***Summary:*** List 29 vegetarian cookbooks in various categories. Vegetarian classics: Moosewood Cookbook by Mollie Katzen (1977, 1992), American Wholefoods Cuisine by Nikki and David Goldbeck (1983), Laurel's Kitchen and The New Laurel's Kitchen by Laurel Robertson, Carol Flinders, and Brian Ruppenthal (1976, 1986), The Vegetarian Epicure (I and II) by Anna Thomas (1977, 1992), Ten Talents by Frank and Rosalie Hurd (1968, 1983).

Other basic books: The American Vegetarian Cookbook by Marilyn Diamond (1990), Kathy Cooks by Kathy Hoshijo (1986), An Ecological Kitchen by Lorna Sass (1992), Fresh from a Vegetarian Kitchen by Meredith McCarty (1989), The High Road to Health by Lindsay Wagner (1990), Cooking with the Right Side of the Brain by Vicki Rae Chelf (1991).

International cookbooks: Sundays at Moosewood Restaurant by The Moosewood Collective (1990), Italian Vegetarian Cooking by Jo. Marcangelo (1984), Yamuna's Table by Yamuna Devi (1992), Cooking with Japanese Foods by Jan and John Belleme, The Best of Lord Krishna's Cuisine by Yamuna Devi (1992). Baking books: Cooking for special occasions: Gourmet Vegetarian Feasts by Martha Rose Shulman (1987), Vegetarian Celebrations by Nava Atlas (1990), Vegetarian Entertaining by Diana Shaw (1991), Vegetarian Pleasures by Jean Lemlin (1987). Other specialty books: Amazing Grains by Joanne Saltzman (1990), Soups for All Seasons by Nava Atlas (1992), Vegetables on the Grill

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by Kelly McCune (1992), Tofu Cookery by Louise Hagler (1982, 1991), Quick Harvest by Pat Baird (1991), and The Good Breakfast Book by Nikki and David Goldbeck (1992).

3099. *Vegetarian Journal's Foodservice Update.* 1993. Serial/periodical. Baltimore, Maryland: Vegetarian Resource Group. Vol. 1, No. 1. Fall 1993.
• ***Summary:*** The editor of Vol. 1, No. 1 is Mary Clifford, RD, 6451 Cotton Hill Rd., Roanoke, Virginia 24018. Page 2 states in large letters across the bottom: "Thanks to Worthington Foods, Inc. for being a Corporate Contributor." Address: P.O. Box 1463, Baltimore, Maryland 21203. Phone: (410) 366-VEGE.

3100. Cole, Sidney J. 1993. Changes at DE-VAU-GE (Interview). *SoyaScan Notes.* Dec. 6. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** DE-VAU-GE (DVG) has stopped making soymilk [actually they plan to stop in early 1994] and therefore also tofu. It was an economic decision. When the Adventist church sold Granose Foods in England, that cost DVG about 40-50% of their soymilk market. DVG still sells and distributes both soymilk and tofu under their GranoVita brand, but they buy the products from other manufacturers. The soymilk may be made by Alpro in Belgium. DVG still manufactures many other soyfoods, such as the soy protein foods, the canned meatlike products, etc.

DVG is still a strong company that is growing rapidly and Michael Makowski is still the general manager. He calculated that he can do better financially by using his factory space to make Corn Flakes rather than soymilk. If DVG keeps up their current growth rate, they may soon pass Australia's Sanitarium Foods as the leading Seventh-day Adventist food company in terms of sales. The church has no plans to sell DVG, and in fact the church is looking to support its food industries quite strongly now.

The decision to sell Granose was made at the local division level, not at the General Conference level. Sidney personally would have preferred that the church not sell Granose, but at least they did sell it at the right time and to a good buyer–the Haldane Foods Group. The products, the company, and the philosophy are all in good hands.

Eric Fehlberg retired about 2 years ago as director of the Seventh-day Adventist International Health Food Assoc. Dr. Cole took his place, and he has also kept his job in Miami at the Inter-American Division. Address: Director, International Health Food Assoc., P.O. Box 140760, Miami, Florida 33114-0760. Phone: 305-443-7471.

3101. Makowski, Michael. 1993. Soymilk at DE-VAU-GE and in Europe (Interview). *SoyaScan Notes.* Dec. 8. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** DE-VAU-GE (DVG) has not yet stopped making soymilk; they had planned to stop during late 1993 and they hope to definitely stop during 1994. They stopped making tofu and Tofu Cream 2 months ago, but they continue to sell tofu; they now buy it from another company [Heuschen-Schrouff in the Netherlands]. DGV decided to stop soymilk production because of the large drop in demand after Granose was sold.

Their problem is to find a partner to produce soymilk for them. This other company must make a good quality product at a reasonable price, must have a large enough capacity to supply their needs (they plan to continue to sell the same soymilk products they are selling now), and must be willing to buy their used soymilk equipment at a reasonable price (this is the main sticking point).

There are not many large soymilk manufacturers in Europe. Alpro in Belgium makes and sells about 32 million liters/year in all the different sizes and flavors. Sojinal in France makes about 5½ million liters/year, and DE-VA-GE makes about 4 million liters/year. Other active soymilk manufacturers include Liquats Vegetal S.A. in Viladrau (near Girona), Spain (which started about 1 year ago and makes their soymilk from whole soybeans; they are a private company), several small manufacturers in England (but their quality is not acceptable), and Soyana in Switzerland. In Michael's opinion, the quality of the soymilk made by Alpro and DVG are more or less the same.

The British market for soymilk is by far the biggest in Europe, comprising about 50-60% of the total European market. Belgium, France, and Germany come next and are all about the same size. Then come Italy and Spain.

In Europe, 80% of all soymilk is sold plain–unsweetened and unflavored; it contains only soybeans and water. Then there are the sweetened types, which are sweetened with sugar, honey, or grape juice. The main flavored types are chocolate, vanilla, or strawberry. Then there are three flavors of dessert puddings: Chocolate, vanilla, and strawberry. That's all. Address: General Manager, DE-VAU-GE Gesundkostwerk GmbH, Postfach 1660, Luener Rennbahn 18, D-2120 Lueneburg. Phone: (04131)-303-145.

3102. Leiss, Richard S. 1993. Re: History of the use of spun soy protein fibers at Worthington Foods. Letter to William Shurtleff at Soyfoods Center, Dec. 16. 2 p. Typed, with signature on letterhead.
• ***Summary:*** Richard has just located a copy of the July 1962 issue of the *Worthington Chopletter.* The enclosed article is the earliest written reference he has been able to find on wet spun soy protein fibers and commercial retail products containing them. "The article does not specifically state which product was sold first, but certainly the Soyameat Fried Chicken Style, Minute Entrees Fried Chicken Style, and Minute Entrees Sliced Whitemeat Style were the first three.

He began to work for Worthington Foods in August 1962. At that time Worthington was not doing any

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commercial spinning of soy protein fibers. It is likely that at that time these wet fibers were being purchased primarily from the Ralston Purina Co. "Following the completion of the Worthington Foods research center in October 1964, a spinning line was set up in the pilot plant. This line was expanded so that commercial quantities of fiber were produced, probably beginning in 1965. This operation was continued until the construction of a larger manufacturing plant in 1970, at which time the spinning was relocated to the new building.

"During the same time period (1962-1968) some limited quantities of spun fiber were obtained from General Mills as well. It was my understanding that the GM fiber spinning line was located in the James Ford Bell Research Center, and I remember Worthington receiving fiber from General Mills for use in retail products. The fiber from each source [Ralston Purina and GM] was slightly different and had to be handled somewhat differently in production.

Richard is not aware that Worthington Foods ever sold wet spun fiber to Loma Linda Foods. "Certainly during the early years it as not a consideration by Worthington management because it did indeed give Worthington Foods a strong advantage over Loma Linda."

"I have considered it an honor to have been a part of the evolution and development of the vegetarian food business in the United States. Knowing and being able to work with pioneers such as "Kelly" Hartman, Bob Boyer, "Cal" Calvert, and Bill Atkinson have made my career something special..." Address: Director, R&D, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

3103. Wittenburg, Bonnie. 1993. Archer Daniels Midland Company: NYSE–ADM. Minneapolis, Minnesota: Dain Bosworth. 36 p. 28 cm.

• ***Summary:*** Contents: Summary and recommendation: Valuation. Company profile. Operating review. Corn refining: High fructose corn syrup (HFCS), ethanol, bioproducts. Oilseed processing (soybeans, soymeal, soyoil): Edible soy proteins (soy protein concentrates, isolates, soy flour, and textured soy flour). Wheat milling. Other products and businesses. International trade: NAFTA and GATT. Financials. Recent results. Outlook and conclusion.

Index of exhibits. ADM sales by segment in 1988 and 1993 (p. 5; In 1993: Oilseed processing 50%, corn refining 28%, wheat milling 13%, other 9%). U.S. oilseed processing capacity (p. 20; ADM 28% of U.S. capacity, Cargill 25%, Bunge 16%, Ag Processors 14%, Central Soya 10%, Other 7%). World oilseed production by crop (p. 20; Soybeans account for 52% of the 227.3 million metric tons [tonnes] total). World soybean production by country (p. 20; Total 116.9 million tonnes, of which the U.S. produces 51%, Brazil 19%, Argentina 10%, China 9%, Other 11%). World vegetable oil consumption 1992 by crop (p. 21; Total 584. million tonnes, of which soybean is 30%, palm 21%, rapeseed 15%, sunseed [sunflowerseed] 14%, peanut 6%, cottonseed 6%, other 3%). Soybean meal use by livestock (p. 20; Poultry 51%, swine 27%, beef 8%, dairy cows 7%, other 7%). Largest exporters of soybean meal: 1990-1994 (tonnes in 1993/94 EC-12 8,830, Brazil 6,550. USA 4,944). Largest importers of soybean meal: 1990-1994 (tonnes in 1993/94 EC-12 13,630, Asia and Oceania 4,936, Middle East and North Africa 2,443).

This "Dain Bosworth Research Report" is "A fundamental appraisal of investment value." "ADM is so big and efficient, and its product lines are so diverse, that it can benefit from almost any positive trend impacting agriculture worldwide. ADM is believed to be the largest corn refiner, oilseed processor and flour miller in the United States... We recommend purchase of ADM shares based on our expectations of improved earnings momentum beginning in the fourth fiscal quarter of fiscal 1994."

Concerning edible soy proteins (p. 23-24): The entire U.S. meat substitute market is estimated at $50-100 million annually today, and growing at 5-8% a year. The Green Giant Division of Pillsbury is marketing ADM's burgers under the name Green Giant Harvest Burger. Worthington Foods of Ohio is the leader in the meat substitute category. Their Morningstar Farms burgers are precooked whereas ADM's burgers require cooking. ADM sold 70 million veggie burgers in fiscal 1993 and is now building capacity to triple production. A company named Aton, said to be one of the largest private enterprises in the Ukraine, has an agreement with ADM whereby ADM will be shipping $100 million of soy-based food ingredients to the Ukraine by the summer of 1994.

Toepfer, which was started in Germany in 1919, handles approximately 9% of the total world grain trade and about 35% of the world trade in feedstuffs. ADM owns 50% of Toepfer; the other half is owned by 14 cooperatives from 7 countries including Gold Kist, Agway, Harvest States, AGP, etc. in the USA.

"We continue to believe that the long-term story for ADM is among the best of the companies we follow." "In our opinion, ADM is among the best positioned, best managed, and financially sound ag processing companies around" (p. 35). Address: 60 South Sixth St., Minneapolis, Minnesota 55402-4422. Phone: (612) 371-2728.

3104. Boyle, T. Coraghessan. 1993. The road to Wellville. New York, NY: Viking. A div. of Penguin Books USA. xii + 476 p. Illust. 24 cm. [2 ref]

• ***Summary:*** Many biographical novels attempt to be true to the life of their main character. This outrageous, satirical and comic novel, which pretends to be about the life of Dr. John Harvey Kellogg, is largely untrue and more like character assassination. The dust jacket states: "The year is 1907, and the boom town of Battle Creek, Michigan, is attracting

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a formidable array of visitors–the rich, the preposterously rich, and the merely famous, from California, Chicago [Illinois], New York, and even Europe. What draws them to this place? And what inspires them to trade in their steaks and oysters, their martinis and champagne, for a diet of bran and yogurt and a regimen of five enemas per day? Dr. John Harvey Kellogg, of course, inventor of the corn flake, peanut butter, and coffee substitutes that have ruined so many a bright morning, the man whose dietary wisdom is at your disposal in this comic masterpiece... [which] overflows with a Dickensian cast of characters–all in search of the magic pill to prolong their lives, or the profit to be had from manufacturing it."

Boyle describes the rise and fall of Dr. Kellogg and his Battle Creek Sanitarium (p. 475-76). The San's heyday was from about 1890 to 1909, "the years when all the world came to him, John Harvey Kellogg, the one man, the impeachable, the authority, the king." "The teens gave way to the twenties, the war years [World War I] rose up and fell away like some sick red tide, women traded in their dresses and feathered hats for short skirts and cloches, ragtime segued into jazz, and the Battle Creek Sanitarium rose higher and higher on the current, unsinkable... Johnny Weissmuller stopped by to have his plumbing inspected; [Admiral] Byrd, Amundsen, Grenfel and Haliburton paid their homage; J.C. Penney, Amelia Earhart, Battling Bob La Follette, Henry Ford. In 1928 the Doctor added a fifteen-story addition, sumptuous with marble, crystal, tapestries and murals, and sat back to watch its 265 new rooms fill with the physiologically wanting.

"It never happened. The Crash came, the dyspeptic set took to dosing themselves with milk of magnesia, diet was whatever you could get. The San crashed under the burden of its debt, the glorious building... was sold at auction to the federal government and rechristened the Percy Jones General Hospital, and Dr. Kellogg retired to Florida while his enemies–and they were legion [especially C.W. Post]–lifted up their parched old heats and sniffed something new in the air." Dr. Kellogg ate more vegetables, smoked less, drank less, slept less and exercised more than practically any man of his time..." Dr. Kellogg died on Dec. 14, 1943. The author carefully avoids telling us that he died in his sleep at the age of 93.

A review in the *USC Trojan Family* (Autumn 1993, p. 19) states that the author has been a USC (University of Southern California) faculty member since 1978; he is the founder and director of the university's creative writing program. Boyle, who is not a vegetarian, "got the idea to write about the health food movement when a friend gave him a book called The Nuts Among the Berries, by Ronald Deutsch. While his protagonist is based on the life of Kellogg, Boyle admits that he exaggerated some of the cereal king's qualities."

A review in *Newsweek* (19 April 1993, p. 62-63) begins: "Part zealot, part rogue, Dr. John Harvey Kellogg is a satirical novelist's dream." His "true genius was in making people miserable in the name of nutrition." "A funny, thoughtful, immaculately written novel, 'The Road to Wellville' eviscerates the gullible pilgrims and conniving hucksters who rubbed shoulders in turn-of-the-century Battle Creek," Michigan. "But is this Kellogg as he was or as Boyle wants him to be? Boyle is infamous for mixing fact with his own fancies... He is riffing on biographical fact to nail down one of the most influential, albeit unattractive, archetypes of our history; the puritanical, proselytizing crank."

Soyfoods Center review: This sleazy (and to many iconoclastic) film is set at his Sanitarium in Battle Creek, Michigan. Its tone of constant ridicule, cheap sexual subplot, and foul language will embarrass most admirers of Dr. Kellogg; and it will do nothing to educate most other viewers about the life of this remarkable man. It is a caricature and a farce.

Talk with Janice Little of Del E. Webb Memorial Library, Loma Linda University, California. 2005. Sept. 29. Janice has read in book reviews that this book is a satire and the that author has written other satirical novels. However no mention (or even hint) of this is made in the book itself or on the dust jacket. Thus, the typical reader can easily assume (incorrectly) that this is an historical novel about a weird doctor.

In 1994 this novel was made into a film, which (according to one critic) portrays Dr. Kellogg "as a jerk–a well-meaning, very serious jerk." It is a very funny movie. Dr. Kellogg is played by Anthony Hopkins. One of the subplots is slapstick conflict with one of his adopted children–done for laughs. A serious review by vegetarian Rynn Berry appears in Satya (1995, which see). Address: Founder and Director of Creative Writing, USC, California.

3105. Pitchford, Paul. 1993. Healing with whole foods: Oriental traditions and modern nutrition. Berkeley, California: North Atlantic Books. xxii + 656 p. Illust. Index. 26 cm. 2nd ed. 1996. 3rd ed. 2002 (both by same publisher). [536 ref]

• ***Summary:*** Contents: 1. Origins. Part I: The roots of diagnosis and treatment. 2. Yin-yang and beyond. 3. Qi vitality. The six divisions of yin and yang: 4. Heat/cold–The thermal nature of food and people. 5. Exterior/interior: Building immunity. 6. Excess and deficiency.

Part II: Essentials of nutrition. 7. Dietary transition. 8. Water. 9. Protein and vitamin B-12.

10. Oils and fats. 11. Sweeteners. 12. Salt. 23. Condiments, caffeine, and spices. 14. Vitamins and supplements. 15. Calcium. 16. Green food products. 17. Survival simplified. 18. Enjoyment of food. 19. Food combinations.

20. Fasting and purification. 21. Food and children.

Part III: The five element and organ system. 22. Five

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elements: Seasonal attunement and the organs in harmony and disease. 23. Therapeutic use of the five flavors. 24. Wood element. 25. Fire element. 26. Earth element. 27. Metal element. 28. Water element.

Part IV: Diseases and their dietary treatment. 29. Blood sugar imbalance [diabetes]. 30. The stomach and intestines. 31. Blood disorders. 32. Cancer and regeneration diets. 33. Other degenerative disorders.

Part V: Recipes and properties of vegetal foods. 34. Vibrational cooking. 35. Grains. 36. Breads. 37. Legumes–Peas, beans, and lentils: Healing properties of legumes, improving the digestibility of legumes, techniques for cooking legumes, miso, tempeh, tofu. 38. Nuts and seeds. 39. Vegetables.

40. Sprouts. 41. Salads. 42. Seaweeds: Agar-agar, dulse, hijiki and arame, kombu and kelp, nori, wakame, Irish moss and Corsican (*Alsidium helminthocorton;* it is sold as a tea and discharges worms. 43. Soups. 44. Sauces. 45. Condiments: Chutneys and relishes. 46. Spreads and patés. 47. Pickles. 48. Grain and seed milks (incl. sesame seed milk, almond milk, almond milk shake, sprouted grain milk {oats, rice, millet, barley}, cooked grain milk). 49. Rejuvelac and yogurt.

50. Fruit. 51. Desserts. Appendixes: Recipe locator. Bibliography (180 references, mostly alternative; Oriental philosophy. Chinese medicine: Theory and foundations. Chinese dietary therapy. Ayurvedic and Tibetan medicine. Western approach to nutrition. Healing the spirit and mind. Chinese herbology. Western herbology. Healing with food. Green foods. Amaranth. Seaweeds. Vegetarian, macrobiotic, vegan. Children. Ecology, politics, and ethics of food. Degenerative diseases and immunity. Toxins and radiation. Cookbooks. Food catalogs, guides, and references. Sources of data for tables, charts, and nutritional statistics). References and notes (356 refs, mostly scientific). Resources index (Incl. Soyfoods Center).

The following are listed in the index (f = most important pages): Acid-forming foods (p. 235f, 240). Aduki [azuki] beans (p. 26, 34, 50, 60, 68, 77, 178, 273, 305, 307, 319, 362, 467f). Amaranth (lots, 419-20f). Amasake (p. 98, 152-53, 155, 160, 163, 275, 287, 592f). Animal products (lots). Aspergillus oryzae (p. 592). Ayurveda (lots). Black sesame seed (lots, 492f). Black soybean (60, 68, 288, 317, 324, 327, 468). Bran (p. 332) and its role in relieving constipation (345-46). Buckwheat (lots, 422f). Buddha. Calcium (lots). Cancer. Cheese (but no soy cheese). Cholesterol. Cigarette smoking. Coldness, bodily. Dampness, bodily. Deficiency. Digestibility (Improving the digestibility of legumes, p. 471-73). Five elements system. Free radicals. Gerson, Max and cancer therapy (p. 41, 126, 162, 365-66, 381). Goiter. Gomasio (sic, gomashio; sesame salt, p. 272, 566f). Heart / Heart/mind. Heat (lots). Hijiki. Ice cream (p. 291, 305 [no soy]). Job's tears (p. 381, 383). Kasha (buckwheat, p. 422). Kelp. Kloss, Jethro (p. 366, 381). Koji (p. 479). Kudzu (p. 22, 25, 29, 60, 289, 299, 309, 317, 414f). Lecithin (lots, p. 127, 470, 414f). Legumes (lots, p. 466-471, 473f). Macrobiotics (p. 3-4). Marijuana (lots). Menopause (p. 181-82, 362-364f, 441, 468, 497). Microwave cooking (p. 20). Milk). Mind, Chinese Zen concept of. Miso (p. 33-34, 60, 72-74, 78, 81, 90, 92, 98, 101, 105-06, 150, 159, 164, 195, 221-22, 272, 275, 315, 376, 479-82f; natto miso p. 482). Mochi (p. 436-37f). Mother's milk–to increase. Mucus. Nails, dry and brittle (p. 285). Oils (incl. soy oil, p. 138-41) Omega-3 fatty acids. Nori. Protein (lots). Qi [chi, p. 16-17]. Quinoa. Rice syrup. Schweitzer, Albert (365). Sea palm (p. 541). Seaweed (lots, p. 540-55f–see also Agar, alaria, arame, bladderwrack, Corsican, dulse, hijiki, Irish moss, kelp, kombu, nori, ocean ribbon, sea lettuce, sea palm, wakame). Seitan (p. 446-47). Sesame butter (p. 81, 492). Sesame seed (lots, 492f). Soybean (p. 52, 56, 60, 105, 124, 161, 178, 232, 235n, 250, 300, 466, 470f; children and soy products 253-54; soy sprouts p. 22, 34, 122, 291, 470f; see also miso, soy sauce, tempeh, tofu).

The section titled "Soybean" (p. 470) begins: "Cooling thermal nature; sweet flavor; strengthens the spleen-pancreas; influences the colon; moistens conditions of *dryness;* supplements the kidneys; cleanses the blood vessels and heart, improving circulation; helps restore pancreatic functioning (especially in diabetic conditions); promotes clear vision; diuretic; lowers fever; highly alkalizing and eliminates toxins from the body; boosts milk secretion in nursing mothers. Also used as a remedy for dizziness, childhood malnourishment (especially in the form of tempeh and soy milk), skin eruptions, constipation, edema, excessive fluid retention and toxemia during pregnancy, and food poisoning. For the imbalances during pregnancy and for food poisoning, drink soybean juice (prepare as 'aduki juice' above). Soybeans are a natural source of lecithin–a brain food.

"Unless well-cooked, soybeans inhibit the digestive enzyme trypsin, making them [sic] difficult to digest. The fermentation process, such as used in tempeh, tofu, miso, and soy sauce, also eliminates the beans' trypsin-inhibiting effect.

"Soybean sprouts are cooling with a sweet flavor. They are diuretic and used to treat spasms, arthritis, food stagnation, *heat*-type coughs and other heat conditions marked by one or more signs such as yellow tongue coating, yellow mucus, and scanty, dark yellow urine."

Soy sauce (p. 34, 78, 81, 98, 105-06, 150, 159, 164, 195, 222, 272, 277, 315, 414f, 480). Spirulina. Sprouting (p. 232-33). Sprouts (lots, p. 528-30f). Steiner, Rudolf (p. 19-20, 504). Stomach (beneficial foods, stomach/duodenal heat and, strengthening food). Stress. Sugar (lots). Superoxide dismutase (SOD). Sweating–night sweats (p. 24, 117, 441). Sweeteners. Sweet rice (p. 433f). Tahini (sesame, p. 106, 225, 493). Tempeh (p. 22, 34, 56, 60, 96, 99, 105, 124, 216, 221, 242, 250, 290, 307, 310, 482-86f; vitamin B-12 and p. 98). Thirst. Tobacco. Tofu (p. 22, 25, 34, 55-56, 60, 68,

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81, 105, 124, 242, 250, 290-91, 300, 303, 307, 310, 317, 327, 486-89f). Tomato. Tongue coating and digestion (p. 399). Umeboshi plums (p. 78, 159, 222, 272, 307, 414, 583f). Umeboshi vinegar (p. 414). Urinary incontinence and deficiency of kidney qi (p. 318-19). Urination, frequent, from kidney qi and yang deficiencies (p. 318). Valerian root. Vegan (p. 5, 95, 137, 261, 389, 502). Vegetarianism (p. 81-82, 95). Vitamin B-12. Vitamin E. Vitamin K. Wakame. Warming foods (p. 18-20, 26-27). Warts. Watermelon. Wind, bodily (foods which quell, 286-89; incl. black soybean, p. 468). Yang. Yin.

Talk with Heartwood Institute. 1997. Nov. 12. This is basically a massage school that also offers retreats. Paul's background is in the martial arts and massage. He graduated from a college after 4 years but the name of the college is not available. He also did 2 years of graduate work at an institution whose name is not available. The Institute sent their catalog/brochure. Address: Director, Heartwood Inst. Wellness Clinic and Oriental Healing Arts Program, 220 Harmony Lane, Garberville, California 95542. Phone: 707-923-5000.

3106. Shurtleff, William; Aoyagi, Akiko. comps. 1994. Ralston Purina Co. and Protein Technologies International's work with soybeans and soybean products–Bibliography and sourcebook, 1934 to 1993: Detailed information on 293 published documents (extensively annotated bibliography), 44 commercial soy products, 42 original interviews (many full text) and overviews, 16 unpublished archival documents. Lafayette, California: Soyfoods Center. 147 p. Subject/geographical index. Author/company index. Language index. Printed 4 Dec. 1993. 28 cm. [381 ref]

• ***Summary:*** The Ralston Purina Co.–originally named the Robinson-Danforth Commission Co.–was incorporated on 8 Jan. 1894 in St. Louis, Missouri. The founders, William H. Danforth (lived 1870-1955), George Robinson, and William Andrews belonged to the same church. The original capitalization was $12,000. The company began by making horse and mule feed; their product was mixed with shovels on the floor of a back room. In March 1896 Danforth became the president of the company and on May 26 of that year he became the majority stockholder. The next day the mill was completely destroyed by the worst tornado in St. Louis' history. Danforth rebuilt the company and made it one of America's largest producers of animal feeds.

Ralston Purina's research on soybeans probably dates from the period before World War I, when the meal had to be imported from Manchuria. In 1926 the company established a 712-acre research farm at Gray Summit, Missouri, for testing all ingredients in laboratory-developed formulas. It is not clear when the company first used soybean meal in its feed products.

The company began processing soybeans in the depths of the Great Depression, probably in about 1930. By Aug. 1935 it had plants for processing soybean meal at Lafayette, Indiana, Circleville, Ohio, and St. Louis, Missouri. The company processed over 2,000,000 bushels of 1935 crop soybeans. By 1936 this soybean meal was being used in 14 products, mostly "Purina Chows," animal feeds made by Purina Mills of St. Louis. It was sold under the famous corporate trademark, the red and white checkerboard.

By the early 1940s was the largest single consumer of soybean meal in America. By 1947 Ralston was operating at least four soybean crushing plants, located in Lafayette, Indiana; Iowa Falls, Iowa; Kansas City, Missouri, and St. Louis, Missouri. The four plants contained 23 expeller presses, had a capacity of 560 tons of soybeans per day, and a storage capacity of 3.91 million bushels of soybeans. The main product of each plant was Purina Chows.

Ralston Purina became involved with isolated soy proteins in 1958 through the acquisition of four soybean processing plants from Procter & Gamble (Buckeye Division). One P&G plant, located in Louisville, Kentucky had an industrial soy protein isolate operation built in about 1946-47 to produce industrial isolate for their Spic & Span house cleaner. During the 1950s P&G converted this plant to making industrial soy protein isolates for the paper coating industry. Production was started by Ralston Purina on 13 June 1959.

The roots of Ralston Purina's work with edible soy protein isolates reach back to Henry Ford. In early 1960 Robert Boyer, who had become one of the world's leading authorities on soy protein isolates while working for Henry Ford, began work as a full-time consultant for Ralston Purina. Starting that year, largely because of Boyer's arrival, Ralston Purina began its first research on edible soy protein isolates at a new research and pilot plant at company headquarters in St. Louis. In 1961 a semi-works plant to create these products was erected at Louisville. In about September 1962 Boyer was named technical director of protein product sales in the soybean division of the Ralston Purina Co.; he worked for Ralston until his retirement in 1971. In 1962 Ralston Purina began to sell both spray-dried edible soy protein isolates (named Edi-Pro A and Edi-Pro N) and the world's first commercial spun soy protein fibers (named Textured Edi-Pro or Fibrotein, and manufactured under patents owned by Robert Boyer). By July 1962 these fibers were being used by Worthington Foods to make a new generation of meatless meatlike products. Ralston Purina's food-grade soy protein products were sold only to the food industry, not directly to consumers.

Frank Calvert, Boyer's co-worker from the Ford Motor Co., was hired in November 1962 to head up Ralston Purina's R&D work on edible isolated soy protein in St. Louis. In 1965 Calvert was named director of soybean research, and in 1967 director of research of the protein division. Calvert is considered a visionary in soy protein research and the accomplishments of his career were honored

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in 1973 when the Ralston plant at Memphis, Tennessee, was dedicated to him.

By 1969 Ralston Purina had become the world's largest producer of formulated livestock and poultry feeds, with plants in over 40 states and 30 foreign countries.

By 1975 Ralston Purina employed more than 50,000 people worldwide and had sales of $3,000 million a year.

In Dec. 1976 Dun's Review proclaimed Ralston Purina to be one of America's best-managed companies. "Besides being the world's largest producer of animal feed and pet food, Ralston Purina is also a leader in protein production and nutrition research, which have vast implications for the company's future."

A survey of U.S. and Canadian soybean processing facilities conducted in Nov. 1977 by Shearson Hayden Stone Inc. found that Ralston Purina was the fourth largest soybean crusher / processor in North America (after ADM, Central Soya, and A.E. Staley), with a capacity of 92 million bushels per year, representing 7.5% of total industry capacity.

During the late 1970s and early 1980s Ralston Purina, under R. Hal Dean (chairman) and William P. Stiritz (president and CEO), was restructured to focus on being a manufacturer of higher-margin consumer packaged goods and to move away from its inherently volatile commodity-based enterprises. During the restructuring, Ralston Purina sold a number of its core divisions that dealt with commodities and used the revenues to purchase many new companies–including Continental Baking Co., Eveready Battery Co., Jack-in-the-Box restaurant chain, Van Camp Seafood Co., Keystone all-seasons resort, etc.

On 2 Jan. 1985 Ralston Purina finalized its sale of six soybean processing facilities to Cargill. Ralston stopped operations at its seventh soybean processing plant in Memphis, Tennessee. The deal left Ralston completely dependent on outside sources for soybean products for its pet foods and other products.

In mid-1986 Ralston Purina sold Purina Mills, its U.S. animal feed business, which represented the origins of the company. The buyer, BP Nutrition, paid $545 million for the prosperous mills. With these two sales, Ralston Purina exited from the bulk animal feed and soybean crushing business. It still sold pet foods to consumers.

The company's 1986 annual report stated that Ralston Purina was the world's largest producer of dry dog and dry and soft moist cat foods, and was the largest wholesale baker of bakery products in the U.S. "Ralston's metamorphosis into a very attractive consumer packaged goods company is now essentially complete." During the past year the company had earned $388 million on $5,500 million sales.

In 1972 Ralston Purina expanded its isolated soy protein operations into Europe by forming Purina Protein Europe (PPE). This started as a marketing organization but soon expanded into a technical service organization with an Application Laboratory in the UK, first at West Haddon and then at St. Albans, Herts., not far from London's Heathrow Airport. By 1976 PPE had an office in Brussels, Belgium, and in late September, 1978, PPE opened Europe's first plant manufacturing isolated soy proteins, at Ieper (Ypres), Belgium.

Also in 1978, in America, Ralston Purina expressed its growing interest in soy protein foods by sponsoring the Keystone Conference on soy protein and human nutrition, a milestone event that brought together top researchers in the two fields and resulted in the publication of the proceedings (Wilcke et al. 1979).

Starting at about this time, Ralston Purina became the world's leading manufacturer of food-grade isolated soy proteins. On 1 July 1987 Ralston Purina Co. established Protein Technologies International (PTI) as a wholly-owned subsidiary, with 92 researchers. Today PTI continues to be the world's foremost maker of isolated soy proteins, with offices worldwide, and manufacturing plants in the USA and Belgium. PTI also makes several industrial isolates and Fibrim soy fiber.

Issued in commemoration of Ralston Purina's 100th anniversary, this is the most comprehensive bibliography ever published about Ralston Purina Co. and Protein Technologies International's work with soybeans and soybean products. It has been compiled, one record at a time, over a period of 18 years, in an attempt to document the history of these two pioneering companies. Its scope includes all known information about this subject, worldwide, from 1934 to the present.

This book is also the single most current and useful source of information on this subject, since 85% of all records contain a summary/abstract averaging 170 words in length.

This is one of more than 40 bibliographies on soybeans and soyfoods being compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyfoods Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features: 30 different document types, both published and unpublished, every known publication on the subject in every language, and 42 original Soyfoods Center interviews and overviews never before published. Thus, it is a powerful tool for understanding the development of these two companies from their earliest beginnings to the present.

The bibliographic records in this book include 293 published documents and 16 unpublished archival documents. Each contains (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English publications together with an English translation of the title, month and issue of publication, and the first author's first name (if given).

The book also includes details on 44 commercial soy products, including the product name, date of introduction,

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manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as references to and summaries of advertisements, articles, patents, etc.) are also given.

Details on how to make best use of this book, a complete subject and geographical index, an author/company index, a language index, and a bibliometric analysis of the composition of the book (by decade, document type, language, leading periodicals or patents, leading countries, states, and related subjects, plus a histogram by year) are also included. The introduction contains a history of both companies. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

3107. Shurtleff, William; Aoyagi, Akiko. comps. 1994. Wheat gluten and seitan–Bibliography and sourcebook, A.D. 535 to 1993: Detailed information on 462 published documents (extensively annotated bibliography), 363 commercial gluten and seitan products, 208 original interviews (many full text) and overviews, 104 unpublished archival documents. Lafayette, California: Soyfoods Center. 347 p. Subject/geographical index. Author/company index. Language index. Printed 9 Dec. 1993. 28 cm. [922 ref]

• ***Summary:*** This is the first bibliography ever published about wheat gluten or seitan, and the most comprehensive book ever published on this subject. It has been compiled, one record at a time over a period of 18 years, in an attempt to document the history of these two interesting foods and food ingredients. Its scope includes all known information about this subject, worldwide, from A.D. 535 in China to the present.

This book is also the single most current and useful source of information on this subject, since 95% of all records contain a summary/abstract averaging 207 words in length.

This is one of more than 40 bibliographies on vegetable proteins being compiled by William Shurtleff and Akiko Aoyagi. It is based on historical principles, listing all known documents and commercial products in chronological order. It features: 32 different document types, both published and unpublished; every known publication on the subject in every language–including 736 in English, 68 in German, 61 in French, 26 in Chinese, etc.; and 208 original Soyfoods Center interviews and overviews never before published. Thus, it is a powerful tool for understanding the development of gluten, seitan, and related products from their earliest beginnings to the present.

The bibliographic records in this book include 462 published documents and 104 unpublished archival documents. Each contains (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English publications together with an English translation of the title, month and issue of publication, and the first author's first name (if given).

The book also includes details on 363 commercial gluten and seitan products, including the product name, date of introduction, manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as references to and summaries of advertisements, articles, patents, etc.) are also given.

Details on how to make best use of this book, a complete subject and geographical index, an author/company index, a language index, and a bibliometric analysis of the composition of the book (by decade, document type, language, leading periodicals or patents, leading countries, states, and related subjects, plus a histogram by year) are also included.

Introduction (p. 7-8): Gluten is a complex protein (composed of gliadin and glutenin) found mainly in wheat, but also in corn, barley and rye. It is best known for its ability to give elasticity and cohesiveness to bread, allowing it to rise. Vital wheat gluten, a cream-colored, free-flowing power, is most widely used to fortify flour and baked goods, but it also finds many other applications. One of the newest and most rapidly growing of these is its use as the main protein source in meatlike products.

Seitan is a Japanese word, coined in 1961 by George Ohsawa (Sakurazawa Nyoichi), a Japanese-born teacher of macrobiotics. He gave this name to a meatlike product developed by one of his students, Mr. Kiyoshi Mokutani. The product was first made commercially in 1962 by Marushima Shoyu K.K. in Japan. It was made by simmering raw wheat gluten in a broth, typically consisting of water, shoyu (soy sauce), kombu (a sea vegetable), and ginger. Seitan was first imported to the Western world in about 1969 by Erewhon, a macrobiotic and natural food company in Boston.

The earliest publication seen that mentions the word seitan is a 34-page macrobiotic cookbook titled Cooking Good Food, published in 1969 by Order of the Universe Publications in Boston. The author, whose name does not appear in the book, is Jim Ledbetter.

Since 1969, interest in and consumption of seitan in the United States and Europe has increased steadily. It continues to be used mostly as an alternative to meat and the macrobiotic community deserves much of the credit for its growing popularity. This book gives details on 104 commercial seitan products that have been developed and launched, mostly in the United States and Europe, and cites 80 published documents (including 40 cookbooks or articles with recipes) in which seitan is discussed. 73% of the published documents are written in English.

The history of gluten can be divided into various periods, a number of which are first documented in this

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book: Here are a few highlights.

Early History in China: The earliest Chinese reference seen to wheat gluten is in the *Ch'i-min yao-shu,* the world's earliest encyclopedia of agriculture, written by Chia Ssu-hsieh in A.D. 535. It describes *po to,* a type of noodle made largely from freshly-washed wheat gluten. By the Sung dynasty (960-1279) wheat gluten was being called by its present name, mien chin. It was widely used in place of meat, in various forms, by Buddhists in China. The first 17 citations in this bibliography, all published before 1600, come from China, as do 23 of the first 26 citation published before 1803.

Discovery by Scientists in the Western World: The earliest known reference to wheat gluten in the Western world was in 1745 in a Latin treatise titled *De Frumento* (Concerning Wheat), published in Italy. It describes how Beccari, a Professor of Medicine in the Anatomy and Chemistry Institute of Bologna, Italy, prepared a dough from wheat flour, then washed it with water to isolate the gluten. However as early as 1597 the term gluten had been used to refer to "The albuminous element of animal tissues" sometimes called animal gluten. In 1800 William Henry wrote in his book titled An Epitome of Chemistry: "Gluten forms the basis of the muscular or fleshy parts of animals." Numerous early observers noted that the gluten in wheat had distinctly meat-like or animal-like properties.

The first two English-language publications to mention wheat gluten appeared in 1803 in London. John Imison, in his *Elements of Science and Art* gave an excellent definition of wheat gluten. European chemists, especially those in France and Germany, took great interest in gluten, in its properties, and in the individual proteins of which it was composed. By 1900 they had issued more than 62 publications on the subject, compared with only 18 in the USA. In America, the first scientific publication on wheat gluten appeared in 1893, by Osborne and Voorhees in Connecticut.

First Use as a Food in the West in Diabetic Diets: In 1836 and 1841, the French scientist A. Bouchardat, while doing research on diabetes, discovered that gluten was good for use in diabetic diets–which were supposed to have little starch. He proposed feeding diabetics with gluten bread that contained only one-sixth the starch of regular wheat bread. His proposal caught on and for the next century gluten came to be widely used in Europe and the United States mainly in diabetic diets. Many commercial diabetic food products were manufactured. 48 records in this book discuss gluten in diabetic diets.

Seventh-day Adventists in America Discover Gluten: The first original publication on wheat gluten in the United States appeared in 1882. It was an advertisement for Sanitarium Foods published in *Good Health* magazine. This company was located in Battle Creek, Michigan, and directed by Dr. John Harvey Kellogg, a famous Seventh-day Adventist physician who headed the Battle Creek Sanitarium. The ad mentions Gluten Wafers, Diabetic Food, and Gluten Food. The Seventh-day Adventists soon became pioneers in introducing gluten-based foods, especially meatlike products, to America. 256 records in this book relate to Adventists, including 174 commercial gluten products. In November 1929 La Sierra Industries in Arlington, California (founded and run by T.A. Van Gundy), introduced the world's first meatlike product based on wheat gluten. It was named La Sierra Soy Gluten. From this small beginning many other Seventh-day Adventist companies launched commercial meatlike products based on gluten: The two leaders were Worthington Foods (Worthington, Ohio; 67 products) and Loma Linda Foods (Riverside, California; 48 products).

Popularization of Seitan in America and Europe: All early seitan products in the Western world were made by members of the macrobiotic community. In America the first two commercial seitan products were introduced in Oct. 1972, made by Nik and Joanne Amartseff in Boston. Tan Pups, consisting of skewered deep-fried seitan in a breaded batter, were so delicious that just their aroma drew passers-by into the store. Piroshki (filled with seitan) were also innovative. America's third seitan product was Wheatmeat, sold as small meatball-like chunks in bulk. Its creator, John Weissman, made many of America's earliest and most innovative seitan products and he still owns the trademark on the term "Wheatmeat."

In Europe, the first three seitan products were all made by Jonathan P.V.B.A., founded and owned by Jos Van De Ponseele, who learned how to make seitan in Boston. They were Seitan (1978), Seitanburger (1979), and Seitan Pâté (1980). Since 1972 at least 62 commercial seitan products have been launched in the USA and 38 in Europe.

The Rise of Gluten Worldwide: Starting in the early 1960s interest in and use of gluten by cooks and food processors began to increase rapidly (see p. 335). The number of records in this book grew from 320 in the 1960s, to 476 in the 1970s, to 749 in the 1980s. In 1974 the first of many gluten cookbooks was published by LeArta Moulton. In 1979 the International Wheat Gluten Association was founded by 11 wheat gluten manufacturers; it now has 23 members worldwide. Today most wheat gluten is sold as vital wheat gluten, and used in baked goods or to fortify flour. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

3108. Shurtleff, William; Aoyagi, Akiko. comps. 1994. Soyfoods industry and market–Bibliography and sourcebook, 1985 to 1993. Lafayette, California: Soyfoods Center. 361 p. Subject/geographical index. Author/company index. Language index. Printed 11 Jan. 1994. Published Jan. 1995. 28 cm. [985 ref]

• ***Summary:*** This is the second of the two most

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comprehensive books ever published on the soyfoods industry and market worldwide.

In May 1982 the first study of the burgeoning soyfoods industry in the Western world was compiled by Shurtleff and Aoyagi, and published by Soyfoods Center. In April 1985 the fifth edition of that book, titled *Soyfoods Industry and Market: Directory and Databook* (220 pages), was published. It contained statistics through 1984, the market size and growth rate for each soyfood type, rankings of leading soyfoods manufacturers of each soyfood type and the amount each produced, analyses, trends, and projections. This book is published to update the 1985 market study.

In the decade since 1984 the soyfoods market has continued to grow at a very healthy rate, with some soyfood types (such as soymilk) growing at a truly astonishing sustained rate–in both the USA and western Europe–as the statistics in this book show so vividly. In 1975 only 75 new commercial soyfood products were introduced in the USA, yet that number skyrocketed to 217 in 1979, reaching an amazing 422 new products in 1987.

During the decade from 1984 to 1994, Soyfoods Center has invested most of its time and resources in the production of SoyaScan, the world's largest computerized database on soyfoods, which contains more than 44,500 records as of Jan. 1994. This database also includes a wealth of carefully researched statistics and analyses of the soyfoods market; those from the start of 1985 to the end of 1993 are contained in this book. Its scope includes all known information on this subject, worldwide. Its focus, however, is statistics, analyses, and trends concerning the soyfoods industry and market in the United States and Europe.

In May 1990 Soyfoods Center conducted an in-depth study of the tofu market in Europe (137 pages), and in July 1990 of the soymilk market in Europe (261 pages). All original interviews and published records from both of these market studies, plus a summary of each study, are included in the present book.

The SoyaScan database is composed of individual records. One record might be an original interview with the head of the largest soymilk company in Europe, on the size and growth of the soymilk market in Europe, and new trends in that market, conducted by William Shurtleff of Soyfoods Center. Another might be a published article or an unpublished document concerning the growth of the market for soy yogurts or soy sauce in America.

This book documents the growth of each product category in every country worldwide. The book contains three extensive and easy-to-use indexes: A subject/geographical index, an author/company index, and a language index. These allow you to find the exact information you need on the soyfoods industry and market quickly and easily. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

3109. Pierce, Ray. 1994. A brief history of Genice Foods Ltd. and their work with soy ice creams, yogurts, creams, and margarine. Part III (Interview). *SoyaScan Notes.* Feb. 4, 8, 10, and 16. Conducted by William Shurtleff of Soyfoods Center. Followed by a an 8-page fax on 7 Feb. 1994.

• ***Summary:*** Continued: Genice developed its first soy yogurt in 1988; it was a chilled/refrigerated product that the company never actually launched. Genice has never made or sold a soy yogurt under the Genice brand, for reasons mentioned earlier–that the company wants to focus on product development and manufacturing, not marketing. Not long after April 1989, when Genice joined the Haldane Foods Group, they started to make Haldane Yoga, a chilled soy yogurt owned by the Haldane Group, but originally launched by the Regular Tofu Company in 1986. This and all subsequent soy yogurts made by Genice have been cultured products. Haldane Yoga product sold at the rate of about 500 to 1,000 cases per week, continuing until early 1990 when Genice developed a unique process for making pasteurized yogurts that have a 4-month shelf life at ambient temperatures. One other dairy company in the UK [Bridge Farm Dairies] was already producing an ambient stable product, but it suffered from protein degradation and did not contain large pieces of fruit. Genice attacked the problem from two directions–process design and product development. The process design concentrated on the necessity of pasteurizing the yogurt containing large chunks of fruit without degrading the soya protein. The product development consisted of producing a product with heat-stable natural flavors and colors at low pH (range: 3.6 to 3.8 when done). The results were highly successful.

The secret to the Genice process for making shelf-stable products is the "protein protection." If the process is not done correctly, all the protein precipitates, resulting in a very poor lumpy product that looks like porridge. The TVC (total viable count) is less than 10 in each soy yogurt product right after packaging, so they are almost as sterile as if they had been treated by UHT. The pH ranges from about 3.8 to 4.0, which gives added protection. This allows them to sell their yogurts using unrefrigerated distribution, which is much more economical. In the UK, most refrigerated distribution is done only by very large food companies.

Genice now makes 4 different brands of non-dairy soya yogurts for sale in the UK in 12 flavors. (1) So Good Yoghert (launched in early 1990 in 3 flavors–strawberry, black cherry, and peach & passion fruit; this is the Haldane brand; the So Good name has no connection with the same name used by Sanitarium Foods in Australia); (2) Unisoy Soya Yogart (launched in late 1990 in 3 flavors- raspberry, peach melba, and black cherry; Genice made these yogurt products for Unisoy before they joined the Haldane Group; before that, they were made by Bridge Farm Dairies in southern England–which attempted to make a shelf-stable product using dairy technology); and (3) Granose Soya Yogert

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(launched in late 1990 in 4 flavors–peach melba, strawberry, apricot, and blackcurrant & apple; Granose became part of the Haldane Group in Jan. 1991); (4) Granose Hi-Fruit Premium Yogert (launched in late 1992, with double the fruit content, 20%, in 3 flavors–kiwi & passion fruit, nectarine and pineapple, and fruits of the forest). Note that there is some duplication of flavors among different brands.

Starting in 1992 Genice started to sell its soy yogurts outside the UK. First in 1992 the So Good line of soy yogurts was launched in Spain, in cups printed in Spanish, for ADM-owned Arkady ADM Iberica S.A. (Carretera de Hosplatalet 42, Cornella de Llobregat, Barcelona, Spain) with the addition of two new flavors–orange and natural. In late 1992 the Spaniards requested their own brand, so So Good was changed to Alisana; Four Soya Yogerts (120 gm each) were sold in each pack. The Spaniards are apparently becoming very health conscious, because Spain is now Genice's biggest export market, taking about 20% of all the soy yogurt that Genice makes. In late 1992 the So Good line was launched in Sweden, Norway, and Denmark using, in part, the pre-existing Granose distribution network. One product, named So Good Soya Frutty, was sold to all 3 Scandinavian countries. The label was in Swedish and the names of all 3 distributors were on it. The distributors are: (1) Kung Markatta AB, Hjalmarsberg, S-705 95 Orero, Sweden (this is Genice's second largest export market); (2) Alternative Mat A/S, AVD Import, Kubben, 2150 Arnes, Norway; (3) Grön Distribution, Hoje Gladsaxe Torv 2, 2860 Soborg, Denmark (Genice has not dealt with Grön since 1992). At about the same time the So Good Yoghert (with its regular English label) was introduced to Finland, distributed by Oy Makrobios AB, Leksvall, 10600 Ekenas, Finland.

Then in early 1993 Genice's So Good soy yogurt was launched in Italy, in English with a sticker applied by Genice, thru a company partly owned by ADM named AFG Italy S.r.l. (Via S. Cassiano 76, Trecate, Novara 28069, Italy) and in mid-1993 in Portugal with an English label through another ADM subsidiary, Natiris (Centro Dietetico Lda., Rua de Santo Antonia, Estrela No. 31-B, 1300 Lisburn, Portugal). Italy is one of the two fastest growing yogurt markets in Europe, and it may soon pass Sweden to become Genice's second largest export market. Continued. Address: Founder, Genice Foods Ltd., Pinfold Lane, Llay Industrial Estate, Llay near Wrexham, Clwyd, LL12 OPX, Wales/Cymru, UK. Phone: 0978-853-787.

3110. Pierce, Ray. 1994. A brief history of Genice Foods Ltd. and their work with soy ice creams, yogurts, creams, and margarine. Part IV (Interview). *SoyaScan Notes.* Feb. 4, 8, 10, and 16. Conducted by William Shurtleff of Soyfoods Center. Followed by a an 8-page fax on 7 Feb. 1994.
• ***Summary:*** Ray feels that these soy yogurts are excellent products. Consumers must have the same opinion since the market is growing very rapidly. "In retail terms, this soya yoghurt market is now worth around £2 million sterling ($3 million), whereas it was worth only about £30,000 sterling in 1985." The market was almost totally created in the last four years–since Genice started making soy yogurt using its unique process that gives a shelf-stable product.

Today Genice now sells about ten times as much soy yogurt as soy ice cream. Moreover, sales of soy ice cream are fairly static, while sales of soy yogurt are leaping ahead. Genice makes at least 90% of the soy yogurts sold in the UK. In short, Genice started as a non-dairy ice cream company, which has in fact turned into a non-dairy yogurt company! "The soy yogurts really sold themselves. It was amazing how they took off so well." There are about 1,500 health food shops in the UK, and no more than half of those have a freezer, so they cannot sell ice cream. Even those with a freezer, usually have very limited frozen storage capacity and the competition for that small space (as from dairy ice creams) is intense. Almost all of those with no freezer also have no refrigerated storage; they sell mainly "pills and potions" etc." So a refrigerated or frozen product can be sold in less than half of all health food stores. This gives shelf-stable products, such as Genice's soy yogurts, a big advantage. Genice is moving its soy yogurts into Italy and Portugal in a bigger way, and is launching two new yogurts for Spain this year (competing soy yogurts are sold on a small scale in Spain). Other concepts and flavours will be introduced into the yoghurt area in 1994, together with the quest for other export markets continuing both in Europe and the rest of the world.

Genice uses fresh soymilk (produced by Unisoy) to make about 50% of its total volume of soy yogurt, and isolated soy proteins to make the other 50%. Powdered soymilk is not used because it is very expensive and too hard to obtain. Isolates are more convenient to use but Ray now feels that fresh soymilk gives a slightly better product–though this is very subjective and different people have different opinions. Isolates also give an excellent soy yogurt.

One of the markets that Genice has not yet entered–and would like to–is Germany, where there are large sales of soymilk and twice as many health shops (Reform Houses) as in the UK. Since most of the Reform Houses do not have chilled or frozen cabinets, Genice's shelf-stable products would fit perfectly; they could be sold on the shelf next to the Muesli. In the smaller health food shops in the UK, Genice's shelf-stable soy products are usually sold unchilled, but in the bigger shops, like Holland & Barrett, they sold chilled, since they taste better after being chilled.

Other dairylike non-dairy products that Genice has made are as follows: In 1990 chilled So Good Soycreem was launched as a non-dairy alternative to dairy double cream, but low in cholesterol, high in polyunsaturates, and low in saturates. It was made for Haldane in a little beige plastic pot with a green foil lid, packed at the Genice plant. It contains a trace of cholesterol because law requires that it contain 36%

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oil, including some palm oil. In 1991 a shelf-stable UHT version (completely sterilized, with a 9-month shelf life), now named Granose Soya Creem, was launched in a 225 ml Combibloc pack, made for Genice by a large dairy in Ireland which had Combibloc packaging equipment. The chilled So Good Soycreem was discontinued. In 1992 Genice installed a vegetarian margarine plant, which also makes Granose Soya Margarine that is sold chilled. This margarine was developed in Germany, so they took over the business and reformulated the product.

Genice is doing very well. The plant has expanded to 15,000 square feet from its original 2,500–a 6-fold increase. Their turnover (gross sales) has doubled virtually every year since they have been in business. Being owned by ADM has been of great benefit to Genice because ADM has been extremely generous in providing the money that Genice needs for its ongoing expansion and implementation of new ideas. Genice would eventually like to enter the U.S. market (starting in New York) with its shelf-stable non-dairy yogurt products, since there are no such products in America.

When yogurt is pasteurized, the beneficial effects of the yogurt bacteria are nullified. But Ray was just told by Dr. Glen Gibson that oligofructose, a sugar, has the effect of promoting the growth of the small quantities of Bifidobacteria in the human digestive system. Thus a pasteurized soy yogurt could be made into an even healthier product if it were sweetened by oligofructose.

Ray is a native of Wales and his wife is a teacher who often teaches in Welsh. Both are happy to see the revival of the Welsh language. Ray is not a vegetarian, but he has a good feeling and high regard for vegetarianism, he likes vegetarian food, and he has some vegetarian ideals but they go beyond the food to more ethical issues. He finds that many of the people in other companies that he deals with are more ethical people. He would estimate that 85-90% of the consumers who buy products made by Genice are vegetarians or vegans. Address: Founder, Genice Foods Ltd., Pinfold Lane, Llay Industrial Estate, Llay near Wrexham, Clwyd, LL12 OPX, Wales/Cymru, UK. Phone: 0978-853-787.

3111. Pierce, Ray. 1994. The origins of the Haldane Foods Group (Interview). *SoyaScan Notes.* Feb. 8. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Two men were instrumental in conceiving of and putting together the Haldane Foods Group: John Mahlich of British Arkady and Peter Fitch. Ray knows both men well and respects them greatly. Peter does a lot of the leg work, whereas John is the man who actually goes to ADM and requests the money. Ray sees John about twice a year and he is located nearby. John, who is about age 66, is an extremely alert and competent person–one of the most competent men Ray has ever met and, moreover, a very approachable gentleman. John has no particular personal interest in vegetarianism but he definitely understands it, sees its potential, has a strong commercial interest in that potential.

Peter Fitch has told Ray many times he didn't really want to acquire Genice; Ray had to court him for 9 months before he agreed to acquire Genice. Both British Arkady and the Haldane Foods Group report to ADM, but Ray thinks John Mahlich is responsible for both. John actually works at and is the top man at British Arkady. Bill Pringle worked for John, but Ray thinks Bill is now retired.

Brian Wellsby started Haldane Foods, and after his company was acquired by the Haldane Foods Group, he went to work for the Group for a while and then he left the Group in late 1989, after Genice was acquired.

A number of the heads of the companies in the Haldane Foods Group are not vegetarians. Of these companies, Granose and its top people are probably the most strongly committed to vegetarianism–in part because of its origins as a Seventh-day Adventist company. Some people at Haldane are also committed to vegetarianism. Address: Founder, Genice Foods Ltd., Pinfold Lane, Llay Industrial Estate, Llay near Wrexham, Clwyd, LL12 OPX, Wales/Cymru, UK. Phone: 0978-853-787.

3112. Ralston Purina Co. 1994. The Ralston chronicle: 1894-1994. A century of managing change. St. Louis, Missouri. 32 p. Illust. 26 x 33 cm.

• ***Summary:*** This excellent company history, which contains more photographs than text, begins with company "Milestones" (1894-1994) in the inside front cover, followed by an Introduction by Bill Stiritz, Chairman and CEO. For each "era" in the company history is given the years encompassed by that era, a one-line description of the era, a description of the key events of that era–both within the company and for the United States, and photographs taken during and capturing key parts of that era.

Milestones (inside front cover): "1894–Robinson-Danforth Commission Company is founded in St. Louis. 1896–Tornado destroys original feed mill. 1898–William H. Danforth assumes a leadership position and enters the cereal business with the endorsement of 'Dr. Ralston.' 1902–The name of the company is changed to Ralston Purina Company to reflect more accurately the business–where 'Purity is Paramount." Ralston adopts the famous Checkerboard logo. 1904–Ralston gains exposure at the 1904 World's Fair in St. Louis. 1926–Ralston opens its experimental farm at Gray Summit, Missouri. Ralston purchases the Rye-Krisp plant in Minnesota. 1932–Donald Danforth Sr. is named President of Ralston. 1937–Wheat Chex is introduced. 1950–Rice Chex is introduced. 1955–Founder and Chairman of the Board William H. Danforth passes away on Christmas Eve..."

1894-1910: Agricultural volatility and reform, and manufacturing might. Color photos show: (1) Company letterhead in about 1896. Across the top: "Familiar faces at your grocers–Ralston Health Club Breakfast Food, Purina

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Health Gluten–Whole Wheat Flour, Century Health PanKake Flour, Ralston Health Club Barley Flour, Ralston Infant Food. "Fine foods build fine minds." (2) Poster (red and black on beige) titled "Ralston Purina Foods" with caption "'Dr. Ralston' inspires a line of whole-wheat breakfast foods–'Where Purity is Paramount.' We see the front panel of: Ralston Breakfast Food. Ralston Cereal Coffee. Whole wheat flour for Brain bread (sack). Purina PanKake Flour. Ralston Hominy Grits. Ralston Kornkins–Old fashioned corn meal. Ralston Health Oats. Ralston Barley Food. Black and white photos show: (1) Women working in a factory making Ralston cereals, with rope drives and pulleys. (2) A child by the fire dreaming of the morning and Kellogg's toasted Corn Flakes.

1894-1910: At the World's Fair in St. Louis ("The Louisiana Purchase Exposition"). "Danforth's fascination with fitness and health inspires the endorsement of 'Dr. Ralston, a health guru with 800,000 followers. 'In a million homes,' a 1902 advertisement boasts, 'Ralston Purina Cereals find a welcome home at the breakfast table.'" "When the Louisiana Purchase Exposition comes to St. Louis in 1904, Ralston celebrates its unlikely first decade in a colorful way. Checkerboard boxes with handles are distributed to fairgoers, and the Purina booth serves Ralston Breakfast Food and pancakes made with Purina PanKake Flour." A color poster titled "Ralston Purina Foods" shows a miller tossing a happy little girl into the air. A package of Ralston Health Breakfast Food is shown. A dark brown on beige poster is titled "You will never forget the World's Fair and your Ralston Box. Begin to Live–now!

Note: A little additional history: 1894–The three founders were George Robinson, Will Andrews, and William Danforth. They started with $12,000 in borrowed capital in a storefront near the St. Louis riverfront. Their horse and mule feed–a combination of corn, oats, and molasses–was mixed by shovels then poured into 175-pound sacks, which were then sewn shut by hand."

Danforth was a man of strong personal convictions. Believing that the 'ingredients' of life were body, mind, personality, and character, he strove to balance all four in his own life and to help his employees do the same. A who felt passionate about healthy living, he boasted that he had never missed a day of work due to illness. It was, in part, Danforth's interest in health that helped him succeed in diversifying from animal feed into consumer goods.

In the late 1800s, most whole-wheat flour had the germ removed, to extend its shelf-life. "In 1898, while traveling in Kansas, Danforth met a miller who had developed a way to prevent rancidity in whole wheat. Packaging the miller's wheat, Danforth named it 'Purina Whole Wheat Cereal,' and began selling it to St. Louis grocers. The name Purina was derived from Robinson-Danforth's company slogan: 'Where purity is paramount.' To promote his new cereal, Danforth approached one of the most famous health spokespersons of the day, a Dr. Ralston. Ralston, whose precepts were followed by thousands, agreed to endorse the cereal only if it were named after him. Danforth quickly renamed the product 'Ralston Wheat Cereal,' and the campaign began. By 1902, there was a whole line of Ralston cereals boasting various health benefits." Address: St. Louis, Missouri.

3113. Mahlich, John. 1994. History and development of the Haldane Foods Group Ltd. Part II (Interview). *SoyaScan Notes.* March 8. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Continued: Next, in Feb. 1989, the Haldane Foods Group purchased a company named Kwality Foods. They made sauces, spreads, and dips. John liked the management, their products, and the price at which they offered to sell the company, which had a financial problem–they had run out of money. The Group subsequently changed the name of Kwality Foods into Saucemasters Ltd.

While owning Saucemasters, the Group started another company named Snackmasters Ltd., which was wholly owned by Saucemasters. Then in 1993 the Group sold Saucemasters, but retained ownership of Snackmasters, which they relocated in a new factory adjacent to the Haldane factory. It basically makes noodle- or rice-based vegetarian snack meals that contain textured protein and dried vegetables with a sauce sachet in each plastic cup. You pour hot water into the cup, leave for 4 minutes, and you have a very convenient and nutritious meal. This type of product is a big business in England; one company, Golden Wonder, dominates the market. But Snackmasters has carved out a niche by making ethnic vegetarian meals (Chinese, Indian, etc.), and using their sauce company to make the sachet of sauce. They have taken the product up-market by some ingenious developments and the company is thriving.

A month after buying Kwality Foods, the Haldane Group purchased Genice (pronounced JEN-ais) Foods, which makes non-dairy ice creams, yogurts, and margarines. "By this time we were deeply into the healthy food, health food, vegetarian business." Though this was the Group's first company to make non-dairy products, it fit well because their products were basically made from soya–either soyamilk or soya protein isolates. "Not only were we developing a group of interesting companies that can make some profit, but we were also signalling to a very large audience that maybe others (such as the many food manufactures who have been hesitant to use soya) should get into the soya business. And ADM likes that, because the more it is obvious that soya is here to stay and that it has multitudinous uses, the more Dwayne Andreas's dream will come true. Truthfully, we do not fear competition; the more that are in the business, the merrier. If you can get companies like Unilever to start using soya, then you get good publicity on a global basis.

"Genice is doing a very good job, but I have to say truthfully that selling non-dairy ice cream is missionary

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work. You need converts, and if you don't get them you're not a happy missionary. Its just a fact that most people want products with more and more cream. But at Genice we were going in the opposite direction–but successfully, though with slow growth. That's a tough number but we are hanging in and more and more will be sold. The non-dairy yogurts, incidentally, are going exceedingly well. That's good business."

ADM is a very acquisitive organization. For this reason, John and Peter Fitch were always looking for promising companies to add to the group. In the 20 years that John has worked for them, he has bought more than companies–with many outside the Haldane Group. Dwayne Andreas was aware of each of the Haldane Group's purchases as they took place. "He was totally aware of what we were doing and obviously was approving as we went. "You have to remember that Dwayne Andreas is very much committed to the evolution of the soyabean. He certainly has shown the keenest of interest in everything that we have done. I report directly to ADM and I could not buy a business without the approval of Dwayne Andreas (or Jim Randall) and finally the ADM board of directors, which meets quarterly... Yet ADM is a very fast-moving animal, and you can't contain its dynamism by quarterly meetings. The whole thing is designed to move with speed. So some acquisitions have been made before the board meeting; the contract simply reads 'Subject to board approval.'"

In those days John used to go to the USA quite a lot because he was running the ADM-Arkady business there for ADM; it was a manufacturing business in Chicago, Illinois–it's now in Kansas.

In December 1990 the Haldane Group purchased Unisoy, a small soya company which was for sale and which made soymilk. In the early 1990s a situation developed where the Haldane Foods Group had a sales director who had been a previous employee of Granose Foods. He suggested that the Group might be able to buy the Granose Foods company. "He had a key to open that particular door. It was with his basic introduction that we approached Granose, and subsequently we bought all of Granose. Granose had built a brand new and beautiful factory which was about 40 miles north of London, and that fit it very well to the growth and pattern that we were following." So the Haldane Group moved the center of their operations out of the Haldane factory and into the Granose factory, where it now is. The group still usually calls itself the Haldane Foods Group Ltd., but under some circumstances other names may also be used–such as the Granose Foods Group.

Granose was selling soyamilk that was being imported from a German manufacturer [DE-VAU-GE]. The Haldane Group decided to discontinue these imports, and now Unisoy is making all of the soyamilk for Granose that used to be imported from Germany. The quality of Unisoy's soyamilk is definitely as good as the German-made product, and now Granose has added many new soyamilk products to its range, with vitamin enrichment, etc. However, it seems like the total soyamilk market in the UK is no longer growing. Continued. Address: The British Arkady Co. Ltd., Skerton Road, Old Trafford, Manchester M16 0NJ, England, UK. Phone: 061-872-7161. Fax: 61-873-8083.

3114. **Product Name:** [Soya Based Drink (Vanilla)].
Foreign Name: Soja Drink–Vanille.
Manufacturer's Name: Bruno Fischer GmbH (Importer-Distributor). Made in France.
Manufacturer's Address: Im Auel 88, 53783 Aetorf, Germany. Phone: 49-2243-4021.
Date of Introduction: 1994 March.
Ingredients: Water, soya beans* (9%), maize malt extract*, dried sugar cane juice*, sea salt, natural vanilla extract. * = Organically grown and controlled.
Wt/Vol., Packaging, Price: 1 liter glass bottle.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Product with Label sent by Bruno Fischer. 1998. April 15. Ingredients and nutritional value are given in five languages, each with the flag of that country by the product name: German, English, Italian, French, and Dutch. Talk with Bruno Fischer. 1998. May 13. This product was launched in March 1994.

3115. Shurtleff, William; Aoyagi, Akiko. comps. 1994. Soy ice cream–Bibliography and sourcebook, 1918 to 1994: Detailed information on 725 published documents (extensively annotated bibliography), 230 commercial soy ice cream products, 210 original interviews (many full text) and overviews, 91 unpublished archival documents. Lafayette, California: Soyfoods Center. 352 p. Subject/geographical index. Author/company index. Extensively annotated. Printed March 14. 28 cm. [1117 ref]
• ***Summary:*** This is the most comprehensive book ever published about soy ice cream. It has been compiled, one record at a time over a period of 19 years, in an attempt to document the history of this subject. Its scope includes all known information about soy ice cream, worldwide, from 1918 to the present, plus considerable information about other non-dairy frozen desserts which contain no soya.

This book is also the single most current and useful source of information on soy ice cream, since 97% of all records contain a summary / abstract averaging 178 words in length.

This is one of more than 40 books on soybeans and soyfoods being compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyfoods Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features: 35 different document types, both published and unpublished; every known publication on the subject in every language–including 1,066 in English, 34 in Japanese, 10 in French, 8

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in German, etc.; 210 original Soyfoods Center interviews and overviews never before published. Thus, it is a powerful tool for understanding the development of soy-based soy ice cream and related products from their earliest beginnings to the present.

The bibliographic records in this book include 725 published documents and 91 unpublished archival documents. Each contains (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English publications together with an English translation of the title, month and issue of publication, and the first author's first name (if given).

The book also includes details on 230 commercial soy ice cream products, including the product name, date of introduction, manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as references to and summaries of advertisements, articles, patents, etc.) are also given.

Details on how to make best use of this book, a complete subject and geographical index, an author/company index, a language index, and a bibliometric analysis of the composition of the book (by decade, document type, language, leading periodicals or patents, leading countries, states, and related subjects, plus a histogram by year) are also included.

Introduction (p. 7-8): Soy ice cream was the hottest soyfood product in America during the 1980s, thanks in large part to David Mintz, whose Tofu Time Inc. launched Tofutti in August 1981 in New York City.

The United Kingdom soon became the second major center of activity following the development of Sunrise Ice Dream by Michael Cole of Soya Foods Ltd. It was launched in July 1985, and was soon being made by Genice Foods Ltd. of Wales.

The idea of making an ice cream from soya originated in March 1918 when a Japanese man, Arao Itano, mentioned it briefly in an article titled "Soy beans as Human Food" in the *Massachusetts Agricultural Experiment Station Bulletin* No. 182.

Other non-dairy ice creams were soon being envisioned. George Washington Carver wrote in Oct. 1919 that he planned to make an ice cream from peanut milk and by 1921 J.H. Stassen was making ice cream from rice milk.

The first patent for tofu ice cream was issued in Nov. 1922 to Lee Len Thuey, a Chinese-American living in Indianapolis, Indiana.

The world's first commercial soy ice cream was introduced in 1930 by Jethro Kloss, a Seventh-day Adventist from Washington, DC. Named Soy Ice Cream, it was sold in strawberry, chocolate, and vanilla flavors, each sweetened with honey. He named his company the Scientific Food & Benevolent Association. By 1934 he was serving his soy ice cream at his lectures in Florida, and in 1935 he included a recipe for soy ice cream in his herbal classic *Back to Eden.*

In the early 1930s Henry Ford's soy researchers Robert Boyer and Edsel Ruddiman developed an experimental soy ice cream at Greenfield Village in Detroit, Michigan. It was based on fresh tofu curds and soy protein isolates. By August 1935 Henry Ford was serving soy ice cream for dessert at VIP and press luncheons held at the Ford Engineering Laboratory in Dearborn.

In 1950 Robert Rich, of Rich Products Corp. in Buffalo, New York, launched Chil-Zert, America's second commercial soy ice cream. Bob Rich had learned how to make soymilk from Henry Ford's researchers.

Interest in soy ice cream, worldwide, was slow from 1918 until the late 1970s (see histogram p. 337-38). Then it began to take off. In Aug. 1976 Ice Bean, the first of a new generation of soy ice creams, was introduced by Farm Foods in San Rafael, California. Developed at The Farm in Summertown, Tennessee, it was soon sold nationwide.

But the product that made soy ice cream famous, and attracted scores of imitations, was Tofutti, developed by David Mintz (and Pesach Lazaroff) at Mintz's Buffet, a kosher Jewish deli on Third Ave. in Manhattan's chic Upper East Side. Tofutti was first sold commercially at the deli in August 1981 as a soft-serve non-dairy frozen dessert in 9 flavors. During the previous two months it had been sold in the deli under other names: Tofu Time Non-Dairy Frozen Dessert (the first flavor was carrot-raisin), then Tofu Time Tofu Ice Kream.

In 1982 Tofutti began to be sold outside the deli in New York City, including at a number of the city's most stylish eateries–such as Bloomingdale's and Zabar's. In 1983 sales expanded ten-fold. Mintz established a new company named Tofu Time and on December 8 Tofu Time Inc. raised $2.76 million net in the company's first public stock offering.

In 1984 Tofutti mania spread across America. Tofutti hit the big time, with huge amounts of free media publicity. Rising to national stardom it became (to everyone's astonishment) America's number one dessert craze. Sales of Tofutti skyrocketed to $9 million in fiscal 1984 (which ended July 31), then to a record $17.1 million in fiscal 1985. Tofu Time had one of the hottest stocks on Wall Street. By the summer of 1985 at least 26 brands of soy ice cream (many of them with "Tofu" on the label), were on the market in America.

The boom years for soy ice cream in America were 1984-1988. When the craze died down, four national brands were left: Tofutti, Ice Bean, Tofulite, and Mocha Mix.

In The United Kingdom, the first soy ice cream was Sojal Frozen Non-Dairy Dessert, launched in 1984. It was developed and marketed by John Holt of the Regular Tofu Co. Ltd. and made in Leicester, England, by Rossa Ltd., a dairy ice cream company. In May 1984 this same company

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introduced SoyBoy Soymilk Ices, then in June 1985 Sojal Light. Michael Cole was one of the salesmen for this company.

Cole then left and went to work for Soya Foods Ltd. In July 1985 he introduced Sunrise Ice Dream, which quickly became a huge success nationwide. Initially the product was made in Clywd, Wales, by Classic Ices–which was then owned by the Hillsdown Holdings Group. Later in 1985 the founder of Classic Ices, Ray Pierce, and the technical manager, Irene Barclay, left Classic Ices and started a company named Genice Foods Ltd. (pronounced JEN-ais, also in Clwyd, Wales) to specialize in making non-dairy products. Their first product, launched in April 1986, was Genice Ice Delight. In 1986 the manufacture of Sunrise Ice Dream was transferred to Genice from Classic Ices. Today Genice is the largest maker of soy ice creams in the UK and Europe. In April 1989 Genice became a member of the Haldane Foods Group. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

3116. Worthington Foods, Inc. 1994. Annual report 1993. 900 Proprietors Rd., Worthington, OH 43085. 16 p. 28 cm.
• ***Summary:*** See next page. On the cover is Worthington's logo, slanted and in pink, against a light gray background. Total sales rose to $79.3 million in 1993, up 3.6% from $76.5 million in 1992. Net income was $1.8 million for 1993, down 36% from $2.8 million in 1992.

On the inside front cover are the "Corporate objectives" and "Mission statement."

A "Notice of annual meeting of shareholders" (12 p.) is attached.

A table (p. 3) shows the number of shares owned by each director. The four largest shareholders are: George T. Harding IV (3.7% of common stock). Allan R. Buller (3.4%). Dale E. Twomley (2.1%). Donald G. Orrick (2.1%).

A table (p. 9) shows a summary of compensation (annual and long term). Dale E. Twomley, President and CEO, has a salary of $190,000 + $28,194 all other compensation.

The LaLoma brand has now been changed back to the Loma Linda brand. Address: Worthington, Ohio. Phone: (614) 885-9511.

3117. Worthington Foods, Inc. 1994. Free merchandising kit: Over a $50 value. No meat, one week. The Great American Meat-Out, March 1994 (Leaflet). 900 Proprietors Rd., Worthington, OH 43085. 1 p. Front and back. 28 cm.
• ***Summary:*** The purpose of this leaflet is to promote Worthington's Natural Touch line of products. The word "Worthington" does not appear on the leaflet. On the front is the black silhouette of a cow standing in a red circle with a read line drawn diagonally (from upper left to lower right) through it. Across the bottom: "See reverse side for details."

On the rear is an explanation, with photos of what the kit includes: Various numbers of cases of 8 Natural Touch products (at 15%+ discount), plus a window banner, 100 printed flyers, one cotton T-shirt, ten badges for store employees, point of sale signs for Natural Touch products, line art for use in advertising the store event, written news release, etc. Address: Worthington, Ohio. Phone: (614) 885-9511.

3118. Sutherland, Mavis. 1994. Re: Country Life Restaurant in Nashville, Tennessee. Letter to William Shurtleff at Soyfoods Center, April 15. 2 p. Typed, with signature.
• ***Summary:*** Country Life Restaurant (sometimes called Country Life Cafeteria) is located at 1917 Division St., Nashville, Tennessee. Phone: 615-327-3695. It is run by André Wilson and his wife, who are black people. It has been in business for 14 years. It was started as a health food store in 1980 and then became a restaurant in 1981. It never had any connection with Madison College or the Madison Hospital. André thinks that America's longest running vegetarian restaurant in recent times is the Country Life at the Yuchi Pines Institute in Columbus, Georgia, owned by Drs. Agatha and Calvin Thrash. Address: 503 Hood Lakes Rd., Lawrenceburg, Tennessee 38464.

3119. Graves, Cheri. 1994. Update on Cedar Lake-MGM Foods in Cedar Lake, Michigan (Interview). *SoyaScan Notes.* April 19. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Vesper C. Sias is no longer with this company but he is still alive. The company is now owned by Mr. Alejo Pizzaro, who was formerly with Loma Linda Foods. He bought the company in 1989 or 1990. Mr. Pizzaro now works at Cedar Lake's marketing offices at 12155 Magnolia Ave., Suite 3E, Riverside, California 92503. Phone: (909) 352-3554. In 1993 MGM Brands (of Scarborough, Ontario, Canada) and Cedar Lake joined forces; their products are very similar except that MGM made frozen vegetable protein foods in Canada and Cedar Lake made similar canned foods in Michigan. The MGM plant was moved to Cedar Lake, where all food production no takes place. Address: P.O. Box 65, Cedar Lake, Michigan 48812. Phone: (517) 427-5143.

3120. Graves, Cheri. 1994. Information about Cedar Lake–MGM Foods (Portfolio). Cedar Lake, Michigan. 38 inserts
• ***Summary:*** Inserts include: (1) Cover letter from Cheri (typed, with signature, on letterhead): "Enclosed is a package containing labels, a price sheet, nutritional information, and further information about our products. We will be working on new labels for the majority of our products, and the new labels will have a new look along with nutritional information for each one... Enclosed is the article I mentioned to you over the telephone. I don't have the cover sheet, but the article was in the *Review and Herald*, March 1991 issue. Since that time, as I mentioned to you, Cedar Lake Foods, Inc. and MGM Brands, Inc. have formed

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CORPORATE OBJECTIVES

MISSION STATEMENT

Worthington Foods, Inc. is solely dedicated to producing and marketing vegetarian and other healthful foods. Worthington Foods will continue to be a leader in providing nutritionally balanced options to meat, egg and dairy products for healthful living, as it has done for more than 50 years.

SHAREHOLDER OBJECTIVE

To provide our shareholders with increasing value from their investment in Worthington Foods. As a 50-year-old growth company, we recognize the necessary balance between consistent dividends and additional shareholder value created through the internal use of generated profits. Our primary responsibility is to our shareholders. Strategies are elevated not just in terms of increased sales or net income, but with an eye toward enhanced shareholder value as measured by the market appreciation of our stock and its dividends. This approach emphasizes economic cash flow analysis, the company's cost of capital, return on assets and other appropriate standards in evaluating growth opportunities.

CONSUMER OBJECTIVE

To provide our consumers with good-tasting, nutritionally sound vegetarian choices for healthful living. Virtually all of our products are cholesterol-free and contain less total fat and saturated fat than the meat, egg and dairy products they are intended to replace. With more than 150 items among our four brand lines, Worthington Foods offers a variety of high-quality, convenient products appealing to the full spectrum of health-concerned consumers. The market ranges from those desiring to reduce their intake of fat and dietary cholesterol to those seeking only vegetarian foods.

TRADE OBJECTIVE

To provide our trade consumers with a wide assortment of healthful, high-quality products to best satisfy the needs of their shoppers, whether motivated by health or philosophical reasons. Worthington Foods' products will provide our consumers with good value at a fair price while permitting the trade to realize a competitive profit. Demand will be generated through appropriate trade promotions, consumer advertising and merchandising support. To that end, we will maintain our commitment to providing greater product offerings and increased sales volume in supermarkets, health food stores, specialty markets and food service operations, both nationally and in targeted international markets.

EMPLOYEE OBJECTIVE

To provide our employees with challenging and satisfying employment in a pleasant working environment. Stable employment with appropriate financial rewards for outstanding work accomplishments can be expected. Personal growth and development will be encouraged, and all employees will have opportunities to be well informed and meaningfully involved in their company.

COMMUNITY OBJECTIVE

To provide our local community and those we serve with a good corporate neighbor which practices the highest values of honesty, integrity and mutual trust. We will assume a responsible leadership role in economic, social and industry matters in which we believe we can have a positive influence on the public welfare.

WORTHINGTON FOODS

The Company will continue to establish policy and conduct business based on the Judeo-Christian ethics and moral values upon which it was founded and has operated within for more than 50 years.

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a partnership. This took place on January 1, 1993. MGM Brands, Inc. was a Canadian company that manufactured frozen vegetable protein products in Scarborough, Ontario. I believe the company had been in business for about 10 years and was started by Graham Munroe. The partnership between the two companies allows us to offer canned and frozen products from the same location."

(2) 31 original labels or packages. Wheat gluten is usually the main ingredient. (3) Wholesale price list, effective Oct. 1, 1993 (2 p.). (4) Cedar Lake Foods nutritional information (1 p.). (5) Nutritional analysis (6 p.). (6) Recipes for using new Cedar Lake products: Quik Burger, Dinner Steaks, Vegi-Scallops, Insta-Soy Milk (3 panels each side). (7) Recipes for using new MGM products: Meatless Franks, Tofu Franks, Tofu Franks–Jumbo BBQ, Boloni Slices and Rolls, Quik Chik Rolls, Salami Slices and Rolls, Golden Burger, Breakfast Links, Sausage Roll, Samburger, Corned Beef Slices and Rolls, MGM Burger, Breakfast Strips, Vegetarian Scallups, Chicken Slices & Rolls, Golden Nuggets, Turkey Slices & Rolls, Golden Dinner Cuts, Vege-Pizza Topping (3 panels each side). (8) Three leaflets for new products. Address: P.O. Box 65, Cedar Lake, Michigan 48812. Phone: (517) 427-5143.

3121. Buss, Dale D. 1994. Worthington's Richard Leiss: Taking meatless mainstream. Research director helps pioneer vegetarian foods technology. *Food Processing* (*Chicago*) 55(4):68-69. April.
• ***Summary:*** A biography of Richard S. Leiss, age 55, and a history of his work at Worthington Foods. Address: Field editor.

3122. Kevin, Kitty. 1994. Analogs: Fabulous fakes. How five companies make the all-American burger meatless. *Food Processing* (*Chicago*) 55(4):39-40, 42, 44. April.
• ***Summary:*** This article leads off the "Foods of Tomorrow" section. "Meatless burgers are going mainstream–sort of." The five companies are Worthington Foods (Worthington, Ohio–Grillers), Wholesome & Hearty Foods, Inc. (Portland, Oregon), Fantastic Foods, Inc. (Petaluma, California), Archer Daniels Midland/Pillsbury (Decatur, Illinois), Sharon's Finest (Santa Rosa, California). Green Giant Harvest Burgers are made by ADM and distributed by Pillsbury. The basic ingredient is texturized soy protein concentrate. A color photo shows four flavors of frozen Harvest Burgers. Address: Associate editor.

3123. Shurtleff, William; Aoyagi, Akiko. comps. 1994. Cheese and cream cheese alternatives (with or without soy)–Bibliography and sourcebook, 1896 to 1994: Detailed information on 334 published documents (extensively annotated bibliography), 159 cheese alternative products, 119 original interviews (many full text) and overviews, 44 unpublished archival documents. Lafayette, California: Soyfoods Center. 225 p. Subject/geographical index. Author/company index. Printed April 28. 28 cm. [570 ref]
• ***Summary:*** This is the most comprehensive book ever published about soy cheese, soy cream cheese, and other cheese alternatives. It has been compiled, one record at a time, over a period of 19 years, in an attempt to document the history of this subject. Its scope includes all known information about cheese and cream cheese alternatives, worldwide, from 1910 to the present.

This book is also the single most current and useful source of information on soy cheese, since 97% of all records contain a summary/abstract averaging 190 words in length.

This is one of more than 45 books on soybeans and soyfoods being compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyfoods Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features: 34 different document types, both published and unpublished; every known publication on the subject in every language–including 528 in English, 11 in French, 11 in Japanese, 10 in German, etc.; 47 original Soyfoods Center interviews and overviews never before published. Thus, it is a powerful tool for understanding the development of soy cheese from its earliest beginnings to the present.

The bibliographic records in this book include 334 published documents and 44 unpublished archival documents. Each contains (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English publications together with an English translation of the title, month and issue of publication, and the first author's first name (if given).

The book also includes details on 159 commercial cheese and cream cheese alternatives products, including the product name, date of introduction, manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as references to and summaries of advertisements, articles, patents, etc.) are also given.

Details on how to make best use of this book, a complete subject and geographical index, an author/company index, a language index, and a bibliometric analysis of the composition of the book (by decade, document type, language, leading periodicals or patents, leading countries, states, and related subjects, plus a histogram by year) are also included.

A brief history of cheese alternatives (p. 7-8): Cheese alternatives are Western-style cheeselike products that contain a significant amount of non-dairy protein, typically from soybeans, nuts, or seeds. They may or may not contain casein or caseinates (the main protein found in milk). The hard cheeses that contain casein typically melt, stretch, and

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shred in much the same way as dairy cheeses. We distinguish cheese alternatives from imitation cheeses and cheese substitutes in which the butterfat is typically removed and replaced by vegetable oil or by no fat at all.

The world's first non-dairy cheeselike products were the various types of fermented tofu made in China (where they are called *doufu-ru, fuyu,* or *sufu*). Said to have been developed 1,400 to 1,500 years ago, they were first mentioned in documents during the Ming dynasty in China in the 1500s (Chin Kan. 1534. Messenger to Ryukyu; Li Shih-chen. 1578-1597. *Pen-ts'ao kang-mu*). Since we consider fermented tofu (sometimes called "soy cheese") to belong to a different category of foods from cheese alternatives (in part since the former do not melt), we discuss them in a separate book.

The first commercial cheese alternative in the Western world was invented and made by Dr. John Harvey Kellogg, the famous Seventh-day Adventist physician and vegetarian. Named Nuttose, it was launched in 1896. Made largely from peanuts, it was a true non-dairy product that was also used as a meat alternative.

The first commercial soy cheeses in the Western world were developed and made Li Yu-ying in 1911. At his modern soyfoods factory near Paris, Li manufactured Fermented Tofu Cheese in Gruyère, Roquefort and Camembert flavors.

Between 1911 and 1985 most of the commercial cheese alternatives in America were made by Seventh-day Adventist companies. Though we know the names of these early products, their ingredients and properties are not always clear. In 1939 Madison Foods (Madison, Tennessee) introduced Cheze-O-Soy, based on tofu. In 1942 Butler Food Co. (Cedar Lake, Michigan) launched ViM-eat Soy-Nut Cheese and in 1944 Butler's Soynut Cheese. In 1951 Loma Linda Foods (Arlington, California) rolled out Vege-Chee (canned, based on tofu). And in 1961 Worthington Foods (Ohio) introduced Kreem-Chee, the world's second commercial non-dairy cream cheese.

The idea of cream cheese alternatives was first conceived of by another Seventh-day Adventist, Jethro Kloss. In April 1934 the *Miami Daily News* reported how approximately 6,000 people had recently heard him speak about dairylike foods made from soy beans at Bayfront park. He exhibited 21 foods made from soy beans (including cream cheese, yellow cheese, and cottage cheese) and invited the public to taste them.

By November 1938 the Wigmore Health Shop in London was making the world's first Soya Cream Cheese. The first two commercial tofu cheesecakes were created in 1971 by students of macrobiotics: One by Marcea Newman was sold at her Souen restaurant in New York; the other by David Kalan (named Tofu Blueberry Pie) was sold at his Crane's Call Bakery in Boston. The first two recipes for a soy cheesecake appeared in 1974: One by Marcea Newman (made with tofu) in her book *The Sweet Life: Marcea Newman's Natural Food Dessert Book;* the other by The Farm in Summertown, Tennessee (made with soy cheese, from naturally fermented / soured soymilk) in their booklet *Yay Soybeans!* The first recipe for a "Tofu Cheesecake" appeared in *The Book of Tofu* by Shurtleff and Aoyagi (1975).

The modern category of commercial soy cheeses and cheese alternatives was born under a bad sign. It began in America in March 1985 with the introduction of Soyarella–probably the most deceptive soyfood product ever launched in America. Though extremely popular for about a year, it was unfortunately mislabeled to deliberately deceive consumers. Though marketed as a "non-dairy soy product" which contained no casein yet melted like cheese, it was later found to contain about 15% casein. The "source" of Soyarella (not to be confused with TofuRella) is thought to have been Nature's Best in Osseo, Michigan. But the name of the manufacturer was not given on the label–and it remains a mystery to this day.

In America, this new category has a number of basic characteristics: (1) Casein (a milk protein) or caseinates is used in more than 95% of all products to make them melt and stretch like dairy cheeses. Less than 5% of all products are truly non-dairy; (2) In the late 1980s, most manufacturers, marketers, and retailers deliberately concealed from consumers the fact that casein is derived from cow's milk (complicated by the fact that FDA regulations allow food products that contain casein to be called "non-dairy"); (3) Many consumers believe that most cheese alternatives are truly non-dairy products. Fortunately, labels and promotional materials have become more honest with each passing year–yet many consumers still remain confused and some deceptive practices still exist; (4) All products are free of cholesterol and lactose, and relatively low in saturated fats. Some are also low in total fats, calories, and sodium; (5) About 95% of the products are soy cheeses and 5% are nut or seed cheeses without soy. Most products contain tofu (either dried or fresh) as a major ingredient; (6) Most products are sold at natural- or health food stores, and retail for about 50% more than typical dairy cheese sold at supermarkets; (7) About 95% of the products are hard cheeses and 5% are soft cheeses, mainly cream cheeses.

The first major soy cheese to hit the market was Soya Kaas, introduced in Jan. 1986 by Richard McIntyre of Soya Kaas Inc., a subsidiary of Swan Gardens Inc. Marketed exclusively by American Natural Snacks of Florida, it is still America's most popular cheese alternative. In June 1986 Mozzarella Style Tofu-Rella was introduced by Richard and Sharon Rose of Brightsong Foods. The company later became Sharon's Finest and the product was renamed TofuRella. In Oct. 1986 Original Pizsoy (a whole-wheat pizza topped with soy cheese) was introduced by Tree Tavern Products; It was the first product in which soy cheese was used as an ingredient.

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In Jan. 1987 Soymage was introduced by Soyco Foods, a Division of Galaxy Cheese Co.; This was Soyco's first soy cheese product and the first modern soy cheese that contained no casein. In April 1987 NuTofu was introduced by Cemac Foods Corp. This was Cemac's first soy cheese product.

In April 1988 Soyco shreds and slices were introduced–the first soy cheese shreds and slices. In 1988 new labels for Sharon's Finest Tofu-Rella became the first (as far as we can tell) to state clearly on the label that the casein in the product is derived from milk.

In Jan. 1991 Fat-Free Soyco was introduced–the first fat-free soy cheese. In Dec. 1992 Almond Cheeze was introduced by Wholesome & Hearty Foods–the first major non-soy cheese alternative.

In April 1994 VeganRella (made from Brazil nuts) was introduced by Sharon's Finest–a true non-dairy non-soy cheese said to have excellent flavor and texture.

The size of the natural foods cheese alternatives market in the USA is about $15 million/year at wholesale and $25 million/year at retail; this is the equivalent of about 5 million lb/year. The category has grown at a remarkable rate–about 20% a year for the past 3-5 years. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

3124. Sutherland, Mavis. 1994. Re: Madison's College's Nashville Vegetarian Cafeteria and Country Life Restaurant. Letter to William Shurtleff at Soyfoods Center, May 19. 2 p. Typed, with signature.
• ***Summary:*** The Nashville Vegetarian Cafeteria, managed by Madison College, began in 1917 and had treatment rooms adjoining. Mr. J.G. Jenkins started this work, and Misses Laura Robinson and Mable Stout took over from him. It was located on 6th Avenue, about half a block from the Greyhound bus station. Margaret McKay joined in the work later. Address: 503 Hood Lakes Rd., Lawrenceburg, Tennessee 38464.

3125. Fonnebo, Vinjar. 1994. The healthy Seventh-day Adventist lifestyle: what is the Norwegian experience? *American J. of Clinical Nutrition* 59(5S):1124S-1129S. Supplement. May. Proceedings of the Second International Congress on Vegetarian Nutrition. Held 28 June–July 1, 1992 at Arlington, Virginia. [67* ref]
Address: Inst. of Community Medicine, Univ. of Tromso, MH-Bygget, Breivika, N-9037 Tromso, Norway.

3126. Fraser, Gary E. 1994. Diet and coronary heart disease: beyond dietary fats and low-density-lipoprotein cholesterol. *American J. of Clinical Nutrition* 59(5S):1117S-1123S. Supplement. May. Proceedings of the Second International Congress on Vegetarian Nutrition. Held 28 June–July 1, 1992 at Arlington, Virginia. [88 ref]
Address: Center for Health Research, Loma Linda Univ., Loma Linda, California 92350.

3127. Haddad, Ella H. 1994. Development of a vegetarian food guide. *American J. of Clinical Nutrition* 59(5S):1248S-1254S. Supplement. May. Proceedings of the Second International Congress on Vegetarian Nutrition. Held 28 June–July 1, 1992 at Arlington, Virginia. [30 ref]
Address: Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California 92350.

3128. Johnston, Patricia K. ed. 1994. Second International Congress on Vegetarian Nutrition: Proceedings of a symposium held in Arlington, Virginia, June 28–July 1, 1992. *American J. of Clinical Nutrition* 59(5S):1099S-1262S. Supplement. May.
• ***Summary:*** Patricia Johnston is the guest scientific editor, with assistance from Bert C. Connell, Kenneth I. Burke, Gary Hopkins, and Joan Flynn. Sponsors: Worthington Foods, Inc. Wenger Manufacturing Co. Sanitarium Health Food Co. Rykoff/Sexton, Inc. Kettering Memorial Hospital Foundation. Loma Linda University. Loma Linda University Medical Center. Seventh-day Adventist Dietetic Association. Health Department–Seventh-day Adventist Church. Pacific Health Education Center. Protein Technologies International. Quaker Oats.

Most of the 24 papers by various authors are cited separately. Address: Dep. of Nutrition, Loma Linda Univ., Loma Linda, California.

3129. Knutsen, Synnøve Fønnebø. 1994. Lifestyle and the use of health services. *American J. of Clinical Nutrition* 59(5S):1171S-1175S. Supplement. May. Proceedings of the Second International Congress on Vegetarian Nutrition. Held 28 June–July 1, 1992 at Arlington, Virginia. [10 ref]
• ***Summary:*** The author believes that one of the most effective ways of reducing total health care costs would be for the population at large to adopt a vegetarian diet. Address: Center for Health Research, School of Public Health, Loma Linda Univ., California; Inst. of Community Medicine, Univ. of Tromso, Norway.

3130. Mills, P.K.; Beeson, W.L.; Phillips, R.L.; Fraser, G.E. 1994. Cancer incidence among California Seventh-day Adventists. *American J. of Clinical Nutrition* 59(5S):1136S-1142S. Supplement. May. Proceedings of the Second International Congress on Vegetarian Nutrition. Held 28 June–July 1, 1992 at Arlington, Virginia. [19 ref]
Address: Center for Health Research, Loma Linda Univ., School of Public Health, Loma Linda, California 92350.

3131. Whorton, James C. 1994. Historical development of vegetarianism. *American J. of Clinical Nutrition* 59(5S):1103S-1109S. Supplement. May. Proceedings of the

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Second International Congress on Vegetarian Nutrition. Held 28 June–July 1, 1992 at Arlington, Virginia. [39 ref]
• ***Summary:*** Contents: Abstract. Introduction. Vegetarianism and morality. Vegetarianism and nutrition. Sylvester Graham. John Harvey Kellogg. Alexander Haig. Newer nutrition of the 1920s. Recent developments

Note: By choosing many strange examples (and some strange personalities; Haig, Lane) from history, then linking them together in sections much longer than their importance deserves, Whorton ends up with an unbalanced, unsympathetic, reductionist history of vegetarianism. He also omits many of the most important parts of vegetarian history, such as the ongoing Adventist Health Study, which has been instrumental in convincing most physicians that a balanced vegetarian diet is healthier than the standard American diet.

To take but one example: in the section on John Harvey Kellogg, instead of using Dr. Kellogg's best known and most respected works as examples, Whorton takes relatively obscure works that have not withstood the test of time (such as autointoxication) as well as most of his writings. Kellogg was a pioneer in understanding and teaching about the role of dietary fiber in a healthy diet. He was the first to develop and sell a line of meat alternatives. His Battle Creek Sanitarium was a pioneer in the model of preventive medicine and of treating the cause of the disease rather than covering up the symptoms. Address: Dep. of Medical History and Ethics, Univ. of Washington, Seattle, Washington 98195.

3132. Duggan, David. 1994. Problems with the Flier patent assigned to Ralston Purina (Interview). *SoyaScan Notes.* June 13. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** David is an anti-trust attorney, not a patent attorney. On 5 July 1990 the federal circuit court of appeals, which hears appeals concerning patent cases in the United States, ruled that Ralston Purina Company had procured the famous Flier patent (No. 3,940,495. Feb. 24, 1976. Application filed 17 Jan. 1973) by fraud on the patent office. The case is number 909 F.2D 1494 (Staley vs. Ralston Purina).

Price Heneveld (a law firm of patent lawyers in Grand Rapids, Michigan) apparently represented Ralston Purina on both the original application and in subsequent litigation.

There was apparently earlier litigation involving Far-Mar-Co, Staley, Cargill, etc. The first case was apparently Ralston Purina vs. Far-Mar-Co of Kansas. He believes that Ralston Purina filed the lawsuit in Oct. 1976. The judgment was in or about 1981–showing the slow pace of federal litigation. The case was tried in the 10th federal judicial circuit (district of Kansas), which is statistically the worst, in the sense that more cases are later overturned from that circuit by the U.S. Supreme Court. He finds it interesting that Ralston chose to file its first case in that circuit. There is law to the effect that if you engage in fraud on the patent office and then use that fraud in an attempt to control or monopolize the relevant market, that is illegal, and may be the basis for a anti-trust lawsuit.

In 1976, after Ralston Purina won the case against Far-Mar-Co in Kansas, Ralston started sending demand letters to many other companies that were supposedly infringing this patent–including Staley, Cargill, Central Soya, Griffith Laboratories, Miles Laboratories, Nabisco, Anderson Clayton, General Mills, Nestle, Riceland Foods, Dawson Mills, General Foods, Grain Processing Corp., etc. Ralston was protecting its rights.

In 1985 the Far-Mar-Co case was upheld, saying that Ralston Purina indeed had the rights to the Flier patent (Case no. 772 F.2D 1570). However Far-Mar-Co did not raise the issue of fraud. So it took another 5 years for the court to reach that question–which it decided in 1990.

David's main questions are: (1) Is textured vegetable protein [actually textured soy flour] a distinct segment of some relevant market? (2) Did Ralston Purina try to exclude other competitors from that market. (3) Were there substitutes for the product on which Ralston Purina had a patent? David's firm is in the process of representing a former player in the industry, a major trading company; they may represent a consortium of companies that were effected by the Ralston Purina's "ill gotten gains."

Update: Talk with David Duggan. 1996. April 26. His firm was representing the Lauhoff Residuary Trust in a case against Ralston Purina Co. Lauhoff is a grain company in Danville, Illinois. They were sued by Ralston, which claimed that they had infringed the patent without paying royalties. Lauhoff initially disregard the demand letter threatening a suit. Then they sold the company, but did not properly disclose to the buyers that a lawsuit was pending or had been threatened. Lauhoff then lost the case against Ralston in about 1986 or 1987. So the new owners sued the formers owners for failure to disclose. David argued that the amount paid by Lauhoff to settle the lawsuit was fraudulently paid. The case, which was very complex and convoluted, was thrown out of court by the judge because the statute of limitations had expired–they brought the case too late. Moreover, the patent was nearing its expiration date, or had expired. David believes that there was some pretty serious frauds on the courts in litigation to enforce the patent. David tried to present a RICO (Racketeering Influenced and Corrupt Organizations) Act argument. It provides for triple damages. David tried to approach some of the smaller players like Far-Mar-Co but he did not approach ADM. The patent law was recently changed to 20 years from the point of application; formerly it was 17 years from the point of grant. Address: 321 S. Plymouth Court, Suite 800, Chicago, Illinois 60604. Phone: 312-663-0670.

3133. **Product Name:** Tempeh.
Manufacturer's Name: Stanley Darby.
Manufacturer's Address: P.O. Box 7248, Agat, Guam

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96928. Phone: 671 565-2059.
Date of Introduction: 1994 June.
New Product–Documentation: Talk with Stanley Darby of Guam. 1995. June 14. He is a Seventh-day Adventist, who has been making tempeh by hand for about one year and selling it to Seventh-day Adventists who have a large get-together each Saturday after church. He has brought tempeh starter culture back from Indonesia several times.

Stanley calls again from Guam. His address is now P.O. Box 8389. He still makes tempeh for SDAs and still has no company name.

3134. Worthington Foods, Inc. 1994. There's a new garden spot that won't be found in your grocer's produce section (Ad). *Vegetarian Times.* June. p. 3.
• ***Summary:*** See next page. This full-page, color ad, with a coupon, features Morningstar Farms Meatless Garden Vege-Patties. It also shows packages of Meatless Prime Patties, and Meatless Chick Patties.

This ad also appeared in the Feb. 1995 issue (p. 5) of this magazine. Address: Worthington, Ohio 43085.

3135. Williams, DeWitt S. 1994. Trends among Seventh-day Adventists concerning vegetarianism (Interview). *SoyaScan Notes.* July 13. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Dr. Williams is head of an active program to educate the public, and especially Seventh-day Adventists, on the benefits of not eating meat, not drinking, and not smoking. He has observed that about 50% of all Adventists are vegetarians, but individuals in the younger generations are less likely to be vegetarian than those in the older generations. Address: Director of Health and Temperance, North American Div. of the SDA, 12501 Old Columbia Pike, Silver Spring, Maryland 20904-6600.

3136. Buller, Allan. 1994. Madison Foods archives, and recollections of Dr. John Harvey Kellogg (Interview). *SoyaScan Notes.* July 14. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** As far as Allan knows, few or no archival records from Madison Foods presently exist at Worthington Foods. He has never heard of a product named Savory Meat made by Madison. His contacts with Madison began in about 1960. Harry W. "Willis" Miller Jr. was at Madison when Worthington began its contacts; Willis helped to develop Infasoy. Dr. U.D. Register was part of the early history of Madison Foods. He was a student at Madison and he worked at the food plant.

In about 1935-36 Allan, then age 18, worked for about one year in the kitchen with Dr. John Harvey Kellogg (who was then about age 84) at his Battle Creek Sanitarium in Miami Springs, Florida. Dr. Kellogg, who went to Florida during the winter, had a strong interest at that time in using soymilk to make a "soy acidophilus milk" that was cultured; he did ongoing experimentation. Allan's work was to turn the meat grinder that produced the soymilk. Dr. Kellogg served this cultured milk, which was made in the kitchen, to patients at the Sanitarium in Florida. This was Allan's earliest contact with soy. Allan also set up chairs for Dr. Kellogg's lectures. Dr. Kellogg was a strong promoter of developing the right kind of bacterial balance in one's intestinal system. So he was constantly experimenting with how to do this with soymilk instead of cow's milk using the acidophilus cultures.

Dr. Kellogg had a strong interest in nutrition and preventive medicine. He was an amazing man. "As I listened to his lectures as an 18-year-old boy, the things he said impressed me as being important. Now 50 years or more later we see many of the things that he advocated then being generally accepted by health professionals. He talked a lot about the importance of fiber in the diet in order to have regular bowel movements." He advocated a vegetarian diet throughout his life. One of the vegetarian visitors to his Sanitarium in Florida in 1935-36 was George Bernard Shaw; he went to visit Dr. Kellogg for a visit, a vacation, and a "tune-up" (perhaps a massage and sunbath). Allan helped to carry Shaw's luggage into the San, and he would take food on a tray up to Dr. Kellogg's room while he and Shaw were visiting; they were great friends. Exercise was also part of the San's program, including use of mechanical equipment, walking, and bicycle riding. Dr. Kellogg emphasized the importance of bicycle riding and Allan saw him riding a bicycle when he was well into his 80s.

What kind of a person was Dr. Kellogg? "A man of exceptionally high ideals. He was very much interested in helping people, and in helping them to discover better health. He helped a lot of young people through school, using his personal finances–a very generous person. He lectured in Florida every Sunday night on principles of health and he had a great concern with public health. The lectures were open to the public and free of charge. He seemed to lack interest in commercially promoting products–such as Corn Flakes. I think he was too interested in helping the public–he was inclined to give things to people. He also had a strong interest in helping diabetics and his Battle Creek Food Co. developed foods for diabetics to use."

Note: Allan Buller was President and CEO of Worthington Foods until 1985, when he retired. He still comes to work and is on the board of directors. Address: Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085. Phone: 614-885-9511.

3137. Worthington Foods, Inc. 1994. Second quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.
• ***Summary:*** "Net sales for the first half of 1994 were $44.4 million, an increase..." "Higher sales in the Mass Market are directly attributed to increase sales of Morningstar

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Farms' meat alternative products, up 52 percent year-to-date compared to last year. The Meat Substitute total category was up 74 percent for the second quarter compared to a year ago and Morningstar Farms sales of meat alternatives were up 65 percent for the same period. Even with the increased competition in the market, Morningstar Farms continues to have a 70 percent market share in this category."

"A new frozen burger product, *Burger Beaters*, containing only 2 grams of fat, is currently being introduced into the Foodservice market. Product shipment began in early July, 1994." Address: Worthington, Ohio. Phone: (614) 885-9511.

3138. Winter, Ralph E. 1994. Worthington Foods says meatless meals fatten bottom line. *Wall Street Journal*. Aug. 12.

• ***Summary:*** Dale Twomley, president and CEO of Worthington Foods (Worthington, Ohio) says sales of meat substitutes are running more than 50% ahead of year ago. The company, which sells vegetarian foods, expects 1994 sales to top $90 million. Last year Worthington completed a new plant to make a refrigerated egg substitute; unfortunately sales of this product inched up only 3% in the first half. Egg substitutes (both frozen and refrigerated) account for about 30% of the company's sales, and profits on them are good. Nevertheless, this year Worthington shifted major promotional resources from egg substitutes to meal alternatives. Green Giant, a unit of Grand Metropolitan PLC, also launched a big ad campaign for meat substitutes, thus boosting interest in the whole category.

Worthington recently reformulated older products to reduce fat content. The company's best-seller is Grillers, a hamburger alternative with about half the fat of a typical beef burger. Other new products are Prime Patties (air cooked, with very low fat), Garden-Vege-Patties, and BurgerBeaters (intended for restaurants, college cafeterias, prisons, and other food-service providers).

Note: In the three-star East Coast edition, this article is titled: "Worthington sees strong results in '94 as Americans shift to meat substitutes."

3139. Fritschner, Sarah. 1994. One burger... Hold the meat: Vegetarian burgers have been around for 20 years, but they're getting a second look now. *Clarion-Ledger* (*Jackson, Mississippi*). Aug. 24. p. E1-2.

• ***Summary:*** Hillary Clinton eats meatless Boca Burgers and Bill Clinton loves them. T.G.I. Friday's has been selling vegetarian Gardenburgers since 1991, and expects to sell more than one million this year. The Morningstar Farms patty [made by Worthington Foods] has been around for 20 years. Max Shondor makes the low-calorie Boca Burger in Florida. About two years ago Burger King franchisee Dennis Kessler added the Morningstar Farms Grillers to the menu of his restaurant at Watkins Glen, New York. It became a hit immediately, selling about 200 per week in the very rural community. Vegetarian burgers were later test marketed at 38 Burger Kings in the Rochester, New York, area, but the test was stopped after two months, according to Kessler. In May, 1994, a Berkeley franchisee asked Burger King if she could add it to her menu. Her request was refused, even though the Berkeley City Council wrote a letter to Burger King's CEO in support of the vegetarian burger option. Kessler presently owns 18 Burger Kings, but only his Mount Hope restaurant near Rochester, New York, sells a vegetarian burger. Kessler says it's extremely successful, selling about 500 per week for $1.59 each (a Burger King "Whopper" sells for only $0.99).

One reason for the steady growth of interest in vegetarian burgers may be the growing number of vegetarians. Today there are more than 12 million vegetarians in the USA, and the number has been growing by 26% a year. Address: Louisville Courier-Journal, Kentucky.

3140. Ono, Yumiko. 1994. Catering to part-time vegetarians' tastes. *Wall Street Journal*. Aug. 24. p. B1, col. 3; p. B2, col. 5.

• ***Summary:*** "There are only about 12 million self-professed vegetarians in America who shun all meat, but companies believe the vegetarian pitch appeals to any nutritious-conscious consumer..." More than 75% of Americans eat meatless meals twice a week, according to a survey by HealthFocus, Inc., a market research firm in Des Mines, Iowa. *Vegetarian Times*, a monthly magazine, says its circulation has doubled in two years to 340,000 in 1993, in part because part-time vegetarians started buying it. And 14 out of 67 varieties of Lean Cuisine dinners are now meatless. In April Linda McCartney, wife of rock star Paul McCartney, introduced to the USA a line of frozen dinners called Linda McCartney's Home Style Cooking Meatless Entrees. Fairmont Foods of Minnesota makes the products. Worthington Foods, of Worthington, Ohio, makes a wide variety of meatless products. And Pillsbury markets Green Giant Harvest Burgers, made by ADM. Address: Staff reporter.

3141. Tomomatsu, Hideo. 1994. Health effects of oligosaccharides: Ingestion of oligosaccharides increases the bifidobacteria population in the colon, which in turn contributes to human health in many ways. *Food Technology* 48(10):61-65. Oct. [90 ref]

• ***Summary:*** Contents: Introduction. Consequence of toxic fermentation products: Variety and amount of toxic compounds, enzymes participating in toxic compound formation, possible causes of carcinogenesis, possible causes of aging and adult diseases. Benefits of oligosaccharide ingestion: Proliferation of bifidobacteria and reduction of detrimental bacteria, reduction of toxic metabolites and detrimental enzymes, prevention of pathogenic and autogenous diarrhea, prevention of constipation, protection

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of liver function, reduction of serum cholesterol, reduction of blood pressure, anticancer effect, production of nutrients. Dosages and side effects. Oligosaccharides vs. dietary fiber. Natural Occurrence.

"Oligosaccharides are one of the most popular functional food components in Japan, but they are relatively unknown in the United States. The Japanese produced 40 million lb ($46 million) of nine different types of oligosaccharides in 1990. The number of consumer products containing oligosaccharides reached 450 in 1991 and included soft drinks, cookies, cereals, and candies."

Oligosaccharides are "preferentially consumed by beneficial intestinal bacteria, bifidobacteria, in the colon." Bifidobacteria suppress the activity of putrefactive bacteria and thereby reduce the formation of toxic fermentation products.

Various natural foods are known to contain oligosaccharides. Soybean oligosaccharides [galactooligosaccharides or GOS] are different from fructooligosaccharides [FOS], which are found in many vegetables (such as onion, garlic, burdock, asparagus, etc.).

Note 1. Although bifidobacteria suppress many bad bacteria in the colon / digestive tract, no experimental evidence was given from animal trials that their consumption prolongs the life or improves the health of animals.

Note 2. The early (and later often ridiculed) theories about Elie Metchnikoff and Dr. John Harvey Kellogg concerning bacterial putrefaction in the colon and digestive system may be vindicated by this interesting article and review of the literature. For examples of ridicule see *Nuts Among the Berries*, by Ronald Deutsch. Address: Quaker Fellow, The Quaker Oats Co., John Stuart Research Lab., 617 W. Main St., Barrington, Illinois 60010.

3142. **Product Name:** Morningstar Farms Better 'n Burgers.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1994 October.
Ingredients: Water, textured soy protein concentrate, contains 2% or less of autolyzed yeast extract, cellulose gum, malted barley extract, corn starch, natural flavors from vegetable sources, salt, soy fiber, carrageenan, spices, soy sauce (water, soybeans, salt), garlic powder, onion powder, aspartic acid, citric acid.
Wt/Vol., Packaging, Price: 11 oz (312 gm).
How Stored: Frozen.
New Product–Documentation: Worthington Foods. 1995. Annual Report 1994. p. 1. This product was launched in Oct. 1994. "Our new Morningstar Farms Better 'n Burgers is the first fat-free burger to be introduced nationally. It has the highest turns per point of distribution and is available in 30% of U.S. supermarkets. In 1995, we expect to complete the national roll-out with an improved product in improved packaging."

Product with Label purchased at Safeway supermarket in Lafayette, California. 1995. Oct. 8 by 4 by 1¼ inches. Paperboard box. Red, yellow, blue, white and gold on green. A color photo shows a burger patty between two buns over a lettuce leaf, topped with a slice of onion and tomato. "Fat free. All vegetable & all natural."

First quarter financial report. A996. April. Worthington began production of Better'n Burgers and other hot-air oven products at the Zanesville, Ohio, facility on 1 April 1996.

3143. APV DTD. 1994. DTD 25. Aarhus, Denmark: Danish Turnkey Dairies Ltd. 55 p. 21 x 27 cm. [Eng]
• ***Summary:*** Published on DTD's 25th anniversary, this book tells the story of the company founded on 1 Nov. 1969 by Mr. Jorn B. Jensen. In May 1971 the company signed the world's first contract for a turnkey dairy plant–signaling a new era for the dairy industry.

In 1981 DTD established a new subsidiary company, STS-Soya Technology Systems Ltd., based in Singapore together with DTD's South East Asian regional office. STS developed new technologies for production of a wide range of soy-based products.

1984–STS breaks into the European market with the building of a complete soymilk plant in Germany [for DE-VAU-GE]. Address: 2, Europaplads, P.O. Box 146, DK-8100 Aarhus C, Denmark. Phone: +45 86 12 41 55.

3144. Soyfoods Association of America. 1994. Get the soy edge (Ad). *Vegetarian Times.* Nov. p. 71-74.
• ***Summary:*** This 4-page advertorial, with 17 color photos, is sponsored by the following organizations: ADM, DevanSoy Farms, Inc., Eden Foods, Inc., Lightlife Foods, Lumen Food Corp., Morinaga Nutritional Foods Inc., Soyfoods Association of America, Tofutti Brands Inc., Worthington Foods.

"Did you know you can fit soy into your diet without giving up your favorite foods? Try soy burgers, soy ice cream, soy yogurt, soy hot dogs, soy flour, soy cream cheese, soy sausage, soy chili, soy frozen juice bars, soy margarine, soy milk, soy tacos, soy sour cream, soy sloppy joes, soy 'chicken' patties..." Address: Palo Alto, California. Phone: 415-327-1444.

3145. Roberts, Rosemary. 1994. Maker welcomes call for research [into safety of soy-based infant food]. *Northern Advocate* (*Whangarei, New Zealand*). Dec. 8. p. 1.
• ***Summary:*** Douglas Pharmaceuticals produces Karicare brand soy-based infant formula; according Dr. John Birbeck, the company's private consultant, Douglas is the only New Zealand company making such a product. He believes other similar foods are being imported. Birbeck says the company welcomes more research on the oestrogen content of its soy-based product, and says it is likely the industry will fund the

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study.

Columbit New Zealand, the company which imports soy isolates to New Zealand, also backs the call for more research, and is confident research will clear its product. Columbit is a partner of the large international corporation Protein Technologies [International]; principals of that U.S.-based company said that they would respond to any requests for information about their products.

Sanitarium Foods [of New Zealand and Australia] does not produce soy-based infant formulae, but does use soy protein isolates in some of its products. The company's technology superintendent, Graham Jackson, said his company was keeping an eye on the situation.

A large photo shows Valerie and Richard James at their New Zealand aviary, with several large white birds, soy bird food, and reports on soy. A similar article appeared in the *Marlborough Express* on this same day.

3146. Twomley, Dale E. 1994. Special message to shareholders. 900 Proprietors Rd., Worthington, OH 43085. 4 panels. 22 x 9 cm.
• ***Summary:*** "Worthington Foods is experiencing rapid sales growth of meat alternative products in both the retail and the food service markets. It has become increasingly evident that, as a Company, we should focus our resources on this opportunity for growth in healthy, meatless food products and build on the position of being Number One in vegetarian foods."

In Nov. 1994 Worthington sold its refrigerated egg substitute business and processing equipment from the Zanesville Plant for $9,000,000. The plant was closed on Nov. 23. The company plans to open it within the next 12-18 months with capacity to produce up to $20,000,000 in meat alternative sales. All of the net proceeds from the sale will be used to reduce debt. The sale will also open up additional processing capacity for meat alternatives at the Zanesville plant. In the meat alternative segment, Morningstar Farms currently has over 60% market share. "Our Worthington Plant will be stretched to the maximum in 1995 to fill meat alternatives orders. We expect net income will be enhanced without the refrigerated substitute business even though the transaction will reduce revenues by approximately $8,000,000... Our refrigerated Better'n Eggs product was third in market share of this category with a 14% share. "Worthington Foods will remain a player in the frozen egg substitute category where Morningstar Farms has a 29% market share and we consider the company to be a low-cost producer. Frozen egg substitute sales of Scramblers and frozen Better'n Eggs will continue under the Morningstar Farms brand nationally where we intend to remain competitive and profitable." The company's newest product is fat-free Better'n Burgers.

"Meat alternatives is one of the fastest growing categories of frozen foods through supermarkets in the US and we intend to become even more recognized as Number One in meat alternatives." Address: President and CEO, Worthington Foods, Inc., Worthington, Ohio. Phone: (614) 885-9511.

3147. **Product Name:** Vegetable Bratwurst (Vegetarian).
Manufacturer's Name: GranoVita UK Ltd.
Manufacturer's Address: Ambron House, Eastfield Road, Wellingborough, Northants NN8 1QX, England, UK. Phone: +44 933 27240.
Date of Introduction: 1994.
Wt/Vol., Packaging, Price: 200 gm pack. Retails for about £1.69 (England, 11/94)
New Product–Documentation: Spot in Soyafoods (ASA, Europe). 1994. Autumn. p. 5. "Vegetarian Bratwursts launched by granoVita."

3148. Butler, Mary; Thornton, Frances; Stolts, Garth "Duff." 1994. The Battle Creek idea: Dr. John Harvey Kellogg and the Battle Creek Sanitarium. Battle Creek, Michigan: Heritage Publications. 104 p. Illust. Photographic index. 22 cm. [6 ref]
• ***Summary:*** This excellent book consists of a 14-page introduction followed by page after page of rare, full-page photos (some in color), each with a substantial caption. Address: Historical Society of Battle Creek, Michigan.

3149. Hammons, Raymond O. 1994. The origin and history of the groundnut. In: J. Smartt, ed. 1994. The Groundnut Crop: A Scientific Basis for Improvement. London: Chapman & Hall. xviii + 734 p. See p. 24-42. [59 ref]
• ***Summary:*** This is an outstanding chapter, the best seen to date (May 1996) on the subject. Contents: Introduction. Prehistoric groundnut agriculture (Peru, Mexico). Post-Columbian historical narratives: Sixteenth century natural histories, selected seventeenth century narratives. Indian vernacular names. Origin of the groundnut: Geographical origin of genus *Arachis*, origin of *Arachis hypogaea.* Dispersal. Ethnography. Early industrial developments: Introduction, beginning of the groundnut oil industry, peanut butter, subsequent development.

In 1894 Dr. John Harvey Kellogg, M.D., of Michigan, developed America's first peanut butter as a nutritious, easily digested food for his patients. Kellogg, who observed a strictly vegetarian diet, obtained the first two [sic three] patents for making peanut butter. To promote his health food ideas, Kellogg elected not to reinforce his patent rights and several brands of peanut butter were on the market by 1899.

In 1896 a former employee of the Sanitarium, Joseph Lambert, began to manufacture and market three machines–a roaster, a blancher and a hand nut-grinding mill–for making peanut butter. Address: Hammons Consultancy, 1203 Lake Drive, Tifton, Georgia 31794-3834. Phone: 912-382-3157.

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3150. McCay, Jeanette B. 1994. Clive McCay: nutrition pioneer. Biographical memoirs by his wife. Charlotte Harbor, Florida: Tabby House. xxv + 505 p. Illust. 27 cm. [50+ ref]
• ***Summary:*** This is probably the best and most complete biography of Clive McCay, PhD, ever written. And it is written by an excellent, very perceptive and very sympathetic writer–his wife.

Contents: Dedication. Introduction. Foreword. Prologue: The story of Cornell Formula Bread [which includes defatted soy flour]. 1. Clive McCay's growing-up years. 2. My early years. 3. Music and Clive. 4. Our summer 1923, Berkeley and New York. 5. Growing pains. 6. My job starts. 7. Letters from Jeanette. 8. My last year in the Great West, 1926. 9, Old *Salvelinus fontinalis.* 10. 1927, and peace for both.

11. My flapper wedding. 12. The challenge of "wedded bliss." 13. To Timagami with J.B.S. 14. The story of the cabin and the trees. 15. How we bought our woods–and a house that came too. 16. From the diary of our sabbatical year–1935. 17. On the Continent [Europe]. 18. And then there was a farm. 19. Clive gets acquainted with pets that were different. 20. Life in the laboratory. 21. How to lose money–even your head!

22. How Clive's studies on fish began–and how they grew. 23. To the dogs! 24. World War II–The beginning. 25. Clive's naval career begins. 26. Washington [DC] and Ithaca [New York]. 27. Clive's Washington associates. 28. Nutrition in the navy. 29. Jeanette's war. 30. Our children–Tommy, the fresh air children and Kenny Button. 31. Switzerland. 32. Religion and Ellen G. White. 33. Senior citizens in a changing climate of opinion. 34. The end of our bittersweet years.

Appendixes: A. *Aequanimitas.* B. Dr. Maynard. Cornell and farm animals. C. Clive M. McCay as nutrition historian, teacher and bibliophile. D. Finding a way into nutrition literature. E. *Schewizer Vereinigung Fuer Ernaehrungsforschung* [May 1953]. F. Human "Lines of thought."

Soybeans and/or soy flour is discussed on pages xx-xv, 331-33, 340-41. Address: 39 Lakeview Dr., Englewood, Florida 33533.

3151. Oser, Marie. 1994. Luscious low-fat desserts. Montrose, Pennsylvania: Chariot Publishing, Inc. 124 p. Foreword by Scott W. Sanders, PhD. 21 cm. [18 ref]
• ***Summary:*** The many recipes in this vegan cookbook are low in fat (only 3 grams of fat per recipe), use no dairy products or eggs, and contain no cholesterol. Twenty-five attractive full-page color photos show the prepared recipes. The glossary of ingredients contains entries for the following soy ingredients:

"Lite silken tofu–a reduced-fat form of silken tofu. It is sold in aseptic packages in large supermarkets and natural food stores. Lite silken tofu has 75% less fat than regular silken tofu and does not sacrifice flavor or texture."

"Silken Tofu–a smooth-textured, custard-like tofu that is sold in aseptic packages and is available in most supermarkets and natural food stores. Like regular tofu it is made from soybeans. Silken tofu is an effective egg substitute when used in ¼ cup tofu to one egg proportions. It is also available in soft, firm and extra firm consistencies. I prefer the extra firm consistency."

"Soy buttermilk–a good substitute for dairy buttermilk in baked goods. It is made by adding 2 tablespoons of lemon juice to 1 cup of soy milk."

"Soy milk lite–a reduced fat soy milk that is 1% fat. It is available in large supermarkets and natural food stores." Soy milk lite was first introduced in the USA in March 1990 as WestSoy Lite. Also in 1990 it was introduced in Australia as Sanitarium So Good Lite.

The glossary also defines "Rice milk" as "a delicious non-dairy beverage with a mildly sweet flavor that can be used in place of dairy milk and soy milk. The Rice Dream (R) brand is available in both original (plain) or vanilla flavors and contains 1% fat and no cholesterol."

It also defines the following sweeteners: Barley malt syrup, brown rice syrup, date sugar, FruitSource (made from grapes and grains), maple syrup, Mystic Lake fruit sweetener, natural applesauce, and Sucanat (granulated organic sugar cane juice).

At the listing for "Tofu" in the index, we are asked to "see lite silken tofu,"–which is used in 33 dessert recipes–including the following (listed alphabetically): Almond streusel cake. Apricot almond custard Austrian apple torte. Banana cream pie. Blueberry custard pie. Chocolate dream pie. Chocolate truffles. Classic pumpkin pie. Lemon yellow icing. Peaches 'n cream parfait. Raspberry banana mousse. Strawberry Nice Cream (creamy frozen dessert like ice cream).

In the introduction to the chapter on cakes, the author says: "One way I achieve a rich cake without eggs or dairy is to use lite silken tofu. Its creamy, custard-like consistency is perfect for replacing the eggs and milk found in traditional cakes. And its low-fat profile will keep you coming back for seconds.

A small color photo on the rear cover shows Marie Oser, who has been a vegetarian since 1971. She left a career in TV advertising to pursue her interest in food and nutrition.

Note: The words "low-fat" are hyphenated on the cover but not on the title page. Address: Agoura Hills, California 91391. Phone: 818-707-7353.

3152. Pennington, Jean A.T.; Church, Helen Nichols. eds. 1994. Bowes and Church's food values of portions commonly used. 16th ed. Philadelphia, Pennsylvania: J.B. Lippincott Co. 257 p. 1st ed. was 1937. 2nd ed. was 1939. 10th ed. was 1966. [62 ref]
• ***Summary:*** Soy is mentioned on pages 62 (shortenings), 63 (soybean oil, regular and hydrogenated), 83 (soy muffin,

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with soy flour replacing 25% of the white wheat flour), 84 (soy pancake, with soy flour replacing 25% of the white wheat flour), 73 (soybean flour, regular and defatted; whole wheat and soy flour), 114 (meat analogues made by Loma Linda and Worthington Foods), 116 (soybean milk, liquid, concentrate and powder), 119 (soy bean nuts [soynuts]), 126 (soy sauce), 142 (soybean mayonnaise, regular and imitation; spread and stick of soybean and palm), 158 (soybean sprouts; soybeans immature [edamame]), 163 (soybean protein). Address: 1. Formerly Instructor of Nutrition, City College of San Francisco, San Francisco, California [Now with U.S. Food and Drug Administration, Washington, DC]. Phone: 202-245-1064.

3153. Burros, Marian. 1995. When tofu meets bun: Eating well. *New York Times.* Jan. 4. p. C1, C6. Living section.
• ***Summary:*** This feature story about the fast-growing popularity of veggie burgers notes that "This quintessential hippie food [the tofu burger] may be on its way to becoming the food of the masses."

In a large table, 34 brands and varieties of veggie burgers are rated; the author's personal taste test resulted in 13 different burgers being rated from acceptable to very good. Among her favorites: Boca Burger, Green Giant Harvest Burger, and Morningstar Farms Meatless Patties [made by Worthington Foods].

3154. Berry, Rynn. 1995. Famous vegetarians & their favorite recipes: Lives & lore from Buddha to Beatles. Revised 2nd ed. New York, NY: Pythagorean Publishers. xx + 239 p. Illust. by Glory Brightfield. No index. 23 cm.
• ***Summary:*** This revised edition, self-published by the author, contains three new chapters: Immortals: Mahavira (Historical founder of the world's oldest vegetarian religion–the Jains of India), and Plato and Socrates (Pythagorean philosophers who were the founders of the Western philosophical tradition). Visionaries: Swami Prabhupada (Founder of the Krishna movement and the first Asian religion to be established in the West since the days of the Roman Empire). The book no longer contains an introduction. Address: 159 Eastern Parkway (2H), Brooklyn, New York 11238. Phone: 718-622-8002.

3155. Berry, Rynn. 1995. The vegetarian cinophile: The Road to Wellville. *Satya.* Jan. p. 8-9. [5 ref]
• ***Summary:*** This new column looks at movies from a vegetarian perspective. *The Road to Wellville* (1994), written and directed by Alan Parker, is based on a satirical novel of the same title by T. Coraghessan Boyle. Anthony Hopkins plays the leading character, Dr. John Harvey Kellogg of Battle Creek Michigan. Genre: Comedy. This review is highly critical of the movie, "with its relentless emphasis on the human bowel and its noxious effluvia... A better title for this film might have been 'The Road to Dungville. But *Battle Creek Register*, the hometown paper of Kellogg's Battle Creek Sanitarium, thought of an even apter title when it headlined its review as 'The Enema of the People.'"

The movie uses Dr. Kellogg's many important inventions (flaked breakfast cereals, peanut butter, meat alternatives, the electric blanket) to make him look like a mad scientist. In fact, there is little about that is factual; it is a farce. According to the Battle Creek Historical Society, Boyle "breezed into Battle Creek a few years ago to do some superficial research on his biographical novel. He didn't get any library dust on his tweeds because most of the 'facts' about Kellogg's life bubbled up from Boyle's overheated imagination." One source Boyle credits is "Nuts Among the Berries," by Ronald Deutsch, with its equally irreverent tone.

Clearly Boyle "held Kellogg, his Seventh-day Adventism, and his cranky food products in such contempt that he felt it was permissible to invent whole swaths of his life history." For example, the movie shows an ongoing conflict between Dr. Kellogg and his wayward adopted son, George. But this is completely untrue; Kellogg never had a wayward foster son. Although Dr. Kellogg and his wife raised and educated 42 adopted children, all "were disgustingly well behaved and grew up to be solid citizens."

The review concludes: "For stirring up interest in the life and work of Dr. John Harvey Kellogg, Boyle and Parker deserve credit; but for assassinating his character with made-up facts, and for putting vegetarianism and compassion for animals in such bad odor, they both richly deserve the epithet that the *Battle Creek Register* hurled at them. They are both indeed, 'The Enema of the People.'" Address: 159 Eastern Parkway (#2H), Brooklyn, New York 11238. Phone: 718-622-8002.

3156. Ingram, Leah. 1995. Soy wonder. *Entrepreneur.* Jan. p. 291.
• ***Summary:*** Steve Demos, founder of White Wave Inc. in Boulder, Colorado, graduated from college in 1971, then spent 4 years in India. During that time, because meat was hard to come by, he became a de facto vegetarian. Upon returning to the USA in 1975, he realized that there were few vegetarian protein sources on the market, despite the fact that many young people were now making the decision to become vegetarians. Following a recipe in *Ten Talents,* a Seventh-day Adventist cookbook by Frank and Rosalie Hurd, Demos started making and selling tofu. His first customers were members of his tai chi class. By 1977 he realized he could turn tofu into a business, so with loans from a friend and his mother-in-law, White Wave was born.

At first, Demos sold his tofu to Boulder health food stores. Then he convinced a buyer at King Supers grocery store to test his tofu for 30 days. Every day Demos had his employees go into the store and buy tofu. At the end of this "test" period, the tofu was selling so well that King Supers increased distribution to 82 stores.

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Today White Wave products are available at more than 1,000 stores nationwide and brought in revenues of about $8 million in 1994. A photo shows Steve Demos holding a package of White Wave tofu, and standing next to a large White Wave Soyfoods logo.

3157. Worthington Foods, Inc. 1995. Amazing but true: Natural Touch Vegan Burger. People's choice. Fat free (Ad). *Vegetarian Times.* Jan. p. 5.
• ***Summary:*** See next page. This full-page, color ad, with a 50 cent coupon, features the new Natural Touch Vegan Burger. A half page photo shows a burger between buns on a plate with all the trimmings. Address: Worthington, Ohio 43085.

3158. **Product Name:** Natural Touch Vegan Burger (Fat Free).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085.
Date of Introduction: 1995 January.
New Product–Documentation: Ad (full-page, color) in Vegetarian Times. 1995. Jan. p. 5. "Amazing but true. Natural Touch Vegan Burger. People's choice. Includes a 50 cent coupon, features the new Natural Touch Vegan Burger. A half page photo shows a burger between buns on a plate with all the trimmings.

Spot in Vegetarian Times. 1995. March. p. 12. "It's Burgertime." This new product contains less than half the calories of a regular hamburger, no cholesterol, no fat, and no animal products.

3159. Lindsay, Allan G. 1995. Re: Information on Mr. F.G. Roberts of Australia. Letter (fax) to William Shurtleff at Soyfoods Center, March 6–in reply to inquiry. 1 p.
• ***Summary:*** Unfortunately this Seventh-day Adventist research center, the oldest and largest in Australia, has no information on Mr. F.G. Roberts. However Mr. Roberts has a grandson, Grahme V. Newitt (a practicing chiropractor), who lives at 443 Station Road, Box Hill, Victoria 3128, Australia. Phone: 03-890-1077. Melbourne. Dr. Lindsay phoned him and he provided no other information except to say that the head of Soy Products of Australia Pty. Ltd. (69 Power Road, Bayswater, Victoria 3153) had recently read to him a dossier on Mr. F.G. Roberts to ensure its accuracy. Mr. Newitt did not have a copy of it but he thought it could be obtained from the Soy Products company. Address: PhD, Director, Ellen G. White SDA Research Centre, Avondale College, P.O. Box 19, Cooranbong, NSW 2265 Australia. Phone: (049) 77-1107.

3160. Little, Janice. 1995. Records at Loma Linda University related to F.G. Roberts, soy pioneer from Australia (Interview). *SoyaScan Notes.* March 9 and 24. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Janice looked for an obituary for F.G. Roberts on every page of the 1977 and 1978 issues of the *Australasian Record,* which is the Seventh-day Adventist newspaper for the Australasian division. She found none. Then she looked at all of the obituaries owned by this library; again she found no obituary. Address: Del E. Webb Memorial Library, Loma Linda Univ., Loma Linda, California 92350. Phone: 909-824-4942.

3161. Maher, Timothy J. 1995. Veggie burgers bite: When they're good, they're great, but so far most frozen veggie burgers are el disgusto. *Record* (*York, Pennsylvania*). March 15.
• ***Summary:*** In the author's opinion, the Original Gardenburger (made by Wholesome and Hearty Foods) is the best of the bunch–because it makes less of an effort to simulate meat than the other patties sampled.

3162. Little, Janice. 1995. Information on Mr. F.G. Roberts of Australia (Interview). *SoyaScan Notes.* March 16. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Janice has been unable to find any information on Mr. F.G. Roberts of Australia, either in the Del E. Webb Library at Loma Linda University, or in any of the North American or Australian obituaries of SDA church members. She checked every single issue. She also talked with the reference librarian of the Heritage Collection at Andrews University (Berrien Springs, Michigan) and searched the OCLC database–again with no results. If anyone had information on him, it should be the Australian branch office or library at the college in Australia. If she gets information on R.G. Roberts, she will catalog it and file it in a "Bio file" under his name.

If Mr. Roberts was a registered member of the Seventh-day Adventist Church, and if he died a Seventh-day Adventist, his death would probably have been reported (by the church of which he was a member) to one of the Union papers. Then her library would have a record of the man. If he was prominent in health food production or as a naturopathic doctor, it would be all the more likely that his death would be reported and recorded in the SDA obituaries.

He could have gone to and graduated from an SDA college and not been an Adventist. That happens all the time. Moreover many non-SDAs believe in and even teach SDA health principles. Address: Reference Librarian, Heritage Room, Del E. Webb Memorial Library, Loma Linda Univ., Loma Linda, California 92350. Phone: 909-824-4942.

3163. Devine, Lester. 1995. Re: F.G. Roberts and his early education. Letter (fax) to William Shurtleff at Soyfoods Center, March 21–in reply to inquiry. 2 p.
• ***Summary:*** Hobart Seventh-day Adventist College was, at the time of F.G. Roberts' childhood, an elementary school.

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The word "College" is used differently in Australia than it is in America. It is operating today in Hobart as a Junior Academy, named Hilliard Christian School, P.O. Box 162, West Moonah, Tasmania 7009. Phone: (002) 72 1711. It is still owned and operated by the SDA Church. The principal is Mark Hansen.

The early records of this school no longer exist. Unfortunately Hobart suffered a major catastrophe about 15 years ago–the Collinsville fire, which destroyed a significant part of outer Hobart, and all of the school's records. The resent administration of the school has been trying to find out something of its early history and believes the school was established around 1901 but no one seems to know the name it operated under at that time.

Les has talked with several people who remember F.G. Roberts, but none know the maiden name of his wife, Alice Maud.

"Probably the best source for you to contact for further information about the life and work of F.G. Roberts is Mrs. Bonnie Roberts. A widow, her late husband V. Noel Roberts, was a nephew of F.G. Roberts. Bonnie indicated this morning that she would like to help you with your research–she believes it is important that this sort of thing be done. Mrs. Roberts indicated she has lost contact with that side of the family but knows where to locate them in Melbourne and will assist in whatever way she can in getting the information you need or directing you to that end." Contact: Bonnie Roberts, P.O. Box 260, Sandy Bay, Tasmania, Australia. Phone: (002) 48-5072. Address: EdD, Regional Director for Education, Dep. of Education, South Pacific Div., Seventh-day Adventist Church, 148 Fox Valley Road, Waroonga, NSW 2265, Australia. Phone: (02) 489-1271.

3164. Fischer, Bruno. 1995. Brief history of Bruno Fischer GmbH (Interview). *SoyaScan Notes.* March 22. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** For several generations, back to his great-great grandfather, his family has been butchers. They owned and ran a meat company named Bruno Fischer Natural Foods. His father started a butcher shop in 1960, but in 1968 his father developed cancer. His father changed his lifestyle, learned about the Bible, and they became Seventh-day Adventists. First they stopped selling pork, and they moved their company toward vegetarianism. Then the company split into two parts, one vegetarian and one the traditional meat products.

In 1976 they introduced their first vegetarian products, which were spreads for breads based on grains, beans, etc. The company's first product containing soy was introduced in 1978; named WieLeberwurst ("Like Liver-Sausage") it was a rather "unspectacular product" made from a mixture of grains and beans, and containing less than 30% of cooked, ground soybeans. In the summer and fall of 1979 Bruno visited Worthington Foods in Ohio. Near the end of the same trip, on 7-8 Oct. 1979 he visited Shurtleff and Aoyagi at Soyfoods Center in Lafayette, California.

Starting in 1976, the company made meat products in the morning, then cleaned up the factory and made vegetarian products in the afternoon. All this took place at their one plant in Cologne. In about 1985 they stopped this system. Interestingly, the vegetarian business had grown so fast that the company could not keep up with the demand. So they rented an old bakery in Cologne and in it they started more automated production of their vegetarian products. In 1987-88 the company opened a new plant in Aetorf for making vegetarian products, but they kept their meat plant in Cologne. They are now in the process of selling off the meat company to their former employees. Formerly they sold off the part of the business which sold meat products by mail order to the people who ran it.

He still has a desire to eat meat, and he prefers not to eat the products made by Worthington Foods and DE-VAU-GE because they do not comply with his idea of healthy, whole foods. His dream is to make whole/wholistic (*Vollwert*) meat alternatives. He feels it is hard to make these products without using wheat gluten, but he would prefer not to use gluten because of problems with allergies. Address: Im Auel 88, 53783 Aetorf, Germany. Phone: 49-2243-4021.

3165. Blankenship, J.; Crane, M.; Mullen, T.; Gregory, R.; Lukens, R.; Sample, C.; Cruise, R. 1995. Serum lipoprotein(a) increased by powdered soymilk in subjects on a total vegetarian diet (Abstract). *J. of Nutrition* 125(3S):802S-803S. March. Supplement. First International Symposium on the Role of Soy in Preventing and Treating Chronic Disease.

• ***Summary:*** Serum lipoprotein(a) (Lpa) was measured in 4 groups of adults. A low level of Lpa is desirable for adults with cardiovascular ailments. Group 1 ate a total vegetarian diet with no powdered soymilk. Group 3 at the same diet but with 1-2 cups/day of commercial powdered soymilk. Group 1 had the lowest Lpa of the 4 groups. The authors conclude that exclusion of powdered soymilk and other free fats significantly lowers Lpa. Address: 1&7. School of Public Health, Loma Linda Univ., Loma Linda, California 92350; 2-6. Dep. of Medicine, Weimar Inst., P.O. Box 486, Weimar, California 95736.

3166. Smith, Paul. 1995. The life and work of F.G. Roberts, naturopath, and Australia's first soyfoods pioneer. Part I. The early years, 1892-1926. Bayswater, Victoria, Australia. 6 p. March. Unpublished manuscript. Handwritten. Updated by several interviews with and letters to William Shurtleff in March 1995.

• ***Summary:*** Paul Smith is Director and General Manager of Soy Products of Australia Pty. Ltd. (69 Power Road, Bayswater, VIC 3153, Australia). This company was taken over in Aug. 1936 by an Australian naturopath named F.G.

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Roberts (lived 1892-1977), at which time the name was changed to F.G. Roberts Health Food Products.

Prior to that it had been known as Willson Health Foods, Naturopath, Dentist & Manufacturer (1932 to Dec. 1935), then Drummond's Health Products (Jan. to July 1936). It appears that Roberts' son, Horace, may have joined Willson in 1932, and that Willson manufactured products for Roberts as well as for himself. In the July 1930 issue of *Nature's Path to Health* (NPH) (Melbourne), Mr. W.H.J. Willson was Melbourne Branch president of the Natural Health Societies and Mr. David Evans was secretary of the Ballarat Branch. F.G. Roberts was the founder and national president. In the Dec. 1930 issue there are advertisements for Drummond's Health Products.

In the Aug/Sept. issue of NPH we find the first "Directory of Health Aids," a consolidation of previously scattered advertisements. In it appears an advertisement for: "Mr. W.H.J. Willson (Melbourne, President of Natural Health Society), 40 Chapel St., East St. Kilda. A nature cure dentist." From Jan/Feb. 1936 to 15 July 1936 in NPH we find: "Drummond Health Food Products, 40a Chapel Street, East St. Kilda." Apparently Mr. Willson was "consulted" by the Dentistry Board about his activities as "Dentist, Naturopath, Food Manufacturer" and forced to choose. It appears he chose dentistry, and sold the factory at the rear of his house, which became 40a Chapel Street. Paul Smith states (28 March 1995): "It appears that Wilson and Drummond manufactured Roberts' products prior to 1936... It appears that Willson began manufacturing products in 1932.

Roberts made the 11 earliest soyfood products sold in Australia. Ron Smith, Paul's father, was a pioneer in commercial soybean production in Australia, starting in the early 1950s.

Frederick Roberts was born on 11 Nov. 1892 in Hobart, Tasmania, the son of William Thomas Roberts and Ellen Bloomfield, both Seventh-day Adventists. He was one of eight children, including Arthur, George, Whit, William Edgar ("Bill"), and Kate. Their order of birth and the names of the other two are unknown. His parents came from Wales. In later life he was best known as F.G. Roberts. The "G.," which initially came from the first name of his wife Gladys, was later changed to "George" to add a little distinction to plain Fred Roberts. He attended primary school at the Hobart Seventh-day Adventist College.

While still in his teens [sic, age 22], Fred Roberts married Gladys Maude Griffiths in 1914 in Hobart, Tasmania. Born on 13 July 1895 in Hobart, Tasmania, she was the daughter of Edley James Griffiths and Susan Jane Mason. No additional details are given in the register of marriages. On the birth record, her middle name is spelled "Maud," but on the marriage record "Maude." Born an Anglican, Gladys became a devout Seventh-day Adventist, in part at least on her husband's behalf. They soon had three children: Fred, Jr. (born 14 Sept. 1911 in Hobart), Horace Eric (born 30 Sept. 1914 in North Lyell; died 1943), and Gladys Ellen (born 25 Feb. 1916 in North Hobart). The children, all born in Tasmania, probably in Hobart, were raised in the Seventh-day Adventist faith. Gladys, the daughter and youngest child, was later married three times, to Messrs. Newitt, Grimes, and Hawken.

In 1912 Fred Roberts began his studies in health and natural therapies as a result of the death of his father, William Thomas Roberts, from a hernia operation. Qualifying as an electrician by trade, he worked in Hobart and Mt. Lyell prior to the outbreak of World War I in 1914. He volunteered for an Engineer Reinforcement Corps but was excused from active service on compassionate grounds since he had married young and already had a young family. Moreover, his wife, Gladys, was strongly opposed to him undertaking military service.

In 1918, he left for England, where he studied at the British College of Naturopathy, learning the natural healing methods used in chiropractic, osteopathy, herbalism, dietetics, homeopathy, and hydrotherapy. During this time, his wife stayed behind in Tasmania with their children.

Returning to Hobart late in 1920, he moved his family to Burnie, Gladys' home town, on the northern coast of Tasmania. There he continued his work as an electrician. In 1923 he established his first clinic in Tasmania, where he engaged in chiropractic and osteopathic work. He often took people into his home for hydrotherapy treatment. Meanwhile he and his wife continued to read and study everything they could get their hands on from England and elsewhere related to naturopathy; this enabled them to steadily expand the areas of their clinical work.

While in the U.K., F.G. Roberts had also worked with ultraviolet and infrared lamps, and he was responsible for introducing them into Australia and using them in the treatment of asthma and certain skin disorders. Next the Roberts family moved to Launceston (in the northeast corner of Tasmania on the Tamar River); there they opened their first rest home or "Health Academy" and added dietary advice and herbal treatments to their range of health services. F.G. Roberts, who was born into a SDA family, was first baptised into the Seventh-day Adventist church in Launceston by Pastor Letts. About 2 years later the Roberts family returned to Hobart, establishing another rest home in Kingston and treatment rooms in Central Hobart, where he began practicing iridiagnosis [iridology, the study of the iris of the eye for indications of bodily health and disease; the term was first used in about 1923], and prescribing diets and herbal remedies, etc. Iridiagnosis became a lifelong study, constantly honed.

He became very skilled at using herbs therapeutically, and at diagnosing people, especially by examining the iris of their eyes. He was very interested in the work of Dr. Harry W. Miller (even though there is no record that the

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two men met) in China during the 1920s and early 1930s. He was also very interested in children who suffered from eczema, colic (abdominal pain), and mucus problems from milk. Continued. Address: Director/General Manager, Soy Products of Australia Pty. Ltd., 69 Power Road, Bayswater, VIC 3153, Australia. Phone: (03) 729-1738 or 729-3611.

3167. Smith, Paul. 1995. The life and work of F.G. Roberts, naturopath, and Australia's first soyfoods pioneer. Part II. Early years in Australia, 1927-1932. Bayswater, Victoria, Australia. 6 p. March. Unpublished manuscript. Handwritten. Updated by several interviews with and letters to William Shurtleff in March 1995.

• ***Summary:*** Continued: In early 1927, after his clinic in Hobart was well established, F.G. Roberts traveled to Melbourne (in Victoria, southern Australia), where he became licensed in 1929 and established his first mainland clinic at Latrobe Street and commenced his well-known lectures. Initially his wife kept the clinic and rest home going in Hobart, then she and the children joined him in Melbourne in late 1927, when the family took up residence in Mordialloc, later moving their house and clinic to 232 St. Kilda Road.

In Nov. 1928 F.G. Roberts and his wife, Gladys, from their headquarters in Melbourne, began publishing a magazine titled *Nature's Path to Health* (NPH). The first issue was volume 5, number 5–raising many questions about previous volumes and issues. They continued publishing NPH until 1951-52. Gladys was a major contributor, serving as editor, publisher and even writer of articles when her husband was away. In later years, Gladys was assisted by her sister, Muriel Ackerman. The magazine became Roberts' main vehicle for announcing his lecture and travel plans, advertising his products, and disseminating his ideas about health, naturopathy, and diet.

In 1929 Roberts established the Australian College of Naturopathy and began offering lectures and study courses, including some in chiropractic; he used his home as the organization's first headquarters. Soon more space was required, so the Roberts family moved to 428-430 St. Kilda Road, where they also established yet another rest home.

During 1930, 1931, and 1932 frequent advertisements appear in *Nature's Path to Health* (Melbourne) for F.G. Roberts interstate lecture circuit, giving dates and venues. He established centers in Sydney and Newcastle (New South Wales), Brisbane, Ipswich, Toowoomba (Darling Downs), Maryborough, Bundaberg, and Rockhampton (Queensland). After traveling this northern circuit by train, he would return to Melbourne for several weeks to rest and attend to his duties there, prior to traveling by car to Ballarat and Geelong (both in southern Victoria), where he had also established centers. Then he was away by train to Adelaide (South Australia), and Fremantle (near Perth, Western Australia). He loved to travel, and in all these places he lectured and treated people. He also participated in radio (wireless) interviews and programs. As his students became qualified, he opened clinics and shops to give the public the goods and services he felt they needed. During this time he closed the St. Kilda Road Clinic and opened a new clinic at Post Office Place.

At about this time, F.G. Roberts may well have traveled to the United States. Esmae N. Jackson (born in 1937), the Roberts' granddaughter, recalls vividly that he told her about several visits (at least two) there during her years in primary and secondary school; she does not know when his trip took place but thinks vaguely late 1930s to mid-1940s. She recalls her grandfather mentioning Loma Linda (which was named College of Medical Evangelists from 1906 to 1 July 1961, when it was renamed Loma Linda University). Paul's father, Ron Smith, has no recollection of F.G. Roberts going to the USA between 1948 and 1954. If Roberts did go, there are three good reasons for thinking he may well have visited Benedict Lust (pronounced LOOST; rhymes with "boost"), who was based in New York. First, Lust published (from July 1925 to 1960) a naturopathic magazine titled *Nature's Path* (New York City). In 1930 F.G. Roberts, assisted by his wife (Gladys), began editing and publishing a bimonthly (later monthly) magazine titled *Nature's Path to Health.* He continued to publish it until about 1952. The magazine was published in Melbourne and Gladys kept it going during her husband's travels. Some articles by Benedict Lust appeared in the Roberts' Australian periodical. And articles by other writers, first published in *Nature's Path* (USA) later appeared in the Australian magazine. By Sept. 1939 Lust appears on the magazine's masthead as "American Contributing Editor"–all indicating a spirit of cooperation and friendship.

Second, the Sept/Oct. 1937 issue of *Nature's Path to Health* (Australia) states (p. 14): "The Naturopathic School of Dr. Benedict Lust conferred on F.G. Roberts, N.D., D.O., D.C. [doctor of naturopathy, osteopathy, and chiropractic], of 430 St. Kilda Road, Melbourne, Australia, the Degree of Dr. of Natural Therapeutics." Esmae believes the honorary doctorate arrived by mail, and that F.G.R. was enormously proud of the honour.

Third, Dr. Lust was widely considered the world's leading practitioner of natural healing (naturopathy) at the time, and it seems likely that an energetic, curious, and dedicated man such as F.G. Roberts would have wanted to meet him, to talk with him about their mutual interests, and perhaps to study Lust's organization, publications, and healing methods. Note: A careful examination of Dr. Lust's magazine might mention a visit from Roberts.

During the 1930s Roberts began to import a range of packet herbs, tablets, and other herbal remedies from Potter and Clark in London.

In 1934-35 F.G. and Gladys Roberts established a restaurant named the Curative Dining and Health Service, on the 2nd floor, 300 Little Collins St., Melbourne. It was renamed Cafe Naytura (see ad in 15 Aug. 1936 NPH). (Note:

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In 1943 Sanitarium Health Food Co. {SDA} had a cafe and natural food store at 293 Little Collins St., Melbourne). During the 1950s it was located in the basement at this same address and run by the Cutting family. It continued at this address until the late 1970s, when it was purchased by Don Newsome, a pharmacist, and moved to its current Bourke Street Mall location. Don used his experience to establish the Naytura Health Food Section nationwide through the Safeway (Victoria) / Woolworths supermarket chain. The Bourke St. store is used to evaluate products for potential supermarket sale and the basement restaurant still carries on the tradition of the Roberts' 1934-35 Cafe.

In the early 1930s, F.G. Roberts became interested in Mr. Willson's food manufacturing business–probably because his son, Horace, worked there. It may have been that Roberts took over the business to keep Horace in a job. F.G.R. never had the time or any real interest in running it.

In the Aug. 15, 1936 issue of *Nature's Path to Health* we find the first advertisement for "F.G. Roberts' Health Food Products, 40a Chapel St., East St. Kilda." The same appears in the "Directory of health aids." He had acquired this health food factory which had been previously named Drummond Health Food Products. St. Kilda was a beach-side suburb of Melbourne, Victoria, Australia. A photo of this original red brick factory appeared in the May-June 1937 issue of *Nature's Path to Health* (p. 22); an original hangs on the office wall at Soy Products of Australia. The factory began to pack a variety of herbal products, and to manufacture some new foods, all to service the needs of Roberts' shops and clinics. Many herbs were grown locally in Australia to supplement the supplies imported from England. It was during the mid-1930s that many of the products still manufactured today by Soy Products of Australia Pty. Ltd. under the Roberts brand name were first formulated and developed. By the late 1930s F.G. Roberts, his teachings, and his products were known nationwide. From 1951 onward Potter & Clark's herbs were replaced by herbs mixed and packaged in Australia using some imported ingredients.

During this period the Australian College of Naturopathy (which Roberts had founded in 1929) became more closely affiliated with the British College and became known as the British and Australasian College of Naturopathy; the two colleges were run on the same standards and principles.

The Roberts' children had now grown up and were taking an active interest in the business, training for and working in key positions. The eldest son, Fred, Jr., and the daughter, Gladys, worked in the clinics. Fred, Jr. later moved to Brisbane and his son, Peter, carries on the family tradition, practicing as a chiropractor. Mr. Roberts was good at treating people and lecturing, but was less interested in managing the food factory, a role that his youngest son, Horace Roberts, fulfilled. Horace also managed the shop at the Post Office Place Clinic. Horace was instrumental in transforming his father's ideas into formulations and products. Starting in the mid-1930s, and continuing until the 1950s, F.G. Roberts developed a number of health food products, which were sold throughout Australia. They were hand-mixed and packaged at his factory, F.G. Roberts Health Food Products, in St. Kilda and from 1933 he was advertising them nationwide in his magazine *Nature's Path to Health.*

Several of these products contained soy flour. Prior to 1950 he launched and sold the following soy products, listed here is the order they were first advertised in his magazine: (1) Soy Wheat Macaroni (Aug. 1936); (2) Soy Bev (tea or coffee substitute; Nov. 1937) was made primarily from ground roasted soybeans and roasted milled chicory; Paul thinks it was first introduced in about 1935-36; (3) Soy Flakes (Dec. 1937); (4-5) Roberts' Soy Nut Roast; Soy Beans in Tomato (in glass, Oct. 1938; canned June 1940); (6) Malto-Soy Drink (tea or coffee substitute; Sept. 1939); (7) Soy Milk Compound (Sept. 1939; originally a mixture of soy flour, malt, lactose, and nonfat dry milk [skim milk]). This product is still made today in modified form under the name Soy Compound; Paul thinks it was introduced in about 1933 or 1934. It was made using defatted soy flour imported from America; (8) Soya Choc-Malt (Jan. 1940), renamed Soya-Choc in Aug. 1946; it was the Soy Milk Compound plus natural cocoa; Paul thinks it too was introduced in about 1933 or 1934; (9-10) Roberts Soy Nut Brawn, Soy Nut Cheese (May 1940); (11) Vita Elm (1948). This early and widely advertised herbal product was being advertised by May 1935 in *Nature's Path to Health* as a "vitalizer" that can give "Glorious Health." Vita-Elm, which always contained slippery elm, was based on an old English formula that went back to the 1750s; the company still makes the product today. Published ads from 1935, 1936, and 1949 said it contained "the Germ of Life of Wheat, Oats, Barley, Rye, Maize" (and slippery elm) but Paul is sure that somewhere prior to 1948 it also contained small amounts of soya flour. Esmae Jackson believes that the soy was added to Vita Elm in 1937, when Roberts first became interested in it. Continued. Address: Director/General Manager, Soy Products of Australia Pty. Ltd., 69 Power Road, Bayswater, VIC 3153, Australia. Phone: (03) 729-1738 or 729-3611.

3168. Smith, Paul. 1995. The life and work of F.G. Roberts, naturopath, and Australia's first soyfoods pioneer. F.G. Roberts Health Food Products, and Ron Smith. Part II. Mid-1930s to 1949. Bayswater, Victoria, Australia. 6 p. March. Unpublished manuscript. Handwritten. Updated by several interviews with and letters to William Shurtleff in March 1995.

• ***Summary:*** Continued: It is not clear when and how F.G. Roberts first learned about soybeans and soy flour. Paul suspects that he read about Dr. Harry W. Miller (a Seventh-day Adventist doctor) and his pioneering work with soyfoods in China, starting in the 1930s. "There is definitely some connection and I believe it is highly likely

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that F.G. Roberts met Harry W. Miller." Or the two men may have corresponded. If Roberts visited Loma Linda, California, he would surely have visited Loma Linda Foods, which made a large range of early soyfoods: In 1922 Loma Linda introduced–Smokene (a seasoning based on roasted soy flour). 1934–Soy Mince Sandwich Spread, Soymilk, VegeCheese, Soy Bean Spread, Breakfast Cup (coffee substitute), Soy Wafers, Soybeans with Proteena and Tomato Sauce. 1936–Soy Beans (plain, canned). 1938–Gluten Burger (with soy flour). 1940–Soy Beans with Tomato, Soy Beans with Proteena, etc.

During the 1930s, F.G. Roberts and others were experimenting with soybean cultivation in Australia on a small home-garden and experimental level. An article in *Nature's Path to Health* (15 July 1936, p. 35-36) gives details. Roberts concluded: "The Soya Bean has been very successfully grown in Australia." But there were no commercial crops until the 1950s.

In 1940 Horace Roberts, the youngest son, left the company when he volunteered for service with an ambulance corps being formed in Melbourne. Serving as a non-combatant male nurse during World War II, he was sent to Singapore. With Horace's departure, F.G. Roberts' food production business began to languish; the man who had managed the plant and attended to daily details was gone. Although the company's soy products were available during the war, it continued to languish until Ron Smith entered the business in 1948.

Meanwhile, during World War II, with the clinics and college all well established and running smoothly, F.G. Roberts turned some of his time and attention to a property at Panton Hills, an outer Melbourne suburb, between Eltham and Lilydale, where a home was built; he grew fresh fruit, herbs, and vegetables, and practiced composting. This provided family, friends, and pupils from the college with a place to visit and relax. It never made the expected profit.

Shortly after World War II ended, the Roberts family received devastating news. Their youngest son, Horace, had been captured in Singapore and interned by the Japanese in Changi, their prisoner of war camp there. He had died in October 1943 in Burma (working as a forced laborer on the Thailand-Burma Railway)–unbeknownst to his family until after the war had ended. So shattered was F.G. Roberts by the death of his son that he began to lose interest in the shop and the factory. The shop and clinic in the Post Office Place was closed and the family moved to Malvern Road, Prahran. The factory continued to run indifferently while F.G. Roberts put most of his time and energy into public lectures, the college, and seeing and treating patients.

Esmae recalls that for many years on a Thursday [sic Tuesday] night, often weekly, F.G. Roberts had addressed the public about "Health Matters" at the Athenaeum Art Gallery Hall at 188 Collins Street, Melbourne. Esmae personally attended many of these evenings, singing, playing the piano, and on one occasion addressing the audience with a speech of her own about diet and health.

In 1946 Ron Smith first came in contact with the F.G. Roberts at the Athenaeum. Vincent Ronald "Ron" and Mabel Smith, both originally from Western Australia, had married and settled in Melbourne after World War II. Ron was born on 10 December 1918 at Boulder (near Kalgoorlie), Western Australia. Mabel was born on 16 Dec. 1919 in Bunberry, also in Western Australia. Both in their late 20s and dogged by ill health, they first attended several of F.G. Roberts' lectures and later went to him for advice and treatment. Ron, in particular, was slightly built, had worn glasses for years, and had never enjoyed really robust good health. F.G. Roberts prescribed an exercise program and made radical alterations to the Smith family diet. Almost immediately the Smith family's health began to improve. Ron's physique developed and his eyes improved to where he was able to discard his glasses for nearly 30 years. Thus began a long and ongoing association with the Roberts family.

F.G. Roberts owned Green Island, a small island just off the coast of Queensland at Mackay, near the Great Barrier Reef; you could walk across at low tide. There he built a retreat to which he took his friends and pupils to enjoy the sea air, balmy climate, and the cleansing diet of fresh tropical fruits–pineapples, papayas, bananas, coconuts, and mangoes. Ron Smith enjoyed unforgettable visits with the Roberts at Green Island several times between 1948 and 1954.

F.G. Roberts had an enormous enthusiasm and an almost boundless capacity for work. When he got a bit tired or run down, he would switch off and head for Green Island for a few weeks of relaxation. He was good fun and good company to go away with. He would buy a case of good quality ripe oranges and, with his guests, would enjoy fresh squeezed orange juice and half a ripe pineapple (freshly sliced with a sharp machete and handed around to all present) for morning and afternoon tea. He practiced what he preached.

The Roberts presided over the prenatal and antenatal care of Mabel Smith during the birth of her two sons in 1949 and 1950 with beneficial results to both infants and mother. The Smiths became lifelong converts to Mr. Roberts' philosophy. Note: In 1995, at age 76, Ron Smith still comes to work at the company each day, and often puts in a 10-hour day as managing director of the company.

In early 1948, after several unsuccessful attempts to start his own business, Ron Smith went to work for F.G. Roberts. He worked as an employee at the factory at 40 Chapel St., St. Kilda, increasingly taking over the daily management and running of this operation–formerly the responsibility of Horace, the Roberts' son, who died in the war.

Although a great healer and publicist, F.G. Roberts was not strong in the technical aspects of food production or marketing. The factory at 40 Chapel St. was more like a cottage industry. It was small, cramped, and labor intensive;

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mechanical aids were either non-existent or very primitive. Output was small and most products were mixed and packed by hand.

Ron sparked the resumption of manufacturing, even though wartime rationing was still in place and obtaining permission to import anything was difficult. Paul recalls (28 March 1995): "Roberts, himself, was a dreamer, and far too preoccupied with travelling, treating patients, lecturing, and racing on to the next new idea. He lacked the patience, persistence, and stability to run a manufacturing business. His skills and interests lay elsewhere."

F.G. Roberts was an osteopath, naturopath, registered dietitian, iris diagnostician, and had several other natural healing qualifications. He studied by attending courses in the U.K. and by correspondence. He was first registered in Australia as a "Consultant Dietitian" in 1942-43. Continued. Address: Director/General Manager, Soy Products of Australia Pty. Ltd., 69 Power Road, Bayswater, VIC 3153, Australia. Phone: (03) 729-1738 or 729-3611.

3169. Smith, Paul. 1995. History of F.G. Roberts Health Food Products and Soy Products of Australia Pty. Ltd. The work of F.G. Roberts and Vincent R. "Ron" Smith. Part III. 1950-1959. Bayswater, Victoria, Australia. 6 p. March. Unpublished manuscript. Handwritten. Updated by several interviews with and letters to William Shurtleff in March 1995.

• ***Summary:*** Continued: In 1951-52 the company launched Australia's first full-fat heat-treated (dry-roasted) soya flour, which was named Soyvita. Prior to 1954 this flour was made from soybeans imported from China and the USA. From 1951 onwards, the company began mixing and packing its own range of herbs.

In May 1952 Ron Smith and F.G. Roberts became equal partners in the ownership of the food factory. In May 1954 Ron Smith bought the entire food processing business from Mr. Roberts, thus ending the partnership. Mr. Roberts kept some of the herbal products and tablets. In June 1954 Smith incorporated a proprietary company under the name "New Life Products Pty. Ltd." and in March 1958 changed the name to "F.G.R's Health Food Products Pty. Ltd."

Shortly after Ron Smith bought F.G. Roberts' Health Foods in 1954, he did two other important things: First, he bought a 3½-acre piece of land at 69 Power Road, Bayswater, Victoria–where the company is located. Bayswater is an outer Eastern suburb of Melbourne at the foothills of the Dandenongs between Croydon and Boronia (north-south), Montrose/Kilsyth and Wantirna (east-west). The property was a green-fields industrial site surrounded by orchards and daffodil farms, with no utilities connected. On this property he built a 100-square-meter storage shed, which was used to store the year's supply of soybeans in hundredweight (112 lb) Hessian sacks. The beans were then taken in small quantities to Hawthorn for dry roasting and milling as required. They were cleaned, bagged, and delivered by semi-trailers, and unloaded by hand.

Second, Smith moved the entire company from St. Kilda to larger premises at 146 Burwood Road, Hawthorn (an eastern, inner city suburb of Melbourne), Victoria–about 45 minutes drive from 69 Power Road. Initially the roaster and mill were at Burwood Road.

Not long after the Smiths purchased F.G. Roberts' food business, they also purchased a new home at Blackburn South on a bare, treeless piece of land. One Sunday, Roberts appeared with four Italian laborers and in a single day transformed the yard, planting zinnias, marigolds, etc. Paul still remembers vividly the riot of color the next summer. According to Ron Smith, F.G. Roberts was a great gardener, and wherever he went (as at homes in Kew and Panton Hills) he surrounded himself with a magnificent garden of herbs, annuals, vegetables and fruit trees.

After 1954, due to family and business pressures, contact between the Smith and Roberts family began to diminish. From all accounts, F.G. Roberts was a lively, congenial, and stimulating companion–a man of rare charm and brilliance. He was extremely widely read in all matters related to natural healing, and a learned man in every sense of the word. He also maintained an active correspondence with naturopathists and herbalists all over the world, even maintaining contact with German and Austrian colleagues during World War II. He avoided attracting attention to himself, and though he cured many people, he made no claims to such cures. He merely went about his chosen profession of helping and healing people. F.G. Roberts was active and healthy throughout his life, working right up until two months prior to his death in 1977 at age 84.

Ron Smith had fine mechanical and technical skills, and he began to expand and automate the factory, even though he was restricted by a shortage of money and the small market for health foods at that time–all the while faithfully preserving the spirit and intent of his mentor's work and often expanding on his legacy. He rebuilt old machines and adapted other machines to new uses. By studying other people's ideas, he was able to modify and adapt them to his own operation at a fraction of new commercial cost. He was an innovator, constantly improving the plant over the years to achieve greater efficiency and output. A stickler for regular maintenance and cleaning to keep the plant running smoothly, he required that meticulous records be kept of bearing performance, greasing routines, etc. Every Friday was devoted to a thorough cleaning of the plant and all its equipment. A keen browser of the technical literature, he built substantial files on all sorts of drying, milling, mixing, dust extraction, and metering equipment and systems.

During the 1950s Ron Smith, frequently accompanied by his two young sons, Paul and Ross, often visited Robert Hutchinson's Flour Mill at Glenroy and H.J. Heinz's new factory at Dandenong (both in Victoria), Australia. From

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these modern, state of the art plants, they gleaned valuable inspiration.

Ron Smith also carried on much valuable pioneering work, especially in the area of commercial soybean production in Australia. One of the company's major products, Soy Compound, was originally manufactured using defatted soy flour imported from the USA. This flour was often difficult to import during the 1950s, and Ron Smith began to have ongoing problems because of the flour's variable quality, flavour, texture, purity, and colour. So he asked a basic question: "Why can't we make soy flour in Australia?" Ron's research showed that there were soybeans locally available in Australia, so early in the 1950s he began to work with several farmers on experimental production of soybeans, first in the Kingaroy district of Queensland, then soon throughout New South Wales and Queensland. From 1951 to 1957, Ron purchased soybeans from Elmo W. Semgreen of Kingaroy, from Kel Maundsley from Murgon (near Kingaroy). Incidentally, Semgreen married one of F.G. Roberts nurses and became interested in soybeans through Roberts. From 1954-55 Ron also purchased soybeans from the Young family (of Chinese extraction–pioneers of commercial soybean production in Kingaroy), who grew them under contract specifically for him. Experimental plots in the Smith's backyard at Blackburn (a Melbourne suburb about half way between Hawthorn and Bayswater), in 1953, 1954, and 1955 produced healthy plants, flowers, and pods full of beans. Unfortunately temperatures and sunlight hours were not adequate at this location, so the beans did not mature and dry properly. Using Australian-grown soybeans, Ron Smith initially continued to use the small and primitive batch roasting and milling system located at the Burwood Road plant, which had been developed to process the imported beans. This improved the quality, reduced the cost, and put the raw material supply directly into the hands of the Smith family.

Early in 1954 the company first began to process Australian-grown soybeans; the first product made from them was Soyvita, a dry-roasted soy flour, similar to Japanese kinako. As soon as the company began to use locally grown soybeans, the soy processing business began to develop steadily as other local companies preferred local, timely production to the costs and difficulties associated with the imported product(s).

From the mid-1950s to the mid-1980s the company purchased most of its soybeans from the Darling Downs, an agricultural region in Queensland. The construction of huge man-made irrigation lakes and bores on the Darling Downs increased soybean yields and reliability–and the area was closer to the SPA plant. John Bligh, the Todd family, and the Behrendorf family were among the company's main suppliers for many years.

In about 1954 H.J. Langdon, a major importer, exporter, and seller of food ingredients, took an interest in buying soy flour from Soy Products of Australia. Starting in 1955 they had it private labeled under the brand name Soybake. It was extremely gratifying at the time to enjoy the support in marketing and distribution of soy flour by such a large and well established company, founded in the mid-1800s.

Brockhoff, a major Australian biscuit manufacturer established in Victoria since 1880 (acquired by and now part of Arnotts Biscuit Group of Companies, which is now owned by Campbells), started to buy soy flour and contract other products and services from F.G. Roberts. Shortly afterwards, Heinz began to use the soy flour as a thickener in many of their soups; they continue to do so to this day, exemplifying the gradual acceptance and increasing usage of soy for both technical (functional) and nutritional reasons in many varieties of popular foods. As Australian companies heard that soy flour and related products were being made in Australia, they decided to buy locally rather than import. Even Australian politicians helped; during the 1950s they were very concerned about the country's balance of trade and avoiding foreign debt, and they worked to make Australia more self sufficient.

In June 1957 Ron Smith founded Soy Products of Australia Pty. Ltd., and in Sept. 1957 had the new company formally registered and incorporated. So at that time he owned two active food companies, with headquarters at 146 Burwood Road, Hawthorn, and soybeans storage at 69 Power Road, Bayswater, both in Victoria.

During the 1950s the company continued to introduce new products. It canned soybeans, continuing F.G. and Horace Roberts' pioneering work in 1939-40, and lima beans, and bottled cider vinegar. In 1953 the company began exporting Soy Compound to New Zealand and continues to do so to this day (1995).

Demand for the dry-roasted soy flour and grits grew steadily over the years. In 1957-58, after electricity, gas and water services had been connected at Bayswater, the rather primitive roaster and then finally the mill were scaled up moved to the shed at Bayswater. The main mixing, packing, dispatch, and administration operations continued at Hawthorn. Continued. Address: Director/General Manager, Soy Products of Australia Pty. Ltd., 69 Power Road, Bayswater, VIC 3153, Australia. Phone: (03) 729-1738 or 729-3611.

3170. Smith, Paul. 1995. History of Soy Products of Australia Pty. Ltd., and the work of Vincent R. "Ron" Smith. Part IV. 1960-1979. Bayswater, Victoria, Australia. 6 p. March. Unpublished manuscript. Handwritten. Updated by several interviews with and letters to William Shurtleff in March 1995.

• ***Summary:*** Continued: By 1961 roasted whole soy flour was being produced at Bayswater 7 days a week, almost 24 hours a day. So that year an American consulting engineer, George Lloyd Levin, from Minneapolis, Minnesota, was

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hired to help design a much larger and more sophisticated, 4-story flour mill (including dehulling, steaming, drying and grinding) at 69 Power Road, Bayswater, to the rear and adjacent to the 1954 shed.

On 1 April 1963 this mill began to manufacture soy flour using a new process in which debittering has replaced dry roasting. Previously, the company was roasting and milling whole soybeans. Now they crack and dehull whole soybeans, before they steam, dry, and mill them. This new mill could produce more soy flour in one day than its predecessor could produce in a week using previous methods–and the quality and flavour were infinitely better. Eventually (in 1969-70) the bagged beans were replaced by the first bulk handling system. The plant and its processes have been continually improved in the areas of intake cleaning of the soybeans, throughput, and quality control of fineness, product purity, and microbiological standards, ever since the initial plant construction.

The 1964 *Soybean Blue Book*, in the section titled "Foreign processors" (p. 96), contained its first entry for Soy Products of Australia Pty. Ltd., at Woodmason Rd., Bayswater, Victoria. The top men were T.W. Harvey, V.R. Smith, and H.G. Eakins. Storage capacity: 20,000 bushels. Manufactures "Soyvita" full-fat soy flour. Approximate soybean operations 50% [i.e., 50% of its processing was done on seeds other than soybeans].

In 1965 Ron and Mabel Smith developed and manufactured two soyabean meat substitutes–Soya Bean Luncheon Loaf, and Savoury Roast–for Bellevue Health Supplies, as part of their product range within F.G. Roberts' Health Foods Proprietary Ltd.

By 1968 the contract milling and health food manufacturing operations at 146 Burwood Road, Hawthorn, had also outgrown the available space. So in April 1968 these operations were moved into newly expanded and constructed premises, including a new warehouse and manufacturing and packaging area in the Bayswater plant. Since 1968 the facilities and technologies at Bayswater have continued to expand and develop.

In the late 1960s and early 1970s the company pioneered Muesli manufacturing in Australia, working with Vitamin Supplies, another established and well-known Australian health food company.

By the early 1970s Soy Products of Australia employed more than 30 people and manufactured an extremely wide range of products. Unfortunately, many of these were labor intensive, and the company lacked the resources to finance the enormous capital investment required to automate them and to market them at a much larger scale. Other products, such as the herbs, were under increasing pressure from the medical profession and health departments, and were becoming increasingly difficult to market. With the enormous social and economic changes which have occurred in Australia since the mid-1970s, many of these products were no longer viable and, reluctantly and sadly, the Smiths had to scale down and lean up their operation. They had to concentrate on those products which they could manufacture and pack efficiently with their facilities.

On 28 Aug. 1973, F.G. Roberts was rebaptised into the Seventh-day Adventist (SDA) Church at the East Prahran Memorial Church (a suburb of Melbourne, Victoria) by J.B. Connolly and H.B. Christianson. F.G.R. and his wife were parishioners of the Windsor and East Prahran SDA churches and congregations.

At least four of the early soyfood products continued until the early 1974-74 under Ron Smith's direction: Beans in Tomato, Soy Bev, Soy Choc, and Soy Compound. In 1972, with the election of a labour government, labor and other costs soared. Most hand-made labour intensive products were discontinued at this time. The 2nd shift was discontinued and the number of permanent employees was reduced from 35 to 15, and have continued to decline ever since.

In 1974 the company F.G. Roberts' Health Foods Pty Ltd. ceased trading, following a rationalisation of the Smith family's affairs. The retail products and F.G. Roberts brand name were retained by "Soy Products of Australia Pty. Ltd." and continue to be manufactured by the company to this day (1995).

F.G. Roberts, a true pioneer in the fields of food, health, and naturopathy (natural healing) in Australia, died on 17 Nov. 1977, at "Corinella" Hospital, a Seventh-day Adventist (SDA) hospital adjacent to the SDA camp at Nunawading, an eastern suburb of Melbourne between Blackburn and Mitcham. Roberts was buried on 19 Oct. 1977 at Springvale, Cemetery.

His wife, Gladys, died less than a year later, on 12 July 1978, and was buried beside her husband at Springvale.

Roberts' daughter, Gladys, now (1995) resides at Corinella Retirement Village.

Was F.G. Roberts a vegetarian? Not strictly. Paul recalls: "He loved fish. A whole baked or grilled flounder was a favorite at home or dining out in Melbourne. He certainly enjoyed catching and eating the fresh Barrier Reef fish in Queensland. Roberts ate cheese, eggs and meat sparingly. In later life, as an antidote for a blood problem, he enjoyed a grilled steak on a weekly basis. Roberts favored vegetarianism. All his dietary advice advocated high consumption of fresh fruit, vegetables and wholegrain cereals, and sparing consumption of what he termed the 'concentrated' foods: meat, dairy products, eggs, nuts, fats, refined sugars." Address: Director / General Manager, Soy Products of Australia Pty. Ltd., 69 Power Road, Bayswater, VIC 3153, Australia. Phone: (03) 729-1738 or 729-3611.

3171. Smith, Paul. 1995. History of Soy Products of Australia Pty. Ltd., and the work of Vincent R. "Ron" Smith. Part V. 1980-1995. Bayswater, Victoria, Australia. 6 p.

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March. Unpublished manuscript. Handwritten. Updated by several interviews with and letters to William Shurtleff in March 1995.

• ***Summary:*** In April 1980 Ron and Mabel Smith's eldest son, Paul, abandoned his career as an architect and joined them full time at Soy Products of Australia. Born on 23 January 1949 at Queens Road, South Melbourne, Paul had Architecture, Landscape Design, and Master of Business Administration (MBA) degrees. He had been a director of the company since Aug. 1977. In 1990 Paul became General Manager of the company following Mabel's retirement. In 1981, at the request of William Shurtleff of Soyfoods Center, Paul wrote a brief history of his company (which see). Thereafter, his interest in the company's history steadily grew, and he did extensive research on the subject. Paul is thinking about writing a biography of F.G. Roberts, so he has collected some documents about his life, including articles from *Nature's Path to Health*, published exercise regimes, iridiagnosis charts, and some recipe books. Unfortunately the company has no product catalogs from before 1985. Paul has written parts of the story and he has written an outline article in a 1985 company brochure.

Paul's human sources of information on F.G. Roberts were: His father and mother, Ron and Mabel Smith. Mrs. Gladys Hawken (F.G. Roberts' daughter). Mrs. Esmae Noelene Jackson (1937 -; née Grimes, granddaughter of F.G. Roberts and his wife Gladys; she was reared by both of them). Grahame Newitt (1939 -; chiropractor, grandson of F.G. Roberts, and brother of Esmae). Mr. David Evans, a naturopath who operated F.G. Roberts' clinics at Newcastle and Sydney during the 1930s. Mr. William Pruss, who worked with F.G. Roberts' brother, W.E. "Bill" Roberts in Sydney during the 1930s and 1940s. Nurse Cogan who operated F.G. Roberts' shop and clinic at Ballarat, Victoria, continuously from 1937 until her death in 1993. Numerous patients of F.G. Roberts, including Mr. Shugg (from Surrey Hills, a suburb of Melbourne), Nan Yates (diagnosed with terminal cancer in 1969 and still alive today), and Mrs. Alice Harding (diagnosed with cancer of the liver in 1939, who remarried at age 80 and died in 1987 at age 88).

The "Roberts" brand has been used continuously since F.G. Roberts commenced manufacturing in 1932 at 40a Chapel St., St. Kilda. The "Roberts" brand name applies to numerous other products, developed by Roberts in the 1930s, which have nothing to do with soybeans, e.g. "Molasses," "Alfalfa Tea," "Skin & Healing Ointment," "Vita Balm" (a heat rub), "Malted Bran," cider vinegar, etc., some of which we still manufacture and sell in addition to our soy products.

Apparently many of F.G. Roberts' personal papers and records were either dumped or acquired by Stephen (?) Newitt when Gladys Roberts Hawken sold her home to move into Corinella Retirement Village about 2 years ago. At least one complete set of *Nature's Path to Health* from July 1930 to Jan. 1947 still exists, privately owned, bound in five volumes.

Concerning old advertisements for products made by F.G. Roberts, Paul has original issues of *Nature's Path to Health* from 1935 (2 issues), 1936 (2 issues), and 1937, plus the April-May 1949 issue. He has seen later and earlier issues, and from some of these he has been able to photocopy articles and advertisements.

In the company's archives Paul can find no product labels or brochures which predate the move to Bayswater in 1968. All existing old labels have the Power Road, Bayswater, address, but many of them were copies of earlier labels with only the address changed. Some of the artwork goes back to the 1930s and early 1950s in format and design.

Even though F.G. Roberts was baptised a Seventh-day Adventist, attended an SDA college and married a woman who became a devout member of that church, he left the SDA church for many years during the middle of his life due to a mismatch between his views and the more conservative views held by the church and its elders at that time. There was intense competition between Roberts and Sanitarium Foods, owned by the SDA church. Roberts was a proponent of Norman Vincent Peale's "Power of positive thinking, and was very critical of Sanitarium Foods' use of wheat gluten in their meatlike products, nutmeats, etc. He also felt the SDA diet was too high in starch, sugar, and gluten. Ron Smith recalls that Roberts never discussed the matter with him.

Gladys, F.G.R.'s wife, remained a staunch SDA parishioner and member of the church throughout her life, paying out of her own income to send a number of children to SDA colleges in Australia and Fiji. F.G.R. upheld his wife in her religious beliefs and works, often waiting outside in the car while she and the children attended church. Yet F.G.R. was a very spiritual / religious person judging from the memories of those who knew him, and the tone of his magazine, *Nature's Path to Health.* His granddaughter, Esmae Jackson, was brought up in the Seventh-day Adventist religion and is still a devout, active member of the church. F.G.R. and his wife, Gladys, reared Esmae, due to friction between herself, her mother, and her stepfather. They paid Esmae's fees to attend the SDA college in Oxley Rd., Hawthorn (very near the 1954-1968 factory) and later Avondale College (SDA), where she studied to be a teacher. Esmae speaks very highly of the kindness and generosity of her grandparents for paying her school fees, etc. She apparently had a very happy and secure childhood with them. Paul suspects that F.G. Roberts felt that a religious background was not important to his work and it may have alienated some potential customers. He was widely known throughout Australia, and treated many SDA patients, including several people that Paul knows who formerly worked for the company.

Since 1957, Soy Products of Australia Pty. Ltd. has operated in two parts: One part is a flour milling / commodity type operation, producing heat-treated / stabilised / debittered

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products including Debittered Full Fat Soy Flour and Grits (the grits come in coarse and fine mesh), Lightly Steamed Full Fat Soy Flour, Heat Treated Soy Fibre Flour (from soy hulls), Stabilised Wheat Germ, and Stabilised Wheat Bran. They also produce heat treated wholegrain rice flour, and maize flour. The other part of the business produces specialty retail products under the Roberts' brand name for the health food, diabetic, and coeliac [celiac] markets. This product range, remaining true to Roberts' philosophy of minimally processed whole foods, continues to include such soy-based foods as Soy Compound, Gluten Free Plain Flour, Gluten Free Self Raising Flour, Soy Crunch, and Vita Elm.

They also make some vegetarian burgers. In addition, since 1963, Soy Products of Australia has supplied cleaned and bagged Australian-grown soybeans to various commercial manufacturers of tofu, soy sauce, and other soyfoods in Australia. Since the early 1970s, most of these soybeans have been grown in the Riverina area in southern New South Wales and northern Victoria.

75% of the company's annual turnover relates in some way to soybeans. About 40% of their turnover is sold under the Roberts brand name and the remaining 60% is sold as commercial commodity products. They also do a fair amount of specialist contracting for the food industry, mainly stabilising bran and wheat germ, and milling, sieving, and mixing a variety of food stuffs for human consumption. They also process rice, maize, rye, barley, oats, wheat, and other grains for internal use. They are currently testing buckwheat, lupins, and chickpeas for both internal (i.e., under the Roberts brand) and external use. They propose to use them in conjunction with soy in a variety of applications. They are moving increasingly towards making user-friendly, convenience "health" or healthy foods which meet F.G. Roberts' ideals.

The company has 6 full-time employees and also employs a pool of casuals as required. The mill is highly automated, needing only a single operator. Last year's sales figures are confidential.

As of 1995 Paul Smith is involved in all aspects of the business, including building, plant and equipment selection, design, and development, product development, packaging design, information technology, etc.

V.R. "Ron" Smith is presently the Managing Director and major shareholder of the company; his wife and son Paul own the remaining shares. His main duties now revolve around maintenance and plant installation, with some consultative input on milling, sieving, and general product development. He no longer plays an active role in the day to day running and management of the company.

An excellent 4 by 6 inch black-and-white photo sent by Paul Smith shows F.G. Roberts, dressed in a coat, tie, and hat. Address: Director/General Manager, Soy Products of Australia Pty. Ltd., 69 Power Road, Bayswater, VIC 3153, Australia. Phone: (03) 729-1738 or 729-3611.

3172. **Product Name:** Better Than Milk? Caseinate Free. Dairy Free Tofu Beverage Mix.
Manufacturer's Name: Sovex Natural Foods, Inc.
Manufacturer's Address: 9104 Apison Pike, P.O. Box 2178, Collegedale, TN 37315. Phone: 615-396-3145.
Date of Introduction: 1995 March.
Wt/Vol., Packaging, Price: 21 oz (1 lb 5 ozs) paperboard carton.
How Stored: Shelf stable.
New Product–Documentation: See next page. Leaflet sent by Patricia Smith from Natural Products Expo West at Anaheim. 1995. March. "New from Sovex... Better than ever." A large photo shows a can of Better Than Milk? on a deep blue background. On the rear are nutrition facts and ingredients (printed too small to read except with a magnifying glass) for seven SKUs. Caseinate Fre Better than Milk? in Natural, Natural Light, Carob, and Chocolate flavors. Low Fat Better than Ice Cream in Vanilla and Strawberry flavors, and Caseinate Free Better Than Milk in a Natural flavor in an aseptic package.

3173. Worthington Foods, Inc. 1995. Annual report 1994. 900 Proprietors Rd., Worthington, OH 43085. 16 p. 28 cm.
• ***Summary:*** Total sales rose to $88.2 million in 1994, up 11.2% from $79.3 million in 1993. Net income (profit) rose to $4.33 million in 1994, up 141% from $1.79 million in 1993. Both 1994 figures were new company records. On 22 Nov. 1994 the Company sold its refrigerated egg assets for $9 million; this helped reduce debt by $10.4 million, made available an ideal plant in Zanesville (Ohio) in which to produce meat alternatives in the future. The company kept its frozen egg products, Scramblers and Better 'n Eggs, which hold, approximately, a 30% market share. "More important than the financial results for 1994, it was a year in which the company was repositioned for improved growth and profitability..."

Meat alternatives is the category in which the company expects to achieve significant growth in the years to come. They developed this category 20 years ago in supermarkets, and in it they have the greatest expertise and technology. During 1994 sales of Morningstar Farms meat alternatives were up 42% in supermarkets and 35% in foodservice operations. In supermarkets Morningstar Farms has maintained over 55% market share. But the company's position as "Number one in meatless" is being challenged. The company's new Morningstar Farms Better 'n Burgers is the first fat-free burger to be introduced nationally. It is selling well and is available in 30% of U.S. supermarkets.

Inside the front cover is the company's very interesting mission statement, which begins: "Worthington Foods, Inc. is solely dedicated to producing and marketing vegetarian and other healthful foods. Worthington Foods will continue to be a leader in providing nutritionally balanced options to

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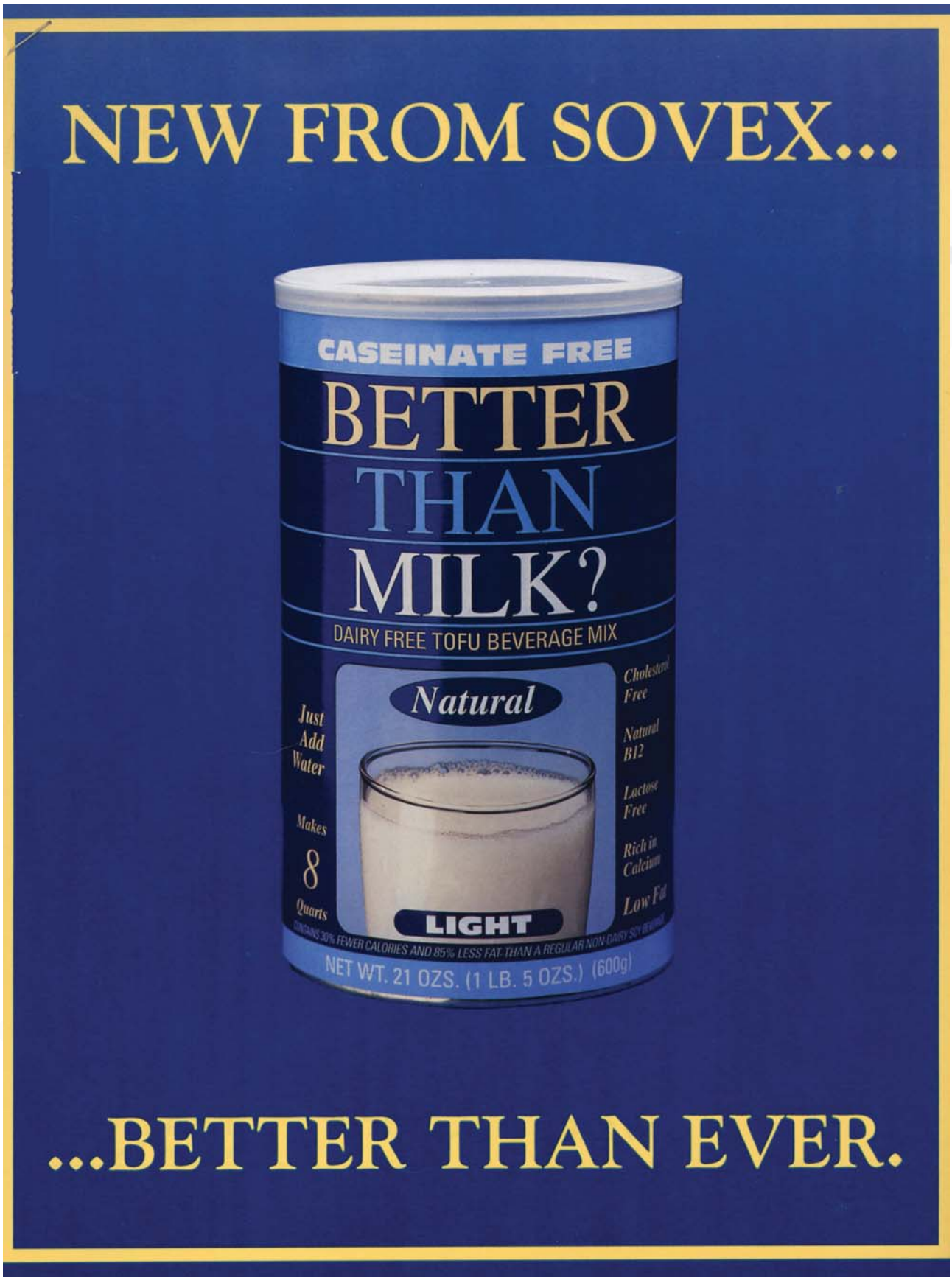

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meat, egg and dairy products for healthful living, as it has done for more than 50 years." The "Corporate Objectives" are divided into six categories: Shareholders, consumers, the trade, employees, the community, and company policy. Address: Worthington, Ohio. Phone: (614) 885-9511.

3174. *Tofu Times: Emerging Soyfoods Trends* (*Morinaga, Los Angeles*). 1995. Mori-Nu Tofu: Moving into food service. March/April. p. 1-2.
• ***Summary:*** Morinaga is currently preparing a Food Service Manual. Stanford University Dining maintains nine foodservice operations and serves 15,000 students per day. Executive Chef Andre Mallie says: "Students at Stanford are extremely health conscious about what they eat. In addition probably 30-40% of our students are vegetarians and we try to be responsive to their needs and requests... Healthy eating is definitely a continuing trend at the University... For main meals, Stanford students have a choice of as low-calorie dish, a vegetarian entree, a meat choice, or a fish selection. The nutritional information of all entries is posted on the serving line... Tofu is served every day as part of the salad selection, and a hot entree with tofu as the main ingredient is served 2-3 times a week. Tofu entrees are rotated and include tofu casseroles, stuffed tofu ravioli, vegetable and tofu kabobs, tofu moussaka, "eggless" tofu rolls, and marinated and grilled tofu, which is a popular selection.

Chef Mallie recommends Mori-Nu Tofu because of its consistent quality, and the fact that it is very compact and can be stored without taking up valuable refrigerator space–for up to ten months. Ben Chilson, Director of Food Services at Andrews University in Berrien Springs, Michigan prefers Mori-Nu Tofu because he does not have to worry about the product going sour. A Seventh-day Adventist university, Andrews promotes a vegetarian lifestyle and does not serve meat or meat by-products. Tofu entrees are served 2-3 times per week including curry tofu and vegetables, stir fry broccoli with tofu, tofu and nut patties, tofu fritters, and scrambled tofu as a breakfast option.

Mori-Nu Tofu is also on the food service menus at Drake University (Des Moines, Iowa) and the University of Wisconsin.

Talk with Art Mio of Morinaga. 1995. March 10. In America today, tofu is being used in foodservice primarily in universities and colleges, and secondarily in businesses. In both places, it is most widely used either (1) as cubed tofu, placed on the salad bar for use as a salad ingredient, condiment, or topping, or (2) stir fried with vegetables. Stanford University uses, on average, about 30 cases/month of Mori-Nu Tofu. Address: California.

3175. Worthington Foods, Inc. 1995. First quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.
• ***Summary:*** "Net sales for the first quarter of 1995 were up 9.3% over the same period in 1994, net income was up 79%, and earnings per share were up 75%. Morningstar Farms Breakfast Links have been reformulated to contain only 2.5 gm of fat per serving. During the second quarter of 1995 Morningstar Farms will introduce two additional "Low-Fat" products: Garden Grain Patties (containing mushrooms, rice, onions, oats, and low-fat cheeses–without any soy ingredients) with only 2.5 gm of total fat and Spicy Black Bean Burgers with only 1 gm of total fat. These two products will be companions to the successful Garden Vege Patties, now available in nearly 60% of U.S. supermarkets. They will appear under the banner "America's Original" Veggie Burgers.

Note: America's earliest known meatless burgers (with the word "Burger" or "Burgers" in the product name) were as follows:

Loma Linda Food Co. 1938. Loma Linda Gluten Burger (with Soy Flour).

Special Foods (Renamed Worthington Foods, Inc. in Dec. 1945). 1945. Choplet-Burger.

Loma Linda Foods. 1949. Vegemeat Burger (or Vegemeatburger).

Loma Linda Foods. 1953. Loma Linda Redi-Burger (Meatless Hamburger).

Loma Linda Foods. 1960. Loma Linda Vegeburger (Canned Meatless Hamburger). Address: Worthington, Ohio. Phone: (614) 885-9511.

3176. **Product Name:** VegiMax: The Ultimate Veggie Burger Sub (Foodservice product).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1995 April.
Ingredients: Vegetables (mushrooms, water chestnuts, onions, carrots, green and red bell peppers, black olives), textured vegetable protein (soy protein concentrate, wheat gluten), egg whites, cooked brown rice, rolled oats, corn oil, calcium caseinate, soy sauce (water, soybeans, salt, wheat). Contains 2% or less of onion powder, corn starch, salt, hydrolyzed corn, soy and wheat protein, sucrose, soy protein isolate, spices, garlic powder, dextrose, jalapeno pepper powder, celery extract.
Wt/Vol., Packaging, Price: 60 x 3.0 oz patties.
How Stored: Frozen.
New Product–Documentation: Worthington Foods. 1996. First quarter financial report. VegiMax is now sold to 3,000 Subway units (restaurants).

Color leaflet with note sent by Worthington Foods. 1996. May 2. This product was introduced in April 1995 by the Morningstar Farms Foodservice Division. It is pre-formed and pre-cooked; just heat and serve on a six inch bun. Only 3 gm fat. No cholesterol. Completely meatless. Excellent Hoagie, too. On the front of the leaflet is a color photo of a

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VegiMax patty inside a long bun, atop a bed of lettuce, sliced tomatoes, and onion rings. On the back of the leaflet the logo reads: "Morningstar Farms: Number One in Meatless. Providing healthier food alternatives, our only business for over 50 years."

3177. *SoyaScan Notes.* 1995. America's earliest known vegetarian / meatless burgers (Overview). May 3. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** America's earliest known meatless burgers (with the word "Burger" or "Burger" in the product name) were as follows:

Loma Linda Food Co. 1938. Loma Linda Gluten Burger (with Soy Flour).

Special Foods (Renamed Worthington Foods, Inc. in Dec. 1945). 1945. Choplet-Burger.

Loma Linda Foods. 1949. Vegemeat Burger (or Vegemeatburger).

Loma Linda Foods. 1953. Loma Linda Redi-Burger (Meatless Hamburger).

Loma Linda Foods. 1960. Loma Linda Vegeburger (Canned Meatless Hamburger).

3178. Stoneback, Diane. 1995. Veggie burgers pass taste test with few beefs. *Call* (*Allentown, Pennsylvania*). May 3. Address: Food Editor.

3179. Hammons, Raymond O. 1995. Early history of the peanut and peanut butter in the United States (Interview). *SoyaScan Notes.* May 10. Conducted by William Shurtleff of Soyfoods Center. Followed by letter of May 15.
• ***Summary:*** Ray has spent his life studying the origin and early history of the peanut. He retired nearly 11 years ago and hasn't focused much on the peanut since that time. Before his retirement in 1984, he donated his many documents on the subject to the Peanut Reference Library at the University of Georgia Coastal Plain Experiment Station Library at Tifton, Georgia. This is the most comprehensive compilation of reference materials on the peanut in existence; it now owns about 15,000 documents on peanuts. In addition to bulletins, scientific journal articles and papers, etc. it contains about 600 PhD and MS theses and dissertations (many from foreign countries).

The earliest document Ray has seen that mentions the peanut in America is by Thomas Jefferson, in which he describes growing peanuts (he called them "peendars") in his garden [in 1794] before he was president. This information and more about the peanut appears in *Thomas Jefferson's Garden Book* edited by Edwin Morris Betts (1944, American Philosophical Society). The earliest reference seen to Jefferson growing peanuts appears in a very important article titled "Economic importance of peanuts," by Dr. B.B. Higgins (1951, p. 6). Dr. Higgins is no longer living. Note: Jefferson, the third president of the United States, lived 1743-1826, and was president from 1801 to 1809. Jefferson may have introduced the peanut from France.

Ray knows of Samuel Bowen. Concerning the reference to Samuel Bowen introducing 1000 lb. of "ground nuts" in 1774, Ray states that it is important to know where these "ground nuts" came from and if they were, in fact, peanuts. If they came from a English-speaking, British-controlled part of Africa they were probably peanuts, but if not they may have simply been nuts that had been ground and brought in as feed.

For example, John Smith is reported to have searched in the bottom lands of Virginia along the James River for the ground nut, but that was almost certainly a plant of the genus *Apios* because peanuts do not grow in forests or wooded areas, which that area was. Today you can find *Apios* there and it was called "ground nut" in Colonial Virginia.

Recent archaeological finds in coastal Peru by Walter Alva (1988) show the importance of peanut in early Peru.

We do not know when the peanut was introduced to Europe.

During the early 1900s the National Peanut Council published a journal titled *The Peanut Promoter,* which contained many fine articles; it was the precursor of *The Peanut Journal and Nut World.* He has looked through all the issues of this periodical.

Dr. John Harvey Kellogg clearly did pioneering work on peanut butter in America but he was a self-promoter. Colonel Sanders, the founder of Kentucky Fried Chicken, patterned himself after Dr. Kellogg. He wore the same white suits and little goatee; he was a very short man. A book titled *The Original Has His Signature,* about the W.K. Kellogg, by H.B. Powell contains some very interesting material on the origin of peanut butter. It traces the Michigan Supreme Court case where the two Kellogg brothers were trying to decide which one should get credit for peanut butter. Address: 1203 Lake Drive, Tifton, Georgia 31794-3834. Phone: 912-382-3157.

3180. Pratt, Steven. 1995. Copy cows: Soy- and rice-based drinks stand in for milk, but with nutritional consequences. *Chicago Tribune.* May 10. p. 3.
• ***Summary:*** Discusses and gives comments on Rice Dream, Naturally Tofu (Sovex), EdenSoy Extra, and Almond Mylk. Address: Tribune Staff Writer.

3181. Nicholls, Walter. 1995. Foraging: Burgers without the beef. *Washington Post.* May 17.
• ***Summary:*** There are two basic kinds burger alternatives: Those designed to taste like beef and those which are simply a vegetarian patty. True vegetarians often prefer the latter. The author found that alternative burgers are grilled or sautéed in a nonstick skillet with lots of good stuff piled on top. He did a taste test, and rated the many brands into three categories: Exceptional: Boca Burgers (Chef Max's Favorite,

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Fresh Garlic, Original), Morningstar Farms (Garden Vege Patties, Grillers; [made by Worthington Foods]), Wholesome and Hearty Foods (Gardenburger, GardenMexi).

Acceptable: Amy's (Organic California Veggie Burger), Green Giant (Harvest Burgers), Ken & Roberts (Veggie Burger), Morningstar Farms (Better 'n Burgers), Natural Touch (Garden Grain Pattie), Yves Veggie Cuisine (Burger Burgers).

Forgettable: Lightlife (American Grill, Light Burgers), Mudpie (Veggie Burgers), Soy Boy (Courage Burger, and Veggie Sizzler), Woodstock Whole Earth Foods (The Better Burger), Yves Veggie Cuisine (Vegetable Patties). Photos show packages of the three Exceptional brands. Address: Washington, DC.

3182. Lazzaro, Don. 1995. New developments with soymilk in Australia (Interview). *SoyaScan Notes.* May 29. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Pureharvest has, for some time, been buying its soymilk from Australian Natural Foods (ANF), but recently the quality of this soymilk has been very inconsistent, and often unacceptable. Berryvale Orchards is Australia's largest manufacturer of fruit juices–a huge company. In about 1988-89, after Sanitarium Foods launched So Good, a small distributor in Victoria approached Berryvale and offered to sell them the technology and know how to make soymilk from whole soybeans. Unfortunately this little fellow didn't know how to make soymilk, so Berryvale's initial products were of very poor quality. Recently they have installed a rather low-cost soymilk plant and Don has switched to using them as his source of soymilk. But the quality is still not as good as he would like. Address: Pureharvest, 15 Ardena Ct., East Bentleigh, Victoria 3166 Melbourne, Australia.

3183. **Product Name:** Carnation Follow-Up Soy: Formula for babies 12 months & older eating cereal & other baby foods–Iron fortified. Powder.
Manufacturer's Name: Carnation Nutritional Products Div., Nestlé Food Company.
Manufacturer's Address: Made in Au Claire, Wisconsin. Corporate headquarters: Glendale, CA 91203. Phone: 1-800-543-3112.
Date of Introduction: 1995 May.
Ingredients: Maltodextrin (potato), soy oil, soy protein isolate, sucrose, minerals (calcium phosphate, potassium chloride, potassium citrate, calcium carbonate, calcium citrate, magnesium phosphate, sodium chloride, magnesium chloride, ferrous sulfate, zinc sulfate, copper sulfate, potassium iodide, sodium selenite), soy lecithin, vitamins (ascorbic acid, choline bitartrate, inositol, alpha-tocopheryl acetate, niacinamide, calcium pantothenate, thiamine hydrochloride, vitamin A palmitate, riboflavin, pyridoxine hydrochloride, folic acid, biotin, phytonadione, vitamin D-3, vitamin B-12), L-methionine, taurine, L-carnitine.
Wt/Vol., Packaging, Price: 14 oz (396 gm) steel can. Retails for $6.99 (10/95, Safeway supermarket, Lafayette, California).
How Stored: Shelf stable.
New Product–Documentation: Product with Label purchased at Safeway supermarket in Lafayette, California. 1995. Oct. 24. Can is 4.75 inches high and 4 inches in diameter. Paper label. Red, blue, yellow, and green on white. Illustration of three wooden ducks on front panel. "Carnation Follow-Up is not intended to take the place of breast feeding. It is intended to replace traditional starter formula when your baby is eating cereal and other baby foods. Caution: If you suspect your baby is prone to allergy, consult your pediatrician." "See inside label for Spanish instructions."

Talk with Brenda at Carnation's toll-free number. In May 1995 Carnation purchased Mt. Vernon Foods (Mt. Vernon, Ohio), which made i-Soyalac and Soyalac. The product names were changed to Alsoy and Follup-Soy in May 1995, but both of these products are made from isolated soy protein; whole soybeans are not used as they were in Soyalac. These are Carnation's first two soy-based infant formulas. Carnation Good Start was on the market in 1988, but it was not soy-based. Follow-Up Soy comes only in powder form in a 14 ounce can. Some amount of these products are made at Carnation's main plant in Au Claire, Wisconsin, and the remainder is made at other plants in the USA whose addresses are confidential.

3184. **Product Name:** Carnation Alsoy: Soy formula for milk-free feeding during baby's first year. Iron fortified. Concentrate liquid–Add water.
Manufacturer's Name: Carnation Nutritional Products Div., Nestlé Food Company.
Manufacturer's Address: Made in Au Claire, Wisconsin. Corporate headquarters: Glendale, CA 91203. Phone: 1-800-543-3112.
Date of Introduction: 1995 May.
Ingredients: 14 oz concentrate: Water, sucrose, soy oil, soy protein isolate, tapioca dextrin, minerals (calcium phosphate, potassium citrate, calcium citrate, potassium chloride, calcium carbonate, magnesium phosphate, sodium chloride, magnesium chloride, ferrous sulfate, zinc sulfate, copper sulfate, potassium iodide, sodium selenite), soy lecithin, vitamins (ascorbic acid, choline bitartrate, inositol, alpha-tocopheryl acetate, niacinamide, calcium pantothenate, thiamine hydrochloride, vitamin A palmitate, riboflavin, pyridoxine hydrochloride, folic acid, biotin, phytonadione, vitamin D-3, vitamin B-12), L-methionine, taurine, L-carnitine, calcium carrageenan.
Wt/Vol., Packaging, Price: 14 fl oz (384 ml) steel can. Retails for $1.99 (10/95, Safeway supermarket, Lafayette, California). 32 oz can ready to feed, and a 14 oz can of powder.
How Stored: Shelf stable; refrigerate after opening.

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New Product–Documentation: Product with Label purchased at Safeway supermarket in Lafayette, California. 1995. Oct. 24. Can is 4 inches high and 3 inches in diameter. Paper label. Red, blue, yellow, and green on white fading into light blue. Illustration of three wooden rabbits on front panel. "Use as instructed by your physician. Breast milk is the preferred feeding for infants. Before deciding to use an infant formula, consult your doctor for advice. Caution: If you suspect your baby is prone to allergy, consult your pediatrician." "See inside label for Spanish instructions."

Talk with Brenda at Carnation's toll-free number. In May 1995 Carnation purchased Mt. Vernon Foods (Mt. Vernon, Ohio), which made i-Soyalac and Soyalac. The product names were changed to Alsoy and Follup-Soy in May 1995. These are Carnation's first two soy-based infant formulas. Alsoy is sold in a 13 fl oz concentrate can, a 32 oz can ready to feed, and a 14 oz can of powder. Some amount of these products are made at Carnation's main plant in Au Claire, Wisconsin, and the remainder is made at other plants in the USA whose addresses are confidential.

Call to Nutricia–Loma Linda Foods in Mt. Vernon, Ohio. 1995. Oct. 30. A message at this number says: "Hello. You have reached the Mt. Vernon Foods Facility, which has recently been closed. The Alsoy product line is being produced at another Nestle facility. If you are a consumer and have questions regarding the product, please dial 1-800-932-5525. For all other enquiries, please dial #201 and leave a message."

Talk with David Polakowski or Mt. Vernon Chamber of Commerce. 1995. Oct. 30. The former Loma Linda soymilk plant is now standing empty. It is owned by Nestle, and the Area Development Council (ADC) is helping Nestle look for a buyer. Nestle purchased the property in Sept. 1994 from Mt. Vernon Foods. They made soymilk at the plant until July 1995, when they closed it. For more details call Tom Heine (president of the ADC and Chamber of Commerce) at this number of the Knox County Recorder (of deeds, 614-393-6755).

Talk with Phil Carlisle, manager of Loma Linda Market. 1995. Oct. 30. The former Loma Linda building is now standing empty, but a new company will be moving in soon. Nutricia bought the Loma Linda name and was using it for the infant formula. They sold the food manufacturing end of the business to Worthington Foods. Recently Worthington re-acquired the name Loma Linda Foods, and they are making old Loma Linda products in Worthington, Ohio, under the name Loma Linda Foods. For a good history and details see the 1995 interview with David Geriguis of La Sierra University.

3185. Packaged Facts. 1995. The meat and dairy alternatives market. New York, NY: Packaged Facts. xii+ 162 + 42 + 6 p. May. 28 cm.

• ***Summary:*** In 1994 retail sales of these products reached an all-time high of $286 million, and these sales are projected to top $660 million in 1999. This very interesting report can be ordered from Packaged Facts, 625 Avenue of the Americas, New York, NY 10011. Phone: 212-627-3228. Price: $2,150. The authors were Sarah and Peter Starr, though their names do not appear in the report. The product director was David Lumis.

Contents: Part I: The products. Scope of the report (Vegetarian products sold as meat or dairy alternatives, products not covered), history of the industry (an emerging market, part of the vegetarian movement, soybeans–an ancient food of Asia, soybeans arrive in the new world in the 18th century, Kellogg family starts health foods industry, makes first meat analogs, Seventh-day Adventists and others produce tofu and meat alternatives in the 1920s, Henry Ford early proponent of soybeans, meat analogs commercially developed in the United States in the 1940s, non-dairy beverages, growth of "Americanized" meat and dairy analogs booming), product definition (foods used to replace meat or dairy products, description of ingredients–tofu, tempeh, soymilk, okara, soy protein concentrates and isolates, textured vegetable protein, wheat gluten and seitan), product categories (three main categories of meat and dairy alternative products, meat alternatives, dairy alternatives, prepared meals), government regulations (the FDA and FTC, NLEA labeling considerations {went into effect in May 1994, making the USA the world's first country to have mandatory nutrition labeling}, soy protein allowed in meat products without special labeling, bovine growth hormone), industry associations (the Soyfoods Association of America, the American Soybean Association, the Vegetarian Awareness Network).

Part II: The Market. Introduction (Retail sales of meat and dairy alternative products by category–1989-94–graph, retail sales of dairy alternatives products by segment–1989-94–graph), market size and growth (market is difficult to monitor, 1994 retail sales estimated at $286 million, dairy alternatives surpass $142 million, meat alternatives soar to $132 million, prepared meals grow steadily to over $12 million, estimated retail sales of meat and dairy alternative products by category–1989-1994–table, growth in milk substitutes segment leveling off but still in double digits, cheese alternatives segment also experiences slight slow-down in 1994, non-dairy desserts–a slow-growth segment, estimated retail sales of dairy alternative products by segment–1989-1994–table), factors in market growth–overall market (maturing population and interest in nutrition, new dietary guidelines, medical community accepts plant-based diet, studies show vegetarian diet equals a healthier–longer life, soy might help to prevent heart disease and cancer, consumers now approve of vegetarian diets, increased demand for vegetarian foods, youth adopts meatless meals, exposure through foodservice, mass market begins to support meat and dairy alternatives,

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products in wider distribution, innovative new products, improved technology equals better taste, increased funding for soyfoods through foreign capital, pricing continues to limit market, image–taste and texture still a problem), factors in market growth–meat alternatives (concern about health hazards of meat, fat calories targeted by labeling law, an alternative to chicken and fish, ecological and social considerations will propel meatless meals, meatless meals difficult to handle by foodservice), factors in market growth–dairy alternatives (milk substitutes enter dairy case, awareness of lactose intolerance on the rise, taste profile limits acceptance, cheese alternatives–are they healthier?, projected retail sales of meat and dairy alternative products by category–1994-1999–graph {p. 34}, projected retail sales of dairy alternative products by segment–1994-1999–graph {p. 35}), projected market growth (overall market to reach $662 million in 1999, meat alternatives and prepared meals to lead growth, projected retail sales of meat and dairy alternative products by category–1994-1999–table, growth of milk substitutes and other dairy alternatives expected to slow somewhat by 1999, projected retail sales of dairy alternative products by segment–1994-1999–table), market composition (meat alternatives will outsell dairy alternatives, share of sales by product category–meat and dairy alternatives–graph, soy-based ingredients most frequently used in meat-like products, protein ingredients used in meat-like products by number of products made with ingredient–1990-1992–table, bulk of dairy alternative sales from milk substitutes, share of sales by product segment–1989 vs. 1994–graph, sales by retail outlet, share of sales by retail outlet–meat and dairy alternatives–1994–graph).

Part III: The marketers. The marketers (About 30 significant marketers–most small, major companies move into the market, meat alternatives–other mass-market players, meat alternatives–natural foods players, the leaders in milk substitutes, cheese alternative market leaders, the leaders in non-dairy desserts, prepared meals market leaders, selected marketers and brands of meat and dairy alternative products–chart), market and brand shares (mass-market leader Worthington Foods challenged by ADM/Pillsbury Green Giant Harvest Burger, wholesome and hearty growing fast, Boca Burger boogies by the Bystanders, marketer and brand shares of meat alternative products sold through supermarkets–1993 vs. 1994–table, natural foods sales of meat alternatives more fragmented, Worthington is leader in natural foods stores, White Wave and Lightlife hold second and third place, estimated marketer and brand shares of meat alternative products sold through natural foods stores–1994–table, many small regional players capture local markets, Eden Foods leads in milk substitutes, estimated marketer and brand shares of milk substitute products mass-market and natural foods stores–1994–table, Imagine Foods' Rice Dream is leading rice beverage, other vegetable beverages, Tree of Life's Soya Kaas holds leading share of cheese alternatives market, estimated marketer and brand shares of cheese alternative products sold through natural foods stores–1994–table, Tofutti holds top market share in frozen desserts, Fairmont Foods establishes lead in supermarkets, marketer and brand shares of prepared meals sold through supermarkets–1994–table, natural foods prepared meals–many brands and no one leader), competitive situation–overall market (marketers compete primarily through new product introductions, growth through mergers and acquisitions). Continued.

3186. Packaged Facts. 1995. The meat and dairy alternatives market (Continued–Document part II). New York, NY: Packaged Facts. xii+ 162 + 42 + 6 p. May. 28 cm.
• ***Summary:*** Contents: Continued from p. vi. Part III: The Marketers. Competitive situation–meat alternatives (Worthington pioneers Seventh-day Adventist vegetarian market, Miles Laboratories acquires Worthington–places Morningstar Farms in mass market, tofu drives natural foods market, soy frank marketers exploit tofu opportunities, tempeh–another meat alternative ingredient gains interest, wheat-based alternative seitan expands presence, Worthington places tofu patties in natural foods stores–changes hands again, Wholesome and Hearty develops foodservice distribution, meatless burger market heats up, patty competition fierce in natural foods arena, ADM/Pillsbury alliance brings soy burgers to mass market, Worthington fights back, category differentiates in the early 1990s, soy attacked by soy-free burger companies, meat alternative marketers cut the fat, low-fat sausages and franks, tightly targeted vegetarian fun foods and snacks, mass-market companies introduce ground meat analogs, natural product companies follow suit, Wholesome and Hearty seeks retail growth, others seek lucrative foodservice market), competitive situation–milk substitutes (early market limited to ethnic community, Edensoy a big hit–Vitasoy responds, new lines introduced, competition–domestic manufacturing and larger containers bring down soy beverage prices, flavors and packaging distinguish early products, Westbrae introduces first low-fat soymilk, fortification has become key selling point, Eden's fortified product suits strict vegetarians, new package sizes expand market, re-closable–easy to pour, rice beverages–line extensions grab shelf space, Wholesome and Hearty's almond beverage, 100% organic products, a fresh–new market–some products shift to dairy case, mass-market interest), competitive situation–cheese alternatives (Seventh-day Adventists start category, first natural foods cheese alternative, Soyarella, not dairy-free, handful of marketers compete on price in natural foods arena {Soya Kaas, TofuRella by Brightsong / Sharon's Finest, Cemac Foods, Galaxy Foods, White Wave}, new products parallel dairy-based mass market, a move toward lower fat and fat-free, seeking the most melt-able cheese, Sharon's finest finds innovative ingredients, marketers target

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vegan market), competitive situation–non-dairy desserts (Tofutti dominates, dairy-free puddings–one major player {Imagine Foods sells a rice-based non-dairy pudding}, non-dairy yogurt has yet to catch on–but White Wave's Dairyless, a non-dairy soy yogurt, seems to be the only major natural foods brand in this category), competitive situation–prepared meals (flavored tofu and seitan expanded into meals, Legume is early innovator, cheese alternatives in prepared meals, other companies dive into prepared meals, action has been in natural foods, supermarket products have not succeeded), competitive profiles (The Archer Daniels Midland Co.–Grand Metropolitan PLC–Pillsbury division partnership, Amy's Kitchen Inc., A&A Amazing Foods Inc., Boca Burger Co.–Sun Foods, Eden Foods Inc., Fairmont Foods of Minnesota Inc., Fantastic Foods Inc., The Hain Food Group Inc., Imagine Foods Inc., Lightlife Foods Inc., Sharon's Finest, Tofutti Brands Inc., Vestro Natural Foods Inc., Vitasoy–USA Inc., White Wave Inc., Wholesome and Hearty Foods Inc., Worthington Foods Inc., Yves Veggie Cuisine Inc.), marketing trends (updated packaging, burger market segmenting into natural and mass market, Worthington–a master at working both markets, hamburger look-alikes crossing back into natural foods, veggie patties crossing into mass market, nostalgia–creating brand loyalty, marketers expanding into other categories, moving into the frozen breakfast section, retail displays, pushing into new distribution channels), new product trends (new–improved packaging, light and healthy, product names emphasize healthy, fat-reversal–mass-market burger-substitutes gaining fat, ground meat alternatives, new flavors and varieties–many gourmet and upscale, ethnic–especially Mexican and Southwestern, convenience, technology produces better mimics, mixing soy with grains and other ingredients, mainstreaming health foods, natural ingredients preferred–organic even better, selected new product introductions–meat and dairy alternatives–1994-March 1995–chart), advertising expenditures (most advertising not measured, specialty magazines are preferred medium, radio is another alternative, little consumer advertising, Worthington outspends competition, ADM-Pillsbury spends millions to launch Harvest Burger in 1994, Eden Foods targets mass market, Fantastic Foods' first major spending), advertising positioning (good health is overlying theme, and fat is prime concern, vegetables are a solution to a bad diet, milk substitutes advertised to lactose-intolerant market, highlighting a sense of the familiar, foods children love, traditional burger images used to woo mass market, vegetarian appeal used for meatless patties, organic is important feature in natural foods, examples of consumer advertising), consumer advertising (consumer promotions not heavily used, money-off coupons from several companies, new lines offer more generous rebates, recipes and books educate consumers, in-store promotions–the White Wave Center, marketers join forces in advertorial, sponsoring sports events–a healthy fit, 25 years of earth day, non-profit tie-ins, Turtle Island's recycling program, other types of promotions, examples of consumer promotions), trade advertising and promotions (three key trade publications, trade ads also used as consumer ads, trade ads scheduled to run in convention issues, trade ads announce growing business, editorial promotions, reaching retailers, example of trade ads). Continued.

3187. Packaged Facts. 1995. Retail sales of meat alternatives: 1989-1994 (in million dollars) (Document part). In: Packaged Facts. 1995. The Meat and Dairy Alternatives Market. New York, NY: Packaged Facts. 162 + 42 + 6 p. See p. 17, 19, 51-52. May. 28 cm.

• ***Summary:*** A graph (p. 17) shows that sales of meat alternatives (in million dollars) rose from $69.8 in 1989 to $85.7 in 1991 to $115.5 in 1993 and $131.6 in 1994. The average annual sales growth for this period was 13.6% In the past two years, however, sales of meat alternatives have increased by 15.2 and 18.0%.

Concerning the accuracy of these figures, page 19 notes that sales in these markets are difficult to quantify because a large share of retail dollar volume moves through natural foods stores, where sales are mostly untracked, and because various information sources define meat and dairy alternatives products differently. Therefore these "estimates are based on information provided by Soyatech, Inc., the Soyfoods Center, Information Resources, Inc., the natural foods trade, and various manufacturers."

A table (p. 51) shows the market shares of major manufacturers of meat alternatives sold through supermarkets (NOT including natural food stores) in 1993 and 1994. The 1994 market shares were as follows: Worthington Foods 64.5% (Morningstar Farms brand 63.8% and Natural Touch brand 0.7%). ADM/Pillsbury 21.8% (up from only 8.0% in 1993). Wholesome & Hearty Foods (Garden products) 7.9%. Yves Veggie Cuisine 2.1%. Sun Foods (Boca Burger) 1.4%. Other 2.3%. Source: Information Resources, Inc.; Packaged Facts.

A second table (p. 52) shows estimated market shares of major manufacturers of meat alternatives sold through natural food stores in 1994: Worthington Foods 30.4% (Natural Touch, Loma Linda, Worthington brands). White Wave 9.8%. Lightlife Foods 6.5%. Yves Veggie Cuisine 5.8%. Wholesome & Hearty Foods (Garden products) 4.8%. Fantastic Foods (Nature's Burger) 3.9%. Sun Foods (Boca Burger) 3.0%. Other 35.8%. Source: Packaged Facts.

Wholesome & Hearty Foods (Portland, Oregon): In March 1985 this company introduced the Gardenburger, a non-soy vegetarian patty into natural foods restaurants and college cafeterias. Foodservice remains Wholesome & Hearty's core business and accounts for about 70% of the company's sales. Today, over 22,000 foodservice outlets offer the company's various meatless patties (p. 59). In 1992

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Wholesome & Hearty began an aggressive drive to introduce its Garden products line into retail stores–both natural foods and mass market.

3188. Lazzaro, Don. 1995. History and current status of soymilk in Australia (Interview). *SoyaScan Notes.* June 6. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Ceres Natural Foods is their holding company and Pureharvest is their trading name. They made this name change in 1982 since they found the word Ceres was difficult for many people to pronounce. The first soymilk they imported to Australia was made by Saniku in Japan and imported from Mitoku.

Don is interested in macrobiotics. In early 1979 he took over the running of a small macrobiotic and natural foods retail store in Melbourne named Ceres Wholefoods. The only way he could make it viable was to try to buy at better prices, so in April 1979 he started a wholesale and import company, which he named Ceres Natural Foods, also in Melbourne. There was a company named Real Foods (run by Michael Pels) in New South Wales, Australia, that was importing, through Mitoku in Japan, tamari, soy sauce, miso, tofu, etc. Real Foods was the first company in Australia to import foods from Mitoku in Japan.

Don knew Michael from when they both used to live in Sydney in about 1978. Michael purchased some rice cake machines (the same kind used by Chico-san) through Mitoku from Airin Co. These machines were very poorly engineered and constructed. Michael has already sold 168 of these machines to Quaker.

When Don took over the Ceres Wholefoods retail store in 1979, he approached Michael and asked to be the distributor in Victoria of the food products Michael was importing from Japan through Mitoku. Michael said okay, and Don began distributing. Don asked Michael to import some soymilk from Mitoku, which he did in mid-1980. The stick-on label over the Japanese label said Ceres Natural, in Choc-Malt and Natural flavors. But the first soymilk in Australia was imported from Japan in about 1977-78, through Muso by 3-4 health food stores named Russel's; it was made by Marusan in a stand-up plastic pouch. Not much of it was sold. In about 1980-81, Michael decided to get out of the whole import business in order to focus on making rice cakes. So Mitoku Mr. Kazama and Chris Dawson asked Don to become their importer in Australia. Don also ran a 3rd company, a center that provided information and advice on macrobiotics.

Jim Wilson, who was running Spiral Foods in Australia, had been importing from Mitoku. He convinced Mitoku not to sell to Don, his competitor; Mitoku agreed. Mitoku then approached Saniku, and in about 1981 Don began importing soy milk made by Saniku through Mitoku. Don sold it under the same label he had used before. The Muso started to import some soymilk packaged in Tetra Brik cartons through Spiral Foods. Don got the same product from Kibun, and on it began to use the name Pureharvest.

In short: Four companies pioneered in importing soymilk to Australia: Real Foods, Russel's, Spiral Foods, and Ceres Natural Foods. There was also a little relatively beany Chinese soymilk sold in the ethnic Chinese market. Ceres, as a result of its Tetra Brik package, managed to get fairly good distribution into the grocery / supermarket trade, starting in late 1983 or early 1984. By this time Ceres was by far the biggest seller of soymilk in Australia. They were importing five 20-foot containers per month of the Kibun soymilk product. Ceres was actively promoting this soymilk, doing trade shows, etc.

In 1986 Ceres was approached by a small soymilk maker named Australian Natural Foods (ANF) in Sydney; basically they had old machinery and were in trouble. They approached Don asking if they could make a soymilk for him. They worked out an exclusive deal and formula, and in Nov. 1986 Ceres launched this as Aussie Soy in its first 1 liter package, in Tetra Brik. Sales shot up. It was trucked in a dairy tanker to Bon Lait in Victoria (almost 1,000 miles away) where it was packaged in a dairy that had a Tetra Brick packaging machine. In about 1990-91 ANF first got its own Tetra Brik packaging machine. That same year ANF launched its own soymilk product, named So Natural, to compete with Sanitarium's So Good. It is made from whole soybeans, and is very similar to the Aussie Soy product they have long made for Don.

As early as 1980 Sanitarium Foods was importing Soyalac in tins / cans. They sold it mostly to Seventh-day Adventists through their own retail stores. Then in April 1987 Sanitarium Foods launched their own So Good soymilk (made from a blend of soy protein isolates, made and packaged by dairy companies) in Australia. They went into it in a big way, with a national campaign. It was the best thing that ever happened to Don and Ceres, because this campaign grew the market dramatically. By April 1987 Ceres was selling 10,000 cartons / month of their Aussie Soy, not including their Japan imports. One year later the figure had skyrocketed to 60,000 cartons / month, increasing to 152,000 on year after that.

Nevertheless, according to the *Australian Grocery Industry Marketing Guide* (1995), Sanitarium has 71% of the dairylike (unflavored) Australian soymilk market, followed by Vitasoy at 7% (they launched in about 1991, and have done a very aggressive marketing campaign), then So Natural (made by ANF) at 5%, Sun Gold at 5%, and Aussie Soy at 4-5%. Of the total Australian soymilk market, flavored soymilks account for only about 5% of the total; the remaining 95% is dairylike; its a milk alternatives market. Each of the three major supermarket chains in Australia (Woolworth's Safeway, Franklin's, and Cole's) has its own soymilk brand. Franklin's has an isolate soymilk made by ANF, starting about a year ago. Sun Gold, made by

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Associated Dairies of New South Wales, is almost identical to So Good, made by the dairy company that used to mix Sanitarium's product. In about 1990 Sanitarium set up their own soymilk mixing and packaging factory.

Today the soymilk retail market in Australia is $45 million, with a population of only 17 million people. This is huge on a per capita basis. This market has three main segments: (1) Middle class, educated, with some allergies–70%. (2) Age 50 and older, concerned with cholesterol–20%. (3) Natural foods and vegetarian–10%.

In late 1993 and early 1994 Don approached Berrivale Orchard Ltd. (a cooperative of fruit growers, headquarters in Berri, South Australia) to see if they would be interested in making a soymilk product for Ceres / Pureharvest–because Don's relationship with ANF had become intolerable.

In 1979, to get tofu to sell at his retail store, Don used to go to Chinatown in Melbourne twice a week. He bought it from a little Chinese company (whose name he does not remember) located opposite Victoria Market. He would take a couple of buckets and carry it home in bulk, under water. Address: Pureharvest, 15 Ardena Ct., East Bentleigh, Victoria 3166 Melbourne, Australia.

3189. Rosch, Leah. 1995. Meatless burgers and hot dogs: Are they better for you? *Glamour.* June. p. 38.
• ***Summary:*** Four people from *Glamour* magazine taste tested nearly two dozen nationally available veggie burgers and hot dogs, comparing them with widely available hamburgers and lower-fat franks. Most faux burgers and dogs are lower in calories and fat than their meaty counterparts. They also contain no dairy, eggs, or animal by-products. "Their chief ingredient is soy protein. Soy burgers provide about half to three quarters of the protein in a comparable serving of cooked ground beef, but they have fewer calories, less saturated fat and a fair amount of fiber. Compared with the real thing, tofu dogs have twice the protein and less fat. They don't contain nitrites (a preservative used in traditional franks that has been linked to cancer), but they often contain as much sodium as regular hot dogs–or even more."

All tasters enhanced the flavor with their favorite condiments. The three veggie burgers that were liked best were: (1) Boca Burger–Hint of Fresh Garlic (97 calories, 1 gram of fat per patty); (2) Boca Burger–Chef Max's Favorite (110 calories, 2 gm of fat); (3) Green Giant Harvest Burgers (140 calories, 4 gm of fat). The top hot dog: Morningstar Farms Meatless Deli Franks (110 calories, 7 gm of fat each) [made by Worthington Foods].

3190. Webster, Donovan. 1995. Green days: How I became a vegetarian for one trying month and changed my life and health forever. *Men's Health.* June. p. 116-20.
• ***Summary:*** The author struggled through a vegetarian diet for one month, losing 9 pounds and the roll of fat around his belly. He ate quite a few meat alternatives. When it was over he felt like he was "on the horns of a dilemma. Vegetarianism had, obviously, been good for me–and it hadn't been that difficult. Yet I also knew that, long term, the carnivorous pleasures of meat-based life would drag me back into the darkness of their cave. So I struck myself a bargain. For two months out of every year, one in the spring and one in the fall, I would be a vegetarian. The rest of the year I'd eat meat when I wanted to, but I'd still endeavor not to do it all the time."

A sidebar by Greg Gutfeld titled "The Meatless Market" begins: "Time was, a vegetarian had to make do with sprouts, tofu, and voting for McGovern. But new to the supermarket shelves are numerous meatless items mimicking our favorite animal-derived pleasures–even things like hot dogs, hamburgers, bacon and deli meat." The following products were tasted and are evaluated as "Hey, not bad": Worthington Chik Stiks, Worthington Stripples, Garden Gourmet Vege-Nuggets, Boca Burger (the best liked), Worthington Stakelets, Lightlife Fat-Free Meatless Smart Dogs, Garden Mexi Patties.

The rest were "No, thanks, we'll pass": Worthington Meatless Salami, Natural Touch Lentil Rice Loaf, Yves Veggie Tofu Wieners, Yves Veggie Pepperoni, Lightlife Italian Lean Links, Lightlife Organic Three Grain Tempeh, Bearitos Vegetarian Chili.

3191. Chajuss, Daniel. 1995. The meat alternatives industry and market in Israel (Interview). *SoyaScan Notes.* July 2. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The three major manufacturers of meat alternatives in Israel are Tivall (Tivol), Soglowek (also spelled Zoglabeck or Zoglovek or Zoglowek), and Shamir Food Industries Ltd. Daniel estimates that Tivall has about 50% of the Israeli (non-export) market, followed by Soglowek (35%), and Shamir (15%). Shamir's products are being sold under the label of Dreizin Food Industries Ltd. About 500 tons/month of products made by these three companies are being sold now in Israel–a huge amount. Most (but not all) of these products contain soy. Tivall has been making these products the longest and Shamir is the most recent entrant into the market. Why do Israeli consumers buy these products? Many buyers do not follow a kosher diet. They like these as convenience products, as natural foods (which they aren't really), and as vegetarian products. Daniel would guess that about 5% of Israelis are vegetarians. There are some villages of American Seventh-day Adventists in Israel near the Sea of Galilee that are completely vegetarian. Vegetarians automatically keep kosher.

Daniel believes that Tivall can trace its origins to the work of two men: Dr. Michael (Micha) Shemer, who earned his PhD at the University of Illinois at Urbana-Champaign in 1973, and Saul Katzen, who was the first person to make meat alternatives from extruded soy flour in patty form.

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Saul's main problem was that his products were made from soy flour, which led to problems of taste (the main problem), antigenicity, and some intestinal gas. Saul bought his soy flour (the fines from non-toasted white flakes sifted out prior to alcoholic extraction) from Daniel's company, Hayes Ashdod Ltd. Saul had extrusion equipment (Wenger X-25 and X-200), so Daniel urged Saul to buy soy protein concentrates (made by Daniel's company) instead of soy flour, and run the concentrates through his own extruder. But Saul felt that soy flour was less wasteful and less expensive. Daniel believes that the use of soy flour led Saul's company into bankruptcy. Daniel was very sad about this bankruptcy, and for a long time before it happened, Daniel gave Saul a lot of soy flour free of charge. After Michael Shemer left the University of Illinois, he went to work for Miles Laboratories, which had purchased Worthington Foods. Then he returned to Israel and worked for Miles on a citric acid project. When Michael was fired by Miles in the late 1970s, he joined an Israeli company name Pedco, which made many kinds of food products. Michael taught Pedco how to make meat analogs. Tivall, a company which is located on a kibbutz in northern Israel, bought Pedco in 1984; Tivall was established and incorporated for the sole purpose of purchasing Pedco and its activities; Tivall was not engaged in any activity and did not operate prior to its purchase of Pedco. Tivall had plenty of start-up capital and the now has a lot of money, most of which they have earned making meat alternatives. A daughter company of theirs used to make tsurumi-like products, but now they are separated.

Dr. Shemer was granted several Israeli and international patents on his process which uses reducing agents (or ss-cleaving agents) to soften gluten. Daniel believes that Tivall is no longer using the Shemer patents; rather they are using a 1956 Hartman/Worthington patent–which is now in the public domain. Thus Shamir can now also use that patent.

To make meat alternatives, Tivall now starts with wheat gluten and adds a reducing agent (such as sodium sulfite) to make the gluten soft. Or ascorbic acid can be used; its low pH softens the gluten. A 1956 patent issued to Warren Hartman and assigned to Worthington Foods describes how to soften gluten by adding soy flour or soy protein. Shamir wants to add soy protein concentrate (SPC) to wheat gluten to soften it. Tivall maintains that SPC is a reducing agent–but Daniel is certain that soy flour is a reducing agent, but regular SPC is not; its NSI [nitrogen solubility index] is 3-6. Dr. Shemer has testified that Tivall is the world's largest manufacturer of meat alternatives and that it was the world's first company to make meat alternatives using wheat gluten and soy protein, but it is well known that Worthington Foods made such products long before Tivall. To help resolve its dispute with Tivall, Shamir hired Dr. Noam, who is a chemist and a patent lawyer. Daniel assisted Dr. Noam–which did not please the people at Tivall.

Shamir is located in the Barkan Industrial Zone (P.O. Box 5), M.P. Ephraim 44820, Israel (Phone: +972-3-936-4159. Fax: +972-3-936-4160); this is in central Israel, far from Tivall. Shamir's basic business is making prepared foods, especially salads, for both consumers and catering (foodservice). They are a relatively small company and they have had a line of meat alternative products on the market for about 3 years–on a very small scale. They make meatless hamburger-like patties (with or without breading; with breading is called "vegetarian schnitzel"), sausages (frankfurters), and some non-soy main dishes based on vegetables–such as peas and corn. These products are similar to those made by Worthington.

Soglowek, a rich and powerful company, is located at 8 Ha Gaton Blvd., P.O. Box 70, Naharya, Israel–10 minute's drive from Tivall. When Soglowek began to compete with Tivall in the meat alternatives market, Tivall's prices dropped significantly. Address: Managing Director, Hayes General Technology Company Ltd., Misgav Dov 19, Mobile Post Emek Sorek, 76867 Israel. Phone: (972) 8 592925.

3192. Chajuss, Daniel. 1995. New developments with soyfoods in Africa (Interview). *SoyaScan Notes*. July 2. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Tomorrow Daniel will fly to Africa where he will stay for about 10 days and help finish a small factory at Jinja, Uganda, for UNICEF to make foods for refugees from Rwanda, Burundi, Somalia, and Sudan. The factory was built and is being run for UNICEF by Lutri Products, a private company. Other organizations, such as Oxfam, are collaborating. The first products should be available for refugees in about 2 months. The foods will be made by processing soy and corn in a low-cost extrusion cooker into which steam is injected to destroy all the trypsin inhibitors. Before cooking, the ingredients are ground in a hammermill. After extrusion, vitamins and minerals are added, then the product is micromilled with a tube-shaped Air-Whirl mill to grind it finer and to cool and dry it. The cost to make the product is about $0.15/lb. It must contain 400 calories (kcal) per 100 gm, about 14-17% protein, 14% fat, plus certain vitamins and minerals.

Follow-up letter (fax) from Daniel. 1995. Aug. 23. In 1993 three companies making precooked fortified blended food based on 75% cereal and 25% soy, plus vitamins and minerals, started to operate in Nairobi, Kenya. They are: (1) Procter & Allan Ltd. Capacity: 660 tonnes (metric tons)/month. Fax: 542518. (2) House of Manji Ltd. Capacity: 600 tonnes/month. Fax: 541649. (3) SoyAfric (Master Bakers Ltd.). Capacity: 450 tonnes/month. Fax: 440534.

In Uganda one new firm has started: Nutri Products Ltd., P.P. Box 1244, Jinja, Uganda. Their capacity is expected to reach about 200 tonnes/month. Africa Basic Foods has been operating in Uganda for many years. Address: Managing Director, Hayes General Technology Company Ltd., Misgav Dov 19, Mobile Post Emek Sorek, 76867 Israel. Phone:

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(972) 8 592925.

3193. Shurtleff, William; Aoyagi, Akiko. comps. 1995. Hydrogenation, shortening, and margarine–Bibliography and sourcebook, 1860 to 1995: Detailed information on 934 published documents (extensively annotated bibliography), 37 commercial hydrogenated soy oil products, 37 original interviews (many full text) and overviews, 32 unpublished archival documents. Lafayette, California: Soyfoods Center. 355 p. Subject/geographical index. Author/company index. Language index. Printed July 24. 28 cm. [1013 ref]

• ***Summary:*** This comprehensive bibliography on hydrogenation and its products focuses on hydrogenation of soy oil. Starting with the early literature on hydrogenation, it shows how and why soy oil has become the world's most popular raw material for making shortening and margarine. It includes the large body of literature on the safety of hydrogenation from earliest times to the present, and concludes with the extensive literature published since World War II.

This is the most comprehensive bibliography ever published about hydrogenation, margarine, or shortening. It has been compiled, one record at a time over a period of 20 years, in an attempt to document the history of these closely related subjects. Its scope includes all important information about these subjects, worldwide, from 1860 to the present.

This book is also a very comprehensive and useful source of information on these subjects, since 89% of all records contain a summary/abstract averaging 219 words in length.

This is one of more than 45 books related to soybeans and soyfoods being compiled by William Shurtleff and published by the Soyfoods Center. It is based on historical principles, listing all known documents and commercial products in chronological order. It features: 33 different document types, both published and unpublished; every known major publication on the subject in every language–including 917 in English, 46 in German, 22 in French, 13 in Japanese, etc.; 37 original Soyfoods Center interviews and overviews never before published. Thus, it is a powerful tool for understanding the development of hydrogenation, margarine, and shortening from their earliest beginnings to the present.

The bibliographic records in this book include 934 published documents and 32 unpublished archival documents. Each contains (in addition to the typical author, date, title, volume and pages information) the author's address, number of references cited, original title of all non-English publications together with an English translation of the title, month and issue of publication, and the first author's first name (if given).

The book also includes details on 37 commercial hydrogenated products (mostly those of historical importance), including the product name, date of introduction, manufacturer's name, address and phone number, and (in many cases) ingredients, weight, packaging and price, storage requirements, nutritional composition, and a description of the label. Sources of additional information on each product (such as references to and summaries of advertisements, articles, patents, etc.) are also given.

Details on how to make best use of this book, a complete subject and geographical index, an author/company index, a language index, and a bibliometric analysis of the composition of the book (by decade, document type, language, leading periodicals or patents, leading countries, states, and related subjects, plus a histogram by year) are also included.

Introduction (p. 7-8): Invented in France in 1869, margarine is a product of major historical (as well as commercial) importance with a number of interesting "firsts" to its name: (1) It was the first commercial substitute food in the Western world–developed as a substitute for butter. (2) It was the first alternative to a meat or dairy product in the Western world. (Note that meat and dairy alternatives based on soy and gluten had been developed centuries earlier in China and Japan). (3) In 1957 consumption of margarine in the United States passed that of butter; this was the first example in America of a major food of vegetable origin surpassing its counterpart of animal origin. (4) The margarine industry was the first to become a major food industry by overcoming the ongoing opposition of governments in every country in the Western world. The two countries that once had the strongest anti-margarine laws were the USA and Canada.

Margarine was sold commercially for more than 30 years before the process of hydrogenation was developed and patented by the German inventor Normann in 1902-03. Hydrogenation has transformed the processing of oils and fats throughout the world, being used to make most types of margarine and shortening, and many types of partially hydrogenated vegetable oil.

A brief history: Margarine was invented in 1869 by the Frenchman Hippolyte Mège Mouriés, in an attempt to alleviate shortages of butter. He won a prize offered that year by Napoleon III. Made mainly from tallow (beef fats), margarine quickly became popular in northern Europe and the United States. Factories began production in Denmark (1871), Netherlands (1871), France (1872-73), Austria-Hungary (1874), United States (1874-76), Germany (1875), and the United Kingdom (1889).

Margarine has always been less expensive than butter. In the early years consumers were often sold margarine (or a mixture of margarine and butter) under the impression that they were buying unadulterated butter. Therefore, starting in the 1880s legislation was enacted in many countries to prevent fraud. Few of the world's foods have been subjected to more discriminatory legislation and court decisions than margarine. Most of this was prompted by political action on

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the part of powerful national dairy industries.

In 1884 New York enacted the world's first anti-margarine laws–though they were voided in 1885 by a New York court. In 1886 the president of the American Agricultural and Dairy Association demanded the "total extermination of imitation butter." That same year the U.S. congress passed the Margarine Act of 1886; a tax of 2 cents a pound was imposed and various expensive licenses were mandated for manufacturers, wholesalers, and retailers. The law also decreed that the product must be clearly labeled "oleomargarine." In 1887 the first Margarine Act was passed in England, where margarine was initially sold under the name of "Butterine." It required that the product be sold only under the name "margarine." Similar laws were soon passed in France (1887) and the Netherlands.

Hydrogenation was first patented by the German inventor Wilhelm Normann in 1902 in Germany and in 1903 in Great Britain. Joseph Crosfield & Sons, Ltd., of Warrington, England, was the world's first company to attempt commercial hydrogenation; they began operating their plant in 1906. In 1909 Procter & Gamble (P&G) in the United States acquired the rights to the Normann / Crosfield patent. At the time, P&G was a soap manufacturing company that made no edible products. In 1911, after considerable developmental work, P&G launched Crisco, the world's first vegetable shortening. The name was an abbreviation of the words "crystallized cottonseed oil." The company had the wisdom to market Crisco as a new vegetable product, not as a lard substitute, and the absence of any animal fat was featured in its extensive and persistent nationwide advertising. In the United States, discriminatory federal legislation against margarine existed until 1950, when the federal Margarine Act was signed into law by President Harry Truman. On July 1 of that year the entire federal system of excise taxes and licenses was ended. Also in 1950 Canada dropped its Commonwealth ban on margarine. The last two U.S. states to legalize the addition of color (generally natural color) to margarine were Minnesota (1963) and Wisconsin (1967).

The earliest known reference to the use of soy oil in margarine in Europe appeared in England, where the *Daily Dispatch* of 22 April 1910 reported that soy oil had enjoyed "striking success" as a substitute for coconut oil in the manufacture of margarine; Messrs. Bibby & Sons of Liverpool were selling large quantities of soy oil to margarine makers on the continent.

The first reported use of soy oil in margarine in the United States was in 1912, when 321 tonnes (708,000 lb) were used. In 5 years, by 1917, this amount had increased almost 10-fold, to 3,000 tonnes (6,614,000 lb), yet this was only 2.5% of all oils and fats used in margarine that year and much less than oleo oil (38% of the total), cottonseed oil (25%), neutral lard (17%), and peanut oil (4%).

In 1915 hydrogenation was first used in margarine production. Note that the first soy oil used in margarine was not hydrogenated; it was added in part for its yellow color.

In 1930 the Chinese soy oil expert Tsao reported that "From 70-80% of the soy oil imported to Europe at present is used in the manufacture of margarine."

The first all-soy, all-vegetable margarine, containing no products of animal origin, was introduced in 1942 by Butler Food Products at Cedar Lake Michigan. Sold as Soy Butter, its main ingredients were a blend of liquid and hydrogenated soy oils, soymilk used in place of dairy milk, and perhaps soy lecithin (plus salt, carotene, vitamin A, and butter flavor).

During 1951 soy oil passed cottonseed oil to become America's leading margarine ingredient. In 1950 soy oil accounted for 45% of all the oils and fats in margarine, whereas by 1960 it had grown to account for 81% of the total.

After the mid-1950s, the United States became the world's largest manufacturer of margarine, followed by Germany. In Europe, per capita margarine consumption is largest in northern European countries. Continued. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

3194. Worthington Foods, Inc. 1995. Second quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.

• ***Summary:*** Net sales for the first half of 1995 were $43.8 million, an increase of 9% over the same period last year after adjusting for the sale of the sale of the refrigerated egg substitute assets. Net income for the first 6 months of 1995 was $2,421,000, up 72%. The sale of meat alternatives in the mass market has been strong during the first half of 1995. "Category sales [nationwide, all manufacturers] of meat substitutes increased 38% during the second quarter and by 50% during the first half of 1995.* We are aggressively working to gain national distribution for these new products during the first half of 1995..." * Note: Statistics on nationwide category growth are based on scanner data supplied by Information Resources, Inc., the world's leader in this field.

In 1994 Worthington decided to place less resources in the egg substitute business and more resources in the meat alternative business. "This has turned out to be a sound strategic decision in that frozen egg substitute category sales are significantly declining, while the meat substitute category sales are significantly increasing. Two years ago our sales for egg substitutes (frozen and refrigerated) were about equal to sales of meat alternatives in the mass market. Currently, our egg substitute business is less than one-third of our meat alternative sales to supermarkets." Address: Worthington, Ohio. Phone: (614) 885-9511.

3195. Benedetti, Jef. 1995. Soy report generates calls to Worthington Foods, but little stock movement. *Daily*

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Reporter (*Columbus, Ohio*). Aug. 7. [1 ref]
• ***Summary:*** A study by James W. Anderson published last week in a medical journal touting the advantages of soy protein in reducing blood cholesterol has generated many phone calls to Worthington Foods, and a lot of interest from the consumer and investment communities. Ron McDermott, the company's vice president of research and technology, says that 80% of worthington's food products contain soy protein. The company markets meatless products under four names: Morningstar Farms, Worthington, Loma Linda, and Natural Touch. In 1994 the Morningstar Farms line was the best seller, with almost $56 million in sales, according to the company's 10-K filing.

In April William Blair & Co. in Chicago published a "buy" recommendation on the company's stock, noting that roughly one-half of Worthington's sales are to individuals seeking to reduce their intake of fat and cholesterol.

An Associated Press story about Anderson's study stated that he received $5,000 from Protein Technologies International, which makes soy protein, to help pay for the work. "Anderson told the AP that he believes 20 grams of soy protein a day, substituted for animal protein, could be enough to help lower blood cholesterol."

Patty House of Ohio State University wrote a report titled "From Farm Lands to Shoppers Hands" stating that the average American consumes six gallons of soybean oil per year in such forms as cooking and salad oil, margarine, shortening, and prepared salad dressings.

3196. Dorsch, Alan. 1995. Information Resources, Inc. (IRI): The world's largest independent market research firm and supplier of scanner data, and their InfoScan database service (Interview). *SoyaScan Notes.* Aug. 16. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** IRI has been in business for about 15 years; 2-3 years ago they passed Nielsen to become the world's largest independent market research firm. Nielsen, which is IRI's only competitor, is owned by Dun & Bradstreet. The U.S. market for syndicated data services is roughly a $600 million a year market. IRI has about 55% of this market share, while Nielsen has about 45%. They collect scanner data from food, drug, mass, and convenience stores (c-stores). They supplement this with audit data in the stores that don't have scanning. Note: They do not cover natural/health food stores. Their food-related information comes only from scanner data. They develop categories (they now have about 250) and they process the data, and serve it up with software to consumer products goods companies–like Worthington, which has been a customer since 1992. Their customer use that information to measure their marketing programs, track trends, etc.

Information is available in two general formats: (1) Syndicated database and (2) a customized database. The customer is allowed extensive input in the way they set up a customized database. This database has 4 basic dimensions: Products, time periods, measures, and geographies. They have a structured hierarchy for their databases that is unique to IRI. The hierarchy starts at the category level, and gets more detailed the further you drill down. Looking at each one: (1) Product dimensions: Category (e.g. meat alternatives, soap). Type (e.g. refrigerated/frozen, shelf stable, hand soap, laundry soap, shower gels). Parent Co. (e.g. R.J. Reynolds). Vendor/child (e.g. Nabisco, subsidiary of Reynolds). Brand (e.g. Morningstar Farms). Then UPC (the lowest level on the hierarchy). If you are only interested in one specific product, you can drill right down to UPC and get trends on it. Any customer has potential access (if they pay for it) to information on all products in the industry–so they can do comparisons with key competitors. (2) Time periods: 4, 5, 12, 12, 13 weeks, quarterly, and annual. Data is typically available back 5 years. (3) Measures is all the different ways you can look at the data. There are hundreds of different measures but the basic five are: Tracking measures (e.g. dollar sales or volume sales), distribution measures (e.g. ACV = All Commodity Volume, so an 80% ACV distribution in a food store chain means that you have good penetration in that chain), velocity measures (e.g. sales per point of distribution, or sales million ACV; it tells you the strength of your penetration), pricing measures (e.g. average base price per unit on the retail shelf, or on display), promotion based measures (e.g. what percentage of the weekly volume is on display–like a temporary end cap or free-standing display). (4) Geographics: For each of basic store types (food, drug, mass, convenience stores, club stores), the following geographic breaks/breakdowns are available: Total USA, standard 8 geographic regions based on the U.S. Census (e.g. northeast, south central, west coast, etc.), 64 major markets (e.g. New York, Los Angeles), and key accounts (e.g., Safeway, A&P).

Each client negotiates what information they need. IRI has a contractual agreement to protect each customer's customized database and the way they look at data.

For its syndicated service, IRI has a category named "meat substitutes" There are two types: Refrigerated (= refrigerated and frozen) and shelf stable. Meat is also included in the refrigerated type, so a client can compare meat and meat substitutes. Another category is milk. One type is kefir/milk substitutes/soymilk.

How does IRI get its data? Every main chain in the USA scans and accumulates its own raw data from its cash registers. IRI has a relationship with each of these chains, and it gathers all this scanned data from the corporate headquarters. IRI often puts software and systems on site at the headquarters which allows the chain to read and use its own data. In some cases IRI has to pay for this data, while in other cases it is a barter agreement.

How much does it cost to get information from IRI? One report might cost $1,000. But to set up a custom database

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might cost $50,000 on up to $1,000,000. Once a company has their own database, they may be able to access it electronically whenever they want to.

IRI's product is named InfoScan, whether it is syndicated or customized. IRI also has Infoscan Census (based on every store in key accounts), Infoscan Panel. They also offer testing services (to set up a test market), MRA (marketing research analysis, with curves, pricing sensitivity, etc.) IRI also has a software division named IRI Software that has separate revenue.

All of these services are sample-based services. They use projection techniques to estimate the entire market.

SAMI (Selling Areas Marketing, Inc.), which was a company, no longer exists. In about 1989 or 1990 it was owned by Arbitron, and was in the process of going out of business. Arbitron focused on rating advertising penetration on radio and TV, and was a competitor of Nielsen (which did TV ratings). IRI did not buy SAMI per se; rather it bought 60-80 of SAMI's employee contracts (those these former SAMI employees went to work for IRI) and SAMI's client files and contracts. SAMI was slow to get into scanned data; IRI, which saw scanner data as the future, came on so fast that SAMI could not recover. Nielsen has always focused on audit data more than scanner data.

Retailers use their own scanner data extensively, as to do category management, track trends and sales of individual products.

Alan is now developing IRI's page on the World Wide Web. The URL is http://pages.prodigy.com/KY/ abdorsch/ abdorschinfores.html.

Update: 1997 April 24–"Over the course of the last two years, Category Management has moved from concept to buzzword to the point where it occupies a substantial part of every modern marketer's time and energy." There is now an "IRI University," where a full-day course on Category Management will be taught on June 18 in New York City. Address: Assoc. Director of Client Services, Information Resources, Inc., Chiquita Center, Suite 700, 240 East 50th St., Cincinnati, Ohio 45202. Phone: 513-357-8025.

3197. *North Pacific Union Conference Gleaner* (*Portland, Oregon*). 1995. Obituaries: Cottrell, Edyth Y. Aug. 21. p. 32.
• ***Summary:*** Edyth Young Cottrell was born on 15 March 1900 in Staples, Minnesota. She died on 3 June 1995 in Moscow, Idaho, at age 95. She is survived by a daughter, Joyce Schwartz, of Orofino, Idaho.

3198. Burros, Marian. 1995. Fresh tofu: Safe cooks buy carefully. *New York Times.* Aug. 23. p. C1, C8.
• ***Summary:*** "Eight containers of tofu were purchased recently from six corner markets in New York City. Two of the containers were commercially packaged and sealed; six had tofu that was floating in water and required a store employee or a customer to pick it up by hand, with tongs or with a plastic bag. The tofu was analyzed by Certified Analytical Group Inc. of Plainview, Long Island, for the total level of bacteria; for coliform, which is indicative of unsanitary handling and storage conditions; for E. coli, which indicates fecal contamination, and for yersinia, a food-poisoning organism historically associated with tofu.

"None of the samples contained yersinia. Both of the prepackaged containers of tofu–Kinugoshi and Mori Nu brands–had relatively low levels of total bacteria and no E. coli. Mori Nu had a level of coliform high enough to indicate unsanitary conditions... But all the tofu that was floating in water had extremely high levels of total bacteria and very high levels of coliform; four contained E. coli."

"Consumers can protect themselves by buying tofu only in sealed packages and by cooking it at high temperatures, until it reaches 160 degrees internally–in other words very hot." Contains two recipes, incl. Ma-Po bean curd. A photo shows tofu being sold loose from open tubs of water.

3199. Parr, Jan. 1995. Under the (veg) influence. *Vegetarian Times.* Sept. p. 22.
• ***Summary:*** Several national restaurant and food-service chains are adding veggie burgers, sometimes even complete vegan meals, to their menus. Some 500 Subway sandwich shops nationwide are serving Wholesome and Hearty's Gardenburger Subs; other outlets are serving or testing the Morningstar Farms' Vegimax burger Denny's restaurant chain is testing two Morningstar Farms Garden Veggie Patties in two markets. Note: Morningstar Farms' products are made by Worthington Foods.

What is driving the trend? Consumer demand, aggressive marketing by the meatless burger companies, and convenient product packaging.

3200. Geriguis, David. 1995. What ever happened to Loma Linda Foods and Nutricia in Riverside, California? (Interview). *SoyaScan Notes.* Oct. 30. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** David's last name is pronounced GER-gus. He worked for Loma Linda Foods in 1989 when the company was sold to Nutricia. He remained with Nutricia, making infant formula at the plant in Riverside, California. The production continued for only a few months, then they had a major problem with the new equipment that was being developed, and they had a recall. It was a disaster. So in about October or November of 1990 Nutricia shut down the plant in Riverside.

Nutricia's plan at that point was to shut down the plant in Mt. Vernon, Ohio, and operate only in Riverside. But after the recall, the opposite happened. Nutricia spent more than $12 million revamping the plant in Ohio, then used it to start making various forms of i-Soyalac (from soy protein isolates) and Soyalac (from whole soybeans). The plant in Riverside went up for sale although Nutricia's sales and

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marketing departments remained in the office. In mid-1993 Nutricia decided to close their offices at the Riverside and move the rest of the company's operations to Mt. Vernon, Ohio. David left Nutricia in July 1993. Then later in 1993 Nutricia had another recall–and another disaster, which even drove down the stock price of Nutricia in the Netherlands. David thinks that Nutricia's management at headquarters in the Netherlands probably said "This American company is too dangerous for us. We'd better sell it." Nutricia then created a fictitious company named Mt. Vernon Foods to allow them to disassociate that company from the Nutricia. Several months later Nutricia began to negotiate with another venture capital group to buy Nutricia's American operations. These didn't work out so about a year later, in 1994, Nutricia sold Mt. Vernon Foods to Nestle/Carnation.

Nutricia is a good company, but they quickly learned that regulation (by the FDA) is much stricter in the USA than in Europe. In Holland they had 90% of the dairy-based infant formula market, and a significant market share in other European countries, but they made no soy-based products. So soy was a new experience for them. In addition they had quite a few problems getting FDA approval and clinical trails done correctly for their dairy-based formula in America. They planned to discontinue Loma Linda Soyalac, because according to their research, starting with whole soybeans caused nutritional problems in the infant formula (probably flatulence). Apparently Carnation followed through with this plan.

In early 1994 Nutricia sold their plant in Riverside to a company named Dasi (pronounced like the flower "Daisy"), which changed its name to Dasi-Linda. Dasi is a manufacturer of equipment for processing cow's milk, including UHT (ultra-high temperature) systems. Then they got into the actual processing of milk. Right now they are spending a lot of money revamping the former Loma Linda plant on Pierce Street in Riverside with the goal of making UHT dairy milk in aseptic cartons. Parmalat (a huge and very significant Italian food company that is the biggest user of Tetra Pak Aseptic packaging in the world) appears to be both a partner and a customer of Dasi-Linda, which talks about having contracts to package for Parmalat.

La Sierra University no longer owns the property on which the former Loma Linda building stands.

David is quite sure that Carnation introduced Follow-Up Soy before they purchased Mt. Vernon Foods.

Talk with Robert Madey, vice president for R&D of Dasi. 1996. Jan. 19 and 24. The information above concerning Dasi is correct. Dasi first signed a written agreement with Nutricia concerning the purchase of the Loma Linda food plant in Oct. 1993, and the deal was finalized in Sept. 1994. Dasi, which is headquartered in Rockville, Maryland, has several dairy milk processing plants of its own in the USA–one in Decatur, Alabama; it is a partner in another in Utah. The Parmalat plant in Michigan produces essentially all of the Parmalat milk in the USA; it is all sold unrefrigerated. Dasi all sells some of its systems overseas as well. Dasi is now in the process of converting all Parmalat plants worldwide to the use of Dasi equipment ("the Dasi process"). This is all equipment from the balance tank, including pre-heating, sterilizer, homogenizer, and up to but not including the packaging equipment. Address: Director of Industries, La Sierra Univ., 4700 Pierce St., Riverside, CA 92515. Phone: 909-785-2477.

3201. Ohio Company (The). 1995. Investment research: Worthington Foods, Inc. Recommendation: Buy/growth. Columbus, Ohio. 2 p. 28 cm.
• ***Summary:*** A very positive assessment, by Richard J. Wayman, of the financial potential of Worthington Foods. A price graph by Bloomberg for Worthington's stock covers the period Nov. 1994 to Oct. 1995, during which time the price has risen from about 10 to about 17. The main increase took place from March 1995 to June 1995. The stock presently sells for $17.25 a share. Address: Columbus, Ohio.

3202. *Soy Connection* (*The*) (*Chesterfield, Missouri–United Soybean Board*). 1995. Foodservice recipes with soy. 3(4):2-page insert. Fall.
• ***Summary:*** Features five meatless recipes: Sweet 'n sour tempeh and vegetables (50 servings, created by Ken Bergeron, Kensington, Connecticut). Black soybean ragout (16 servings, created by Mark T. Buckley, certified executive chef, Bloomington, Illinois). Tofu fried rice. Hot and sour soup (with soft tofu) (each 50 servings, submitted by The Vegetarian Resource Group, Baltimore, Maryland). Barbecue meatballs–total vegetarian (240 x 1-inch meatballs, submitted by Dr. Kenneth Burke, Loma Linda Univ., Loma Linda, California). Address: PhD.

3203. Worthington Foods, Inc. 1995. Finally, a low-fat breakfast worth getting up for (Ad). *Vegetarian Times.* Oct. p. 3.
• ***Summary:*** See next page. This full-page, color ad is for Morningstar Farms Scramblers and Breakfast Links. A large photo shows the links with an omelet and hash browns on a white plate. The name of the company (Worthington) does not appear in the ad.

This ad also appeared in the Dec. 1995 issue (p. 3) and the Nov. 1996 issue (p. 3) of this magazine. Address: Worthington, Ohio 43085.

3204. Worthington Foods, Inc. 1995. Third quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.
• ***Summary:*** Net sales are up 10.9% for the first 9 months of 1993 compared with the same period one year ago. Third quarter sales are up 14.6%. Even better, net income (profits) for the first 9 months of 1995 are up 68.6%, and for the third

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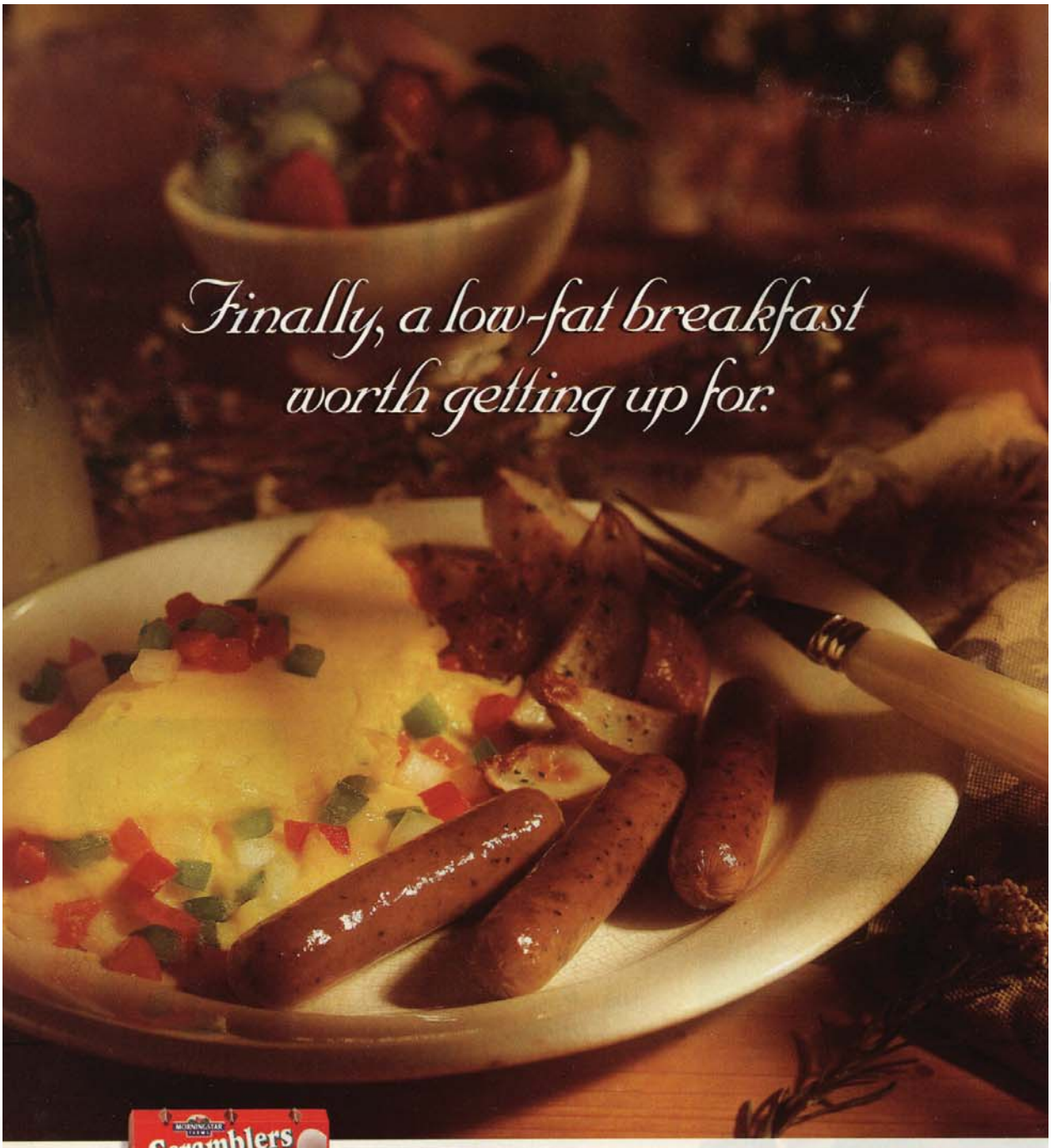

You didn't think a low-fat, cholesterol-free breakfast like this would ever see the light of day. So start your day off right with Morningstar Farms® fat-free Scramblers.® And our Breakfast Links, Patties or Strips that are free of meat and animal fat. Just heat and serve. Remember, when you help yourself to Morningstar Farms, you really are helping yourself. Look for them in your grocer's frozen breakfast section.

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The change will do you good.™

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quarter are up 63.0%. Sales of Morningstar Farms meat alternatives are up 23.9% for the year to date. The market share of Morningstar Farms meat alternatives sold through retail supermarkets has remained constant for the past 9 months at approximately 50%. Better'n Burgers are now available in approximately 66% of all retail supermarkets. "In terms of unit sales per point of distribution, Better'n Burgers continue to out-pace our other meal alternative products."

Foodservice sales were up 31.9% for the first 9 months of 1995 when compared to 1994. "Sales for the third quarter of 1995 were up over 43.2% as a result of increased authorization from restaurants, correctional facilities, and other foodservice operations." Address: Worthington, Ohio. Phone: (614) 885-9511.

3205. Campbell, T. Colin. 1995. Past and current work related to vegetarian diets (Interview). *SoyaScan Notes.* Nov. 21. Conducted by William Shurtleff of Soyfoods Center. [1 ref]

• ***Summary:*** Dr. Campbell grew up on a farm, earned his PhD in animal nutrition, and was interested in finding more efficient ways to produce animal protein. During the 1960s he managed a program in the Philippines feeding children. In the late 1970s he became interested in epidemiology, and was on the 13-member panel of the National Academy of Sciences that wrote *Diet, Nutrition, and Cancer.* Published in 1982, this work created an earthquake in the scientific community. As one by-product, his work was featured in People magazine. He then became chair of the National Committee on Nutrition Fraud, but soon discontinued this work when he saw its motivation. He was highly visible in the early 1980s in government and scientific circles, but as he found himself breaking ranks with traditional science, increasing pressure was put on him and he felt considerable distress. In 1985-86 he took a one-year sabbatical to Oxford, England, and considered never returning to the USA.

In England, he decided to focus on cancer research, and the causes of cancer. He is developing a theory as to why this has been such a contentious field, and a larger theory as to why we think what we do in the field of nutrition. He has taught a senior course in nutrition and biochemistry.

This year he is again on sabbatical, writing an autobiography, focusing on his scientific research and growing discontent with established and orthodox views. Science is becoming ever more reductionist, looking at smaller and smaller pieces of the whole. There is a great need to construct a model of wholism. He is also preparing to teach a new course at Cornell, an introductory course in vegetarian nutrition for both the university and the community. He has lectured twice at Loma Linda University and a close colleague, Jeff Gates, is a Seventh-day Adventist. The data from the China Study II, which was bigger than the first study, is now coming in. To help fund his research at Cornell, he has established two businesses. One is quite involved with herbs. He has been treated by traditional Chinese physicians and was impressed. He was the person who isolated dioxin, and his health has suffered as thereafter; throat polyps and a twitching in his face. Address: Div. of Nutritional Sciences, N204-A MVR Hall, Cornell Univ., Ithaca, New York 14853. Phone: 607-255-2669.

3206. Twomley, Dale E. 1995. Re: Stock split and growing acceptance of Worthington's meat alternatives. Letter to shareholders, Nov. 28. 1 p. Typed, with signature.

• ***Summary:*** On Nov. 27, 1995, the Board of Directors declared a five-for-four stock split on common shares of Worthington Foods, Inc. The board has also declared a dividend of 3 cents per share.

"On November 6, 1995, the Company announced that several restaurant chains had begun serving some of our Morningstar Farms' Veggie Burgers. Denny's is now serving our low-fat Garden Vege Patties in all 1,500 restaurants nationwide. Chilli's, with over 400 restaurants, has just introduced Morningstar Farms' Spicy Black Bean Burger under the menu title of 'Bandito's Vegetarian Bean Burger.'

"Additionally, the recent approval from International House of Pancakes, Marie Callender's, and hundreds of Subways (VegiMax) of Morningstar Farms Garden Vege Patties in various forms makes it clear that meatless products are quickly becoming a regular part of menus in restaurants throughout the nation. More and more restaurants are turning to the Morningstar Farms brand of Worthington Foods, the world's largest producer of meat alternative products and marketer of 'America's Original Veggie Burgers.'" Address: President and CEO, Worthington Foods, Inc., 900 Proprietors Rd., Worthington, Ohio 43085. Phone: (614) 885-9511.

3207. Parr, Robert; Litser, Glyn. 1995. "What hath God wrought!" The Sanitarium Health Food Company story. Berkeley Vale, NSW, Australia: Sanitarium Health Food Co. 463 p. Nov. Illust. Index. 29 cm.

• ***Summary:*** This book is strong in describing the unfailing presence of the hand of God in Seventh-day Adventist health work, but short on a clear presentation of history. For example: Seventh-day Adventists were pioneers in the production of peanut butter worldwide. When did they start commercial production in Australia? Here is a brief chronology:

1897 Nov. 8–Edward C. Halsey first arrives in Sydney, Australia (p. 18 left column), from the USA, where he undoubtedly learned how to make peanut butter, probably at Battle Creek [Michigan].

1898 Jan. 28. Halsey roasted the first tray of peanuts–according to his diary (p. 19 left)–probably at the Melbourne plant.

1898 April 27–The first products of the infant company were Granose, Granola, and Caramel Cereal [grain coffee].

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The names were registered on patents applied for on this date (p. 16 right).

Undated–There is no evidence of what they said as the first products were taken from the oven; "they were probably too busy with the next batch of Granola or the next tray of peanuts, to be roasted to make the first peanut butter ever made in Australia" (p. 19 right).

1899 May 29–The new factory at Cooranbong is now "ready to allow Edward Halsey to commence his manufacturing Wizardry. His first product was Peanut Butter" (p. 27 right).

1899 July–The company begins to sell its first products at the Union Conference session held at Avondale. "During this conference he [Halsey] produced (and sold to the delegates) the first Granose Biscuits ever made in Australia" (p. 27 right)–but no peanut butter.

1899 Dec.–Halsey "had the following products off the production line and ready for customers: Granose, Granose flakes, Bromose, Nuttose, Antiseptic (charcoal) Tablets, Granola, Caramel Cereal, Nut Butter, Wheatmeal Biscuits, Gluten Biscuits and Gluten meal" (p. 27 right). If this "Nut Butter" was peanut butter (which seems likely) then Sanitarium Foods first made and sold peanut butter commercially in Australia in Dec. 1899. They probably sold it commercially in late May or early June 1899. However, the company may have made 6-12 months earlier, but the records are unclear. Address: Berkeley Vale, NSW, Australia.

3208. *Vegetarian Journal* (*Baltimore, Maryland*). 1995. Burger King offers tomato sandwich on white bread. 14(6):5. Nov/Dec. [3 ref]
• ***Summary:*** A reader wants to know more about the "Spicy Beanburger" that Burger King offers in England. The editor notes that Taco Bell offers many vegetarian/vegan options, and we should all support their efforts. Kimberly Miller of Burger King states that her company, which has more than 6,400 restaurants in the USA, did test a meatless burger, "The Griller" [made by Worthington Foods] in 38 restaurants for six months in Rochester, New York, in late 1993 and early 1994 to see if it would appeal to American customers. "Overall, consumer reaction to the product was mixed; it did well in some restaurants, poorly in others."

3209. Worthington Foods; Morningstar Farms. 1995. Look what happened when we played with our vegetables (Ad). *Vegetarian Times.* Sept. p. 3,
• ***Summary:*** This is a full-page color ad for Morningstar Farms Veggie Burgers. This ad also appeared in the Nov. 1995 issue (p. 3), in the June 1996 issue (rear cover) and in the May 1998 issue (p. 5) of this magazine.

3210. Oppenheimer & Co., Inc. 1995. Worthington Foods, Inc.: Restructured, refocused and ready for growth; Attractive small-cap dominates segment growth; 50% upside potential; Initiating coverage, added to special research series list. New York, NY. 10 p. Dec. 20.
• ***Summary:*** A very positive assessment of the financial potential of Worthington Foods, America's largest publicly traded natural foods manufacturer. Contents: Investment conclusion. Investment highlights: Divestiture [or refrigerated egg business] focuses operations on growth categories, new products, category growth and expanded distribution should drive top line, projecting 15% revenue growth and faster EPS [earnings per share] growth, discounted valuation provides 50% upside to our $23 price target.

Company description: A leader in natural foods industry with distribution muscle, retaining frozen egg substitute segment for strategic reasons. Growth drivers: Category dominance in rapidly growing segment, benefiting from growth in natural foods industry, new products and expanded distribution, expect more new products in 1996, foodservice building an impressive base. Earnings drivers: Volume growth will be major contributor to earnings, bringing production in house from co-packers will benefit margins, margin expansion should propel earnings growth faster than sales, capacity expansion [at Zanesville facility] prepares for growth, price increase should offset rising commodity costs. Management: Stable management becoming increasingly market oriented. Financials: Earnings up sharply this year, expect continuing earnings strength in 4Q and 1996, strong balance sheet, board declares 5-for-4 stock split. Valuation: Worthington shares appear undervalued on several measures, target price of $23 represents 50% upside. Risk factors. Our quarterly EPS estimates from 1994 to 1997. Price chart. Annual data. Balance sheet. Address: New York.

3211. Worthington Foods, Inc. 1995. Worthington Foods: Worthington & Loma Linda product catalog. 900 Proprietors Rd., Worthington, OH 43085. 6 panels. 28 cm. Undated.
• ***Summary:*** Talk with marketing rep at Worthington Foods. 1997. May 14. This catalog was printed in late 1995. When asked if these products now contain genetically engineered soybeans he says "I don't know. Talk to Ron McDermott." Address: Worthington, Ohio. Phone: 1-800-628-3663.

3212. Battle Creek's gold-in-flakes: The origins of the cereal industry in Battle Creek, Michigan. 4 vols. 1995. Battle Creek, Michigan: Heritage Publications. 22 cm.
• ***Summary:*** This 4-volume work comes bound in a slipcover. The four volumes are: (1) The Battle Creek idea: Dr. John Harvey Kellogg and the Sanitarium. (2) Walking the road to Wellville: C.W. Post and the Postum Cereal Company. (3) Cereal Boom: The cereal gold rush, 1902-1910. (4) The best to you each morning: W.K. Kellogg and the Kellogg Company.

Volume 3 is by Mary Butler, Frances Thornton, Martin Ashley, and Duff Stoltz. In vol. 3 on page 97 is a table listing

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101 cereal manufacturers. No. 60 is the Lambert Nut Food Co. Date of legal incorporation: 1900. Products: Products: Peanut butter crackers, nut products, and machinery for making nut products. Notes: Name changed to Lambert Good Food Co. in 1901. No. 59 is The Lambert Good Food Co., Date of legal incorporation: 1901. Products: Same as above. Notes: Moved factory to Marshall [Michigan] in 1902; dissolved in 1930. No. 60 is another Lambert Co. The name was changed to the Lambert Good Food Company in 1901.

Note: This table of 101 cereal manufacturers in Battle Creek was first published in 1992 in an article titled "A taste of cereal," by Stoltz. An endnote in that article (p. 57) concerning the legal date of incorporation states that "companies often existed before they actually filed legal papers. Conversely, companies filed legal papers of incorporation and then never progressed beyond that stage to manufacture a product." Address: Battle Creek, Michigan.

3213. Bruce, Scott; Crawford, Bill. 1995. Cerealizing America: The unsweetened story of American breakfast cereal. Boston and London: Faber & Faber. xv + 313 p. Illust. Index. 24 cm. [495+* ref]

• ***Summary:*** This well researched and carefully documented history of breakfast cereal in America includes the work of pioneers John Harvey Kellogg, his younger brother Will Keith Kellogg, Charles William Post, etc.

In Chapter 20, "Baby Boomer breakfast," is a good, humorous history of the reincarnation of Granola. The section titled "Johnny Granola Seed" (after Johnny Appleseed), tells how Layton Gentry, in 1965, developed a formula for "Crunchy Granola," then sold the recipe and manufacturing rights to various companies, starting with Sovex, Inc. in Collegedale, Tennessee (owned by the Goodbrad Family)–for $3,000. He also sold the recipe to Lassen Foods of Chico, California (run by Wayne Schlotthauer)–both Seventh-day Adventist food companies.

Jim Matson, who worked for PET Incorporated, saw the product and introduced it nationally in 1972 as Heartland Cereal. Also in 1972 Quaker introduced 100% Natural cereal. Kellogg followed suit with Country Morning, and General Mills launched Nature Valley. Note: Adelle Davis is not mentioned in this chapter. Address: 1. Cambridge, Massachusetts (Publisher of Flake magazine); 2. Writer, Austin, Texas.

3214. Butler, Mary; Thornton, Frances; Ashley, Martin. 1995. Walking the road to Wellville: C.W. Post and the Postum Cereal Company. Battle Creek, Michigan: Heritage Publications. 104 p. Illust. (some color). Photographic index. 22 cm. Series: Gold in Flakes Set: Volume 2 of 4. [7 ref]

• ***Summary:*** John Harvey Kellogg and his brother, W.K. Kellogg, together discovered the wheat flake, but C.W. Post was the first successful breakfast cereal entrepreneur. This series of four books is about the origins of the breakfast cereal industry in Battle Creek, Michigan.

This very interesting book is composed primarily of full-page photos (some color) with captions, preceded by a brief biography.

For a more detailed biography of C.W. Post, see *C.W. Post–The Hour and the Man*, by Nettie Leitch Major (1963).

Charles William Post was born on 26 Oct. 1854 in Springfield, Illinois, the son of Charles Rollins Post and Caroline (Lathrop) Post. He had two brothers. They were all educated in the public schools of Springfield, with extra private tutoring being provided by their mother. At age 13, Charlie entered Illinois Industrial College, the forerunner of the University of Illinois. Although he had shown aptitude for mechanical engineering and other crafts, he dropped out after two years of indifferent grades. He soon joined the Springfield Zouaves, or Governor's Guards.

On 4 Nov. 1874, Charles William Post and Ella Letitia Merriweather were married at Pawnee, Illinois–at the home of her uncle, her parents having died a few years earlier.

In 1881 he established the Illinois Agricultural Works in Springfield, Illinois. The company, which manufactured Post Capital City Cultivators (mechanically) grew rapidly until a scheming banker tried to take control of the fast-growing business. Post's subsequent quarrels and lawsuits with the banker are thought to have been (eventually) the main cause of Post's first severe nervous breakdown and loss of his health in August 1885; he was left with nothing, not even his health, which–for the first time–he clearly realized was his most cherished possession. He slowly recuperated in Springfield.

On 15 March 1887, the Post family's first and only child, Marjorie Merriweather Post, was born in Springfield, Illinois.

In Nov. 1887 the family left Springfield and spent the winter in Santa Ana, California, where the climate seemed to put the finishing touches on Charlie's recuperation. By Feb. 1888, they had settled in Fort Worth, Texas, and before long he was in business again this time in real estate, building a subdivision and selling the homes. But in about Feb. 1890, his health completely collapsed again.

In Feb. 1891, when C.W. Post, with his wife and daughter, arrived in Battle Creek, with chronic health problems, he did not stay at the main building, Dr. J.H. Kellogg's Battle Creek Sanitarium, since the family assets were tied up in Texas real estate. So they rented a nearby cottage while Mr. Post was taking hydrotherapy, exercise treatments, and fresh air at the "San." But Post was not cured. After 10 months of treatment, Dr. Kellogg, director of the Sanitarium, told Ella he could do nothing more to help her husband. Within a day or two he was healed by a Christian Science practitioner; his appetite returned.

In 1892 he purchased the Beardsley farm on the edge of Battle Creek. His plan was to convert the farmhouse

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into his own health spa (LaVita Inn). While a patient at the San, he had tasted Caramel Cereal Coffee, a cereal-based coffee substitute. Like Dr. Kellogg, he believed that regular consumption of coffee was harmful to one's health. In late 1894 he developed Postum, his first food or beverage product, made from roasted wheat, bran, and molasses. On 1 Jan. 1895 C.W. Post and his only employee, Clark "Shorty" Bristol, began commercial production of Postum Cereal (a beverage dry mix) just outside Battle Creek. By late 1895 the product was selling well–thanks to his extensive advertising.

In 1895 the Postum Cereal Co. was established; it was incorporated on 22 Oct. 1896.

In 1898 Post introduced Grape Nuts, a very original product; during the slow baking, the starch was reduced to dextrose or grape sugar.

To help promote his new health cereal, Post wrote "The Road to Wellville," a little pamphlet summarizing his philosophy of healthy living and positive thinking, and attached a copy to each box of Grape Nuts.

By 1900 his first two products were being sold in Great Britain. By 1906 more than 600 employees were working around the clock in Battle Creek, making 6-7 million boxes of cereal a month.

By the early 1900s, Battle Creek turned into a boom-town as dozens of cereal and health food companies sprang up overnight, hoping to imitate the popularity of Post's products.

In 1904 he and his wife were divorced and he married Leila Young.

In 1906 he launched his 3rd product, originally named "Elijah's Manna," but soon renamed Post Toasties.

C.W. Post's business produced one of the largest fortunes of the early 20th century.

Also in 1906 Post, now a millionaire, began to buy large ranches in the Garza County section of Texas. Finally, with more than 225,000 acres he built Post City, Texas, which (when incorporated on 23 March 1907) was a humming tent city intended to be a model city or utopian community–on which Post deliberately made no profits. Although always short of water, the community survived until about 1920.

In the late fall of 1913 the first signs that C.W. Post was not in good health appeared, when he showed signs of strain and depression. In January 1914 he broke down from overwork and mental strain. He retreated to his winter home in Santa Barbara, California. But in mid-March he was rushed across the country on an express train to the Mayo Clinic in Rochester, Minnesota, where on 10 March 1914 he underwent a successful operation for appendicitis. He returned to Santa Barbara.

On 9 May 1914 C.W. Post died [suicide, by a self-inflicted gunshot wound]. He was buried in the C.W. Post Mausoleum at Battle Creek, Michigan.

The ownership of his company and properties passed to his daughter, Marjorie–age 27.

In the early 1920s, Marjorie and her second husband, E.F. Hutton, began acquiring food companies.

1925–The first company magazine, the "Wellville Post," was first published in May 1925. The coined word "Wellville" was used extensively in Postum advertising and publicity. It represented the goal of good health which could be obtained in part by eating good nourishing foods such as the company manufactured. The "Wellville Post" continued until September 1927, and was followed in 1928 by "Postum Magazine,"...

In 1927, an exquisite series of color posters titled "The Road to Wellville," produced by children's artist Carolyn Haywood, illustrate "the stages in the manufacturing of Post health products."

In 1929, when Birdseye "Frosted Foods" was added to the list, the company was renamed General Foods. Thus, amazingly, the roots of General Foods, a large and famous American food company, lie in the Postum Cereal Co., a health food company in Battle Creek, Michigan. Address: Historical Society of Battle Creek, 165 N. Washington Ave., Battle Creek, Michigan 49107. Phone: (616) 965-2613.

3215. Eidlitz, Eliezer. 1995. Is it kosher? Encyclopedia of kosher foods, facts, and fallacies. New York and Jerusalem: Feldheim Publishers. 234 p. Index. 23 cm.

• ***Summary:*** An excellent, comprehensive work. Contents: Preface. Introduction. Kashrus contract. Reliable kosher symbols. Sample of kashrus certificate. History of kosher supervision. Kosher information agencies. Federal & State kosher slaughter laws. Kosher laws from California State Penal Code. Kosher laws from New York State Penal Code. Shechita. Laws of Shechita. Treifos. Traibering (Nikur-deveining). Kashering meat–soaking & salting. Kashering liver. Glatt kosher. Illustrations of kosher animals. The kosher butcher shop. Halachic sources of kashrus. Sources of forbidden foods. Some general laws of Kashrus. Passover (Pesach). The Seder. Kitniyos & Matza Ashira. Kosher for Pesach products. Information booklets. Products to be cautious of for Pesach use. Oils. Eggs. Egg substitutes. Health foods. Israeli foods. Restaurants. Food additives. Additives functions in food ingredients. Flavoring. Food flavor. General food products list. Products that do not require certification. Bakeries. Beverages. Candies. Cheese. Chewing gum. Dairy products. Fish. Multilingual guide to common names of kosher saltwater fishes. Illustrations of some popular kosher fish. Ice cream. Margarine. Marshmallows & gelatin. Snacks. Vitamins. Wines & liquors. Insects in your food. Do you know what you are eating? Vegetable inspection. Methods for inspecting vegetables."

The Preface states: "Prior to the food revolution of over 50 years ago, most food was grown or processed by the person or family who would be eating it... What you saw is what you got. Today, this has changed greatly with

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technology. It is perfectly feasible for a strictly kosher consumer to eat a 'cheeseburger with milkshake' without doing anything wrong. The milk could be from soybeans (pareve) the cheese could be from soybeans (pareve), the ice cream for the milkshake could be from soybeans (pareve), and as a matter of fact, even the bread could be made from soybean."

Page 9 states: "As a matter of fact, it has been estimated that approximately one third of all shelf products in our supermarkets are certified kosher. This makes the kosher industry in the U.S. a 30 billion dollars a year business. Although only a relatively small amount of this is dedicated strictly toward the kosher consumer (about $2 billion), the interest in kosher food is rapidly growing. Some adhere to kosher laws from conviction, such as Seventh-day Adventists, Muslims, and vegetarians."

"In the U.S. alone, there appear to be at least 5 million people who buy products based on their being kosher." 9."

Soybeans appear in the index only once (p. 155); this states that soybeans themselves do not require kosher certification. Soy is not permitted during Passover. Address: Rabbi, North Hollywood, California.

3216. Goldberg, Alan; Thompson, Molly. 1995. The Kellogg brothers: Corn Flake kings (Color videotape). Produced and Directed by Molly Thompson of the Arts Entertainment Television Network. 50 min. *
• ***Summary:*** This is a generally accurate and fair portrayal of the relationship and conflict between the two Kellogg Brothers, Dr. John Harvey Kellogg and Will Keith Kellogg. The video is distributed by: New Video Group, 126 Fifth Ave., New York, NY 10011.

3217. *Natural Foods Merchandiser.* 1996. Worthington Foods expands mainstream ventures. Jan. p. 10.
• ***Summary:*** Worthington Foods has "entered agreements with Denny's, Chili's, International House of Pancakes, Marie Callender's and Subway, to offer its Morningstar Farms meatless burgers, made from either soy or black beans."

3218. *Prepared Foods.* 1996. New food plant construction: Dasi Linda [Riverside, California]. Jan.
• ***Summary:*** Dasi, Inc., headquartered in Rockville, Maryland, purchased the idle facility in the Loma Linda section of Riverside, California, from Nutricia for $2.2 million, then refurbished it at a cost of $8.5 million. The architects/engineers were O'Mally Engineering, Corona, California. Features: The facility includes an 850,000 cubic foot cooler, with initial capacity to produce more than 50 million quarts of fluid annually. "Dasi's patented processing technology permits gentle UHT pasteurization of fluid products while maintaining their taste. Start-up was expected in Dec. 1995. The plant, which 10,000 square feet of processing space, will make UHT and ESL (Extended Shelf Life) milk, and other dairy and non-dairy products in a variety of packages and sizes.

Talk with Robert Madey, vice president for R&D of Dasi. 1996. Jan. 24. Dasi first signed a written agreement with Nutricia concerning the purchase of the Loma Linda food plant in Oct. 1993, and the deal was finalized in Sept. 1994.

3219. Soyfoods Center archival collections, from the 1600s ongoing. 1996. Lafayette, California. [6313 ref]
• ***Summary:*** As of 1 Jan. 1996 the Soyfoods Center Archives contains 6,313 unpublished archival documents–mainly correspondence, interviews, photographs, and unpublished manuscripts relating chiefly to the history of soybeans and soyfoods, and to a lesser extent, the history of vegetarianism and natural foods.

Main subject areas include: early history of soybeans and soyfoods; modern soy protein products; soyfoods industry and market; industrial utilization of soybeans; soy pioneers in the U.S., Europe, and worldwide; major U.S. soybean crushers; Seventh-day Adventists worldwide; pioneer U.S. soy protein companies; pioneer U.S. natural food companies and distributors; soybeans, soyfoods, Third World nations, and world hunger; nutritional and medicinal value of soybeans and soyfoods; and soybean production, trade, and marketing.

Document level access is available through the repository's SoyaScan information retrieval system.

Most important specific subject areas: Miso, natural foods, Seventh-day Adventists, soy sauce, soybean, soybean industry, soybean products, soyfoods, soyfoods industry, soymilk, tempeh, tofu, vegetarianism. Address: P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

3220. **Product Name:** Morningstar Farms Ground Meatless: All Vegetable Burger Crumbles.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1996 January.
Ingredients: Textured vegetable protein (wheat gluten, soy protein concentrate), water. Contains 2% or less of autolyzed yeast extract, natural flavors from non-meat sources, modified food starch, black malt powder, salt, corn starch, garlic powder, sucrose, onion powder, soy sauce (water, soybeans, salt, wheat), tomato powder, spices, vitamins and minerals [niacinamide, iron (ferrous sulfate), vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12 (cyanocobalamin)].
Wt/Vol., Packaging, Price: 16 oz roll (chub pack). 12 rolls per case.
How Stored: Frozen.

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New Product–Documentation: Worthington Foods news release. 1995. Nov. 23. "Ohio company introduces new fat free ground meat alternative." Suggested retail price is $2.99. The product "can be used as a healthy addition to any favorite family meal such as chili, spaghetti sauce, lasagna, and is perfect in casseroles and soups. First shipment is set for Jan. 2, 1996." "Fat is still the primary issue when it comes to consumers' nutritional concerns. Over 60% of all consumers report the reduction of fat in their diet is their number one nutritional concern. More than 100 million American adults are now watching their fat intake. Two out of three grocery shoppers, according to the FMI [Food Marketing Institute], indicated that low-fat, fat-free labels are extremely important in their product purchasing decisions."

Worthington Foods. 1996. First quarter financial report. In Jan. 1996 Worthington introduced Morningstar Farms Ground Meatless, which is a fat-free, cholesterol-free precooked vegetable burger product that can be used in items such as chili, spaghetti, pizza, casseroles, and other recipes. Trade response has been positive.

Product profile sheet sent by Worthington Foods. 1996. May 2. Sheet dated Dec. 1995. "Description: Ground Meatless is a savory blend of textured vegetable protein with the versatility to be used like browned ground beef in all your favorite recipes. Precooked for convenience, Ground Meatless burger crumbles are fat free and do not experience shrinkage like beef." Second quarter financial report. 1996. Aug. "The introduction of MSF Ground Meatless continues and 39% national distribution has been achieved." New product description sheet sent by Worthington Foods. 1996. Aug. 22. An illustration shows the package. "Fat free. Precooked. Use like cooked ground beef in chili, spaghetti, pizza." A table compares the nutritional composition of Ground Meatless and ground beef (100 gm): Cholesterol: 0 vs. 48 mg. Total fat: 0 vs. 11.5 gm. Saturated fat: 0 vs. 4.5 gm. Calories: 60 vs. 160.

Holly McCord. 1996. *Prevention.* Oct. p. 56-57. A Prevention taste panel liked this product very much when it was used in place of ground beef in Sloppy Joes. "Taste and texture excellent. Pretty darned close to ground beef. 8.5 mg isoflavones per ½ cup."

3221. Goel, Vindu P. 1996. Columbus company feasts on a meat-free market. *Plain Dealer* (*Cleveland, Ohio*). Feb. 25. p. 1-1, 3-1.
• ***Summary:*** Worthington Foods has gradually moved into the mainstream as a growing number of Americans look for healthier alternatives to beef and sausage. Worthington makes three different meatless burgers. Several national restaurant chains, including Subway and Dennys, sell Worthington's Low-Fat Garden Vege-Patties.

"Worthington Foods controls about 58% of the meat alternative category nationally," and it had sales of $91 million in 1995, up 13% over 1994. Address: Plain Dealer Bureau.

3222. Epstein, Joseph. 1996. Worthington Foods: Green is good. *Financial World.* Feb. 26. p. 20.
• ***Summary:*** "Growing demand for soy-based meat and egg alternatives may look like just another countercultural fad fueled by restless American youth, but hey, you never know.

"One thing is clear: The 'meat-alternative' segment of the food industry is growing at a 20%-plus annual rate."

3223. Stuttman, Irene. 1996. Re: Sycamore Creek soynut butter to be sold by Worthington Foods. Letter (fax) to William Shurtleff at Soyfoods Center, Feb. 29. 1 p.
• ***Summary:*** Today her company is making its first commercial run of soynut butter to be private labeled for Worthington Foods. Len Stuttman is in Chicago overseeing the co-packer.

Talk with Irene Stuttman. 1996. March 4. This product will be sold retail by Worthington Foods. Sycamore Creek is giving an exclusive agreement to Worthington, which will be able to keep that agreement as long as they maintain sales of a certain amount, renewable for 6 months for a certain period of time. They also have to pay Sycamore Creek whether they sell or not. They will probably roll out with two brands nationally from the start–Morningstar Farms for supermarkets, and Natural Touch brand for health food stores. Worthington's marketing team will soon be getting 5,000 lb. The product should be out in about April, when they have ordered 40,000 lb. "This whole idea to go with Worthington was T&G's. They did a fantastic job. They are on a first name basis with all kinds of people because they are ingredient sales people. Moreover they were the former marketers of Solnuts." Address: Sycamore Creek Co., 200 State St., Mason, Michigan 48854. Phone: 517-676-3836.

3224. **Product Name:** [Rice-Based Drink].
Foreign Name: Reis Drink.
Manufacturer's Name: Bruno Fischer GmbH (Importer-Distributor). Made in Belgium.
Manufacturer's Address: Im Auel 88, D-53783 Aetorf, Germany. Phone: 49-2243-4021.
Date of Introduction: 1996 February.
Ingredients: Water, rice* (9%), sunflower oil*, sea salt, sunflower lecithin, natural vanilla extract. * = Organically grown and controlled.
Wt/Vol., Packaging, Price: 1 liter glass bottle.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Product with Label sent by Bruno Fischer. 1998. April 15. Ingredients and nutritional value are given in five languages, each with the flag of that country by the product name: German, English, Italian, French, and Dutch. Talk with Bruno Fischer. 1998. May 13. This product was launched in Feb. 1996. Note: Imagine Foods ships a rice beverage base to the UK and packages it

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there.

3225. Value Line, Inc. 1996. Worthington Foods [Financial report]. New York, NY. 1 p. Feb. 9. 28 cm.
• ***Summary:*** A concise, detailed financial analysis of Worthington Foods as of 9 Feb. 1996. Address: 220 E. 42nd St., New York, NY 10017-5891. Phone: 1-800-833-0046.

3226. **Product Name:** GranoVita Deluxe Soya Yoghart [Natural, Black Cherry, Strawberry, or Peach & Apricot].
Manufacturer's Name: GranoVita UK Ltd. (Marketer-Distributor). Made in Germany by DE-VAU-GE Gesundkostwerk GmbH.
Manufacturer's Address: Granovita UK Ltd., Ambron House, Eastfield Road, Wellingborough, Northants NN8 1QX, UK. DE-VAU-GE, Luener Rennbahn 18, Postfach 1660, D-2120 Lueneburg (near Hamburg), West Germany.
Date of Introduction: 1996 March.
Wt/Vol., Packaging, Price: 125 gm plastic cup with peel-off foil lid. Retails for £0.37.
How Stored: Refrigerated.
New Product–Documentation: Soyafoods (ASA, Europe). 1996. Spring. p. 4. "Granovita launches Soya Yogharts." These are ambient stable products with a shelf life of 4 months. They contain real fruit with no added sugar, artificial color, or preservatives. A photo shows cups (and labels) of the four different flavored products.

Note: In late 1990, DE-VAU-GE, a Seventh-day Adventist health food company in Germany, set up GranoVita UK Ltd. as a UK subsidiary after the Haldane Foods Group purchased their UK distributor, Granose Foods Ltd.

3227. Worthington Foods, Inc. 1996. Annual report 1995. 900 Proprietors Rd., Worthington, OH 43085. 16 p. 28 cm.
• ***Summary:*** Total sales rose to $91.1 million in 1995, up 13.4% from $88.2 million in 1994. Net income (profit) rose to $5.231 million in 1994, up 20.8% from $4.33 million in 1994. Gross margins improved from 37% in 1994 to nearly 40% in 1995. All three of these 1995 figures were new company records.

Sales of Morningstar Farms (MSF) meat alternative products in retail (supermarket) stores grew by 27% in 1995, increasing by 37% in the 4th quarter alone. The MSF Breakfast Links, now a low-fat product with only 2.5 gm of total fat, has become the best-selling meat alternative product in U.S. supermarkets.

"Foodservice was another bright spot for the Company in 1995. Led by sales agreements which came late in 1995 with over 4,000 new restaurants, including Subway, Denny's, Chili's, Pizzeria Uno, and Marie Callender's, total Foodservice sales increased during the fourth quarter by 43% with sales up 35% for 1995. The strong broker and distributor network assembled in 1994 is starting to pay returns."

By the beginning of the second quarter 1996 the Zanesville plant will start producing meat alternative products.

Note: Talk with George Pfau, stock and bond broker at PaineWebber (San Francisco, California). 1996. April 23. The company's growth in sales and profits from 1991 to 1995 has been good but not spectacular. Dale Twomley, president & CEO, is age 56. William Kirkwood, executive VP and chief financial officer, is age 47. Allan Buller, chairman of the board, is age 78. Their earnings per share fell each year from 1991 to 1993. They haven't raised their dividend for years: it has been $0.10 per share since 1992. In Dec. 1995 Oppenheimer wrote a very positive report about Worthington.

Talk with Joan Lieb of Worthington Investor Services. 1996. 1996. April 23. Two underwriters took the company public: William Blair & Co. (Chicago, Illinois) and The Ohio Co. (Columbus, Ohio). The initial public offering (IPO) was in Dec. 1992; the stock opened at $12.00. Oppenheimer, which has done several more reports since their first one in Dec. 1995, is completely objective and has nothing to gain if Worthington stock rises. Address: Worthington, Ohio. Phone: (614) 885-9511.

3228. Worthington Foods, Inc. 1996. First quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.
• ***Summary:*** Net sales for the first quarter of 1996 rose 16% over the same period in 1995, net income rose 21%, and earnings per share rose 18%. The Zanesville $9 million capital expansion project was completed and contract manufacturing arrangements (which contributed to reduced gross margins during the past 3 quarters) have been terminated. Worthington began production of Better'n Burgers and other hot-air oven products at the Zanesville, Ohio, facility on 1 April 1996.

Morningstar Farms Prime Patties are now available as a low-fat item. The total fat content has been reduced to only 2 gm and the flavor and texture have been improved to be even more "hamburger like." They are now in production and will begin to appear on supermarket shelves in the coming weeks.

In Jan. 1996 Worthington introduced Morningstar Farms Ground Meatless, which is a fat-free, cholesterol-free precooked vegetable burger product that can be used in items such as chili, spaghetti, pizza, casseroles, and other recipes. Trade response has been positive.

"Foodservice sales continue to grow rapidly as a result of new accounts, which included 4,000 restaurant units added during the fourth quarter of last year." Worthington VegiMax is now sold in about 1,500 Subway units. "Sales to Chili's have been brisk and Denny's sales are also improving." Address: Worthington, Ohio. Phone: (614) 885-9511.

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3229. Worthington Foods, Inc. 1996. Morningstar Farms meatless restaurant guide (Leaflet). Worthington, Ohio. 1 p. Single sided. 28 cm.
• ***Summary:*** This glossy color leaflet is produced by the Morningstar Farms, Foodservice Division of Worthington Foods. "Now you can enjoy delicious Morningstar Farms products in many of your favorite restaurants... here are just a few. National: Chili's, Denny's, IHOP*, Subway*, Blimpie*. * = In participating restaurants only." Restaurants are then listed by region: East (26, incl. World Trade Center). Southeast (10). Southwest (4). Midwest (22). Central (4). West (21, incl. Candlestick Park and Oakland Coliseum–baseball stadiums in California).

Talk with Joan Lieb of Worthington Foods. May 22. This list was published on March 1, and is current as of that date.

This leaflet also appeared unchanged in the June 1996 issue of *Vegetarian Times*, p. 110. Address: 900 Proprietors Rd., Worthington, Ohio 43085. Phone: (614) 885-9511.

3230. Worthington Foods, Inc. 1996. Worthington Foods, Inc. announces new foodservice accounts (News release). Worthington, Ohio. 1 p. April 24.
• ***Summary:*** "Worthington Foods, Inc. (NASDAQ: WFDS) today announced the Company has been authorized to sell its Morningstar Farms VegiMax meatless sub product in 1,500 Blimpie restaurants nationwide and 4,000 Subway locations in 19 markets in the U.S. Additionally, Morningstar Farms` Spicy Black Bean Burger was recently approved by Subway's corporate office for all locations.

"Worthington Foods entered the Foodservice category in 1990 and significantly increased its commitment to the industry through the addition of a nationwide network of regional sales managers, food brokers and foodservice distributors. This was in response to greatly increased demand for excellent tasting, low fat, meatless entrees. Over 7,000 restaurants now serve a Morningstar Farms product.

"For the first three months of 1996, net sales increased 49 percent for Foodservice compared with a year ago. During the fourth quarter of 1995, the Company began shipping Morningstar Farms products to Denny's, Chili's, Pizzeria Uno and Marie Callender's restaurants throughout the U.S.

"Worthington Foods, Inc., located in Worthington, Ohio, is the world's largest company dedicated to producing and marketing meatless and other healthful food products." Address: Worthington, Ohio.

3231. *SoyaScan Notes.* 1996. Who is making Westbrae's soymilk (Overview). May 3. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** Until recently, Westbrae's soymilk (not including its Malteds) was being made by several different companies in different parts of the USA: (1) Most of it was made by Pacific Foods of Oregon, in Tualatin, Oregon. (2) Some of it was made by Nutricia at the old Loma Linda Foods plant in Mt. Vernon, Ohio. (3) Not long after that plant was taken over by Carnation / Nestle, Westbrae's production was shifted to Bill Bolduc in Ohio. In mid-1993 he purchased a small soymilk plant at which he made plain, unpasteurized/unsterilized soymilk, then sent it northward to Parmalat Foods (5252 Clay Ave., Wyoming, Michigan 49548. Phone: 616-538-3822). Parmalat is a huge and very significant Italian food company that is the biggest user of Tetra Pak Aseptic packaging in the world. Parmalat packaged the soymilk for Westbrae. As of May 1996, none of the above 3 companies make soymilk for Westbrae any longer.

Then in mid-1995 Bolduc was forced to declare bankruptcy, and apparently the relationship between Westbrae and Pacific Foods was not satisfactory for Westbrae. So Westbrae approached Raj Gupta at ProSoya Inc. in Ontario, Canada. In late April 1996 ProSoya started to make Westbrae's soymilk, apparently using their full capacity of 1-2 tankers a week, which is about 45,000 pounds or 20,000 liters a week. The product is probably shipped to Farmland Dairies, a packer in New Jersey, where it is packed in Westbrae's new 2-liter Combibloc cartons. ProSoya in Ottawa is also obligated to do quite a bit of R&D work for the Canadian government. It is not clear why or what kind of compensation they receive for this.

The rest of Westbrae's soymilk is made by Northern Milk Products (related to SunRich) in Alexandria, Minnesota. Several tankers a week are shipped to Parmalat in Michigan.

ProSoya would like to set up a soymilk plant with Westbrae (probably in the USA) on a joint venture basis.

3232. Roller, Ron. 1996. How American Soy Products (ASP) disposes of the okara resulting from making Edensoy (Interview). *SoyaScan Notes.* May 10. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** ASP is the largest manufacturer of soymilk in North America. Located in the rural city of Saline, Michigan (population 6,500; about 9 miles south of Ann Arbor), they are bounded on the south and west by diversified agricultural land. The ASP plant produces about 1,000 lb/hour of okara, which contains on average 80% water (range 78-82%) and 6.7% protein. The okara comes out of a high-speed decanter. 100 lb of dry soybeans yields 75-100 lb of okara. Ron has an arrangement with one farmer, who owns two large trucks, who comes to the plant each night in one of the trucks, leaves it under the okara spout, and drives the full truck away. These two trucks are used only for hauling okara. ASP pays this man a significant amount of money (which is confidential) each year to haul the okara; in fact Ron estimates that the money may be of more value to the farmer than the okara itself. Ron estimates that this farmer composts

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about 90% of the okara and adds the remaining 10% to feed for his milk cattle. Cattle are pretty sensitive to a change in their diet, and the wet okara is hard to mix. Ron believes it would be much more difficult and expensive to dispose of okara from a city plant than from his in the countryside.

All of the okara must be hauled away regularly every day. This is the most important thing! The operation must be organized and the person doing the hauling must be reliable. If he missed even one day, it would a nightmare! The okara piles up so fast and Ron would have no idea of what to do with it. The local dump wouldn't take it. The okara freezes in the winter and ferments (putrefies) in the summer.

The amount of okara that ASP produces each year is steadily growing, so Ron is now doing research and planning for the future. The best option appears to be drying the okara then selling it as an ingredient in organic livestock or pet feeds–but they have not yet found a dependable outlet, and dependability is–again–the key. With a dependable outlet, Ron believes they could pay for the drier and make money on it. They have also looked at pelletizing. Drying requires both a large initial investment in a continuous process operation (ideally made with stainless steel so the dried okara would be food grade) and use of a large amount of energy to remove all that water. On a moisture free basis, okara contains 34% protein (of very high quality) and 49% carbohydrates. Okara with 10% moisture (a realistic figure after drying) contains 32% protein and 37% carbohydrates. Outlets for dried okara in food might include use in a burger, in breads and muffins, etc. Worthington Foods has made their Natural Touch Okara Patties since March 1984; okara is the 4th ingredient in order of predominance. Northern Soy has made Soyboy Okara Courage Burger since April 1995; okara is the 3rd ingredient. Many companies make Soysage. Address: President, American Soy Products, 1474 N. Woodland Dr., Saline, Michigan 48176. Phone: 313-429-2310.

3233. Kuhn, Mary Ellen. 1996. Soy in the spotlight: Disease-fighting benefits may change the image of the once-lowly bean. *Food Processing* (*Chicago*). May. p. 52-53, 55, 58.
• ***Summary:*** This is a cover story; on the cover is written: "Unlocking the secrets of soy," with four large color photos. The article begins: "What a difference a couple of decades make." Twenty or 30 years ago, most foodservice operators and consumers used soy with hesitation, sometimes scornful comments. "Today, however, the once-maligned soy protein has a much better image, thanks to a fast-mounting stack of research data suggesting it may help prevent and treat high blood cholesterol, cancer, osteoporosis, and symptoms of menopause." And this good news has begun to reach health and nutrition professionals. With better products on the market, "soyfoods marketers may soon be dealing with a new generation of mainstream consumers who–far from spurning soy-based products–actively seek them out.

"Much of the current soy research is focused on isoflavones, a unique class of phytoestrogens or plant hormones found primarily in soy protein." The main soy isoflavone is genistein. Now soyfoods manufacturers are starting to take isoflavone content into consideration when they formulate, label, and promote their products. The isoflavone content of unprocessed soybeans can vary considerably among varieties, years, and place of harvest. Heat treatment does not appear to significantly reduce isoflavone content, but an alcohol wash (used with most soy protein concentrates and isolated soy proteins) removes most isoflavones in the product. The well-known Supro brand of isolated soy proteins are not subject to an alcohol wash, which helps preserve their isoflavone content.

Rick McKelvey, president of the Soyfoods Association of America, has attended the American Dietetic Association show for the past two years. Last year, most of the questions he heard were: "What is this soy stuff that I'm hearing about?" This year's questions concerned the level of isoflavones in specific products. "This shows how far we've come in the bast year," he observes.

ADM, which could easily extract isoflavones from soybeans and sell them has decided not to do so. Jerry Weigel, PhD, who is ADM's vice president of corporate nutrition and regulatory affairs thinks it is probably not legal to sell isoflavones because they do not have GRAS (Generally Recognized as Safe) status or food additive status. Few soyfoods marketers are presently publicizing the isoflavone or genistein content of their products or making specific health or disease-prevention claims.

William Helferich, PhD, an associate professor at Michigan State University's Department of Food Science and Human Nutrition, has been studying dietary phytoestrogens in laboratory animals for 3 years. He has found that "genistein can stimulate estrogen-responsive breast cancer-cell growth in cultured cells and in animals implanted with these cells. He believes that women at risk for estrogen-dependent forms of breast cancer should not consume high levels of phytoestrogens." Most researchers are concerned about consumers taking isoflavone supplements or pills. Yet such products are now on the market and they acknowledge that some consumers will be attracted to them, instead of simply increasing the level of soyfoods in their diet, eating a healthful, balanced diet, and living and healthy lifestyle. Photos show: A jar of Morningstar Farms Roasted Soy Butter (soynut butter) which will be introduced this spring. Jan Remak, president of marketing for Vitasoy U.S.A.

One sidebar, titled "Probing the soy/health connection," discusses the research of Dr. James Anderson and Mark Messina, PhD. "Scientists theorize that phytoestrogens in soy might help compensate for the loss of hormonal estrogen women experience at menopause."

Another sidebar, "Boom times for the bean," notes that starting soon after the research study by Dr. James

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Anderson was published in August 1995, many soyfoods companies experienced a substantial increase in sales. Peter Golbitz notes that "After years of steady 10% to 15% annual growth, soyfood sales have soared by about 30% in the past year... Many marketers of meat and dairy analogs are reporting sales increases of more than 100%." A 1995 study by the Soyfoods Association of America found that 75% of Americans have heard of tofu, 55% of soymilk, and 50% of soy burgers. Golbitz adds that in Australia, where soymilk based on soy protein isolates is widely available, per capita soymilk consumption is at least three times what it is in the USA. Vitasoy has adopted a niche-market approach to selling its soymilk; it adjusts the amount beany taste according to the taste preferences of each market. Address: Senior Editor.

3234. **Product Name:** Morningstar Farms Prime Patties (Low Fat–Reformulated).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1996 May.
Ingredients: Textured vegetable protein (soy protein concentrate, wheat gluten), egg whites, calcium caseinate, natural and artificial flavors from non-meat sources, autolyzed yeast extract. Contains 2% or less of modified food starch, sucrose, hydrolyzed soy protein, onion powder, soy protein isolate, salt, potato starch, yam flour, partially hydrogenated soybean and cottonseed oil, caramel color, cellulose gum, soy extractives, maltodextrin, ascorbic acid, lactic acid, disodium guanylate, vitamins and minerals [niacinamide, iron (ferrous sulfate), vitamin B-1 (thiamine mononitrate), vitamin B-6 (pyridoxine hydrochloride), vitamin B-2 (riboflavin), vitamin B-12 (cyanocobalamin)], spices.
Wt/Vol., Packaging, Price: 11 ox paperboard box.
How Stored: Frozen.
Nutrition: Per patty (780 gm): Calories 110, calories from fat 20, total fat 2 gm (3% daily value; saturated fat 0 gm), cholesterol 0 mg, sodium 300 mg (13%), potassium 170 mg, total carbohydrate 5 gm (dietary fiber 3 gm [12%], sugars less than 1 gm), protein 19 gm. Vitamin A 0%, calcium 6%, thiamine 40%, niacin 6%, viatmin B-12 60%, vitamin C 4%, iron 15%, riboflavin 20%, vitamin B-6 20%. Percent daily values are based on a 2,000 calorie diet.
New Product–Documentation: Worthington Foods. 1996. First quarter financial report. Morningstar Farms Prime Patties are now available as a low-fat item. The total fat content has been reduced to only 2 gm and the flavor and texture have been improved to be even more "hamburger like." They are now in production and will begin to appear on supermarket shelves in the coming weeks.

Photocopy of label sent by Worthington Foods. 1996. May 2. Below the product name is written: "87% less fat than hamburger. Big juicy burger taste. Vegetable & grain protein patties. Low fat."

3235. Messina, Mark J. 1996. Thoughts on pills containing soy isoflavones, and the use of soy in place of estrogen replacement therapy (ERT) (Interview). *SoyaScan Notes.* June 4. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** What does Mark think about all the pills containing soy isoflavones (such as genistein, often in the form of "soy germ" from SoyLife / Schouten) that are starting to flood the market. They could cause serious problems. In the most recent issue of the *Soy Connection*, Mark has written about these pills. Recently Laurent Leduc of Schouten USA Inc. in Minnesota (phone: 612-920-7700) hired Mark to speak to ten employees at Nature's Way, because they are coming out with the pills. He made a video of the speech to be used by their sales people. Laurent may hire Mark to go to the Netherlands or Germany after the Brussels symposium to give a presentation there as well. If a major company offered Mark a year-long, lucrative contract to give one speech every two weeks to promote one such pill containing genistein, he definitely would not accept it. If he told people the truth, they would ask him to stop mentioning all the negative aspects.

Another problem with these pills, besides the philosophical one, is that the concentration of genistein is really tiny; its all daidzein and glycitein. Of the 20 mg per pill of soy isoflavones, only about 2 mg are genistein, because the composition of isoflavones in the hypocotyl [sprout] is different from that in the rest of the soybean. So if you're buying the pills because you want genistein, you must take 10 pills a day to get enough genistein to matter, whereas if you think just in terms of isoflavones, two pills is enough. From an anticancer perspective, most researchers are focusing on genistein. Some 600 papers have been published in the last 2 years on genistein; there were probably 50 or less on daidzein. Mark manually goes through *Current Contents* periodically, but now actually gets no more than about 50 genistein papers a year, because they are quite similar, and usually involve *in vitro* studies (in test tubes and petri dishes), whereas animal studies are needed.

If a company were to introduce concentrated genistein as a commercial product, Mark believes there is the potential for significant damage to the soyfoods industry and the image of soy. Mark thinks the idea of "adding genistein to this and that is absolutely insane."

Concerning the use of soy for estrogen replacement therapy, this is complex. ERT does raise a woman's risk for breast cancer. But taking soy may not eliminate that risk in postmenopausal women. However ERT has several major benefits; it decreases heart disease risk by 50% and fracture rate (osteoporosis) by 50% as well. So if a woman wants to just relieve hot flashes, night sweats, etc. and is not concerned about cardiovascular disease and osteoporosis, then Mark would suggest that she try soy; if it works, good.

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But if the woman and is concerned about cardiovascular disease and osteoporosis, then Mark cannot recommend soy over ERT. We just don't know enough about soy in these areas.

When you look at all the studies from a very objective viewpoint, Mark just doesn't see what people find so exciting about soy in many respects at this point. It is very intriguing because of what the isoflavones may do; they were hypothesized to do all sorts of different things and soy has so much of the isoflavones, especially a food like tofu–which is the only place a typical consumer can get enough isoflavones except for these pills. So in conclusion, Mark strongly that soyfoods can and should be a very important part of a healthy vegetarian diet. But perhaps one can get the same effects on a Mediterranean diet in terms of lipid profile and cancer risks.

It is becoming extremely difficult for Mark to present his soy lectures to dietitians which the United Soybean Board (USB) has hired him to do for the past year. He is not greatly disappointed that they dropped him because of a chapter that appears in his and Ginny's new book *The Vegetarian Way* that talks about animal rights.

Hans Diehl is a Seventh-day Adventist and a vegan who is setting up what he calls the CHIPS Program, an integrated approach to health, in various cities across America. Now a main center of his activity is in Kalamazoo, Michigan. Twice a year he goes there, works with the local hospital and restaurants, gives 4-week intensive programs of smoking cessation, weight loss, diet change, exercise, etc. It's really great and he tries to get the whole town involved. Mark speaks with him from time to time, last time to about 500 people. He sold a lot of books. Mark's thing is to say "Soy is good and vegetarianism is good," but he is increasingly aware of the complexity of the argument. For example, he does not feel that small amounts of meat or white rice are bad for the health of other people. This type of honesty bothers many other vegetarians, who usually do not have a strong scientific background.

Mark will soon start editing a peer-reviewed journal on vegetarianism to be published in England and targeted to health professionals. Unfortunately the subscription price will be very expensive, beyond what many dietitians could afford. This will give him a valuable and prestigious affiliation, bring in editors fees of about $2,000 a year, and could lead to speaking invitations. Address: PhD, 1543 Lincoln St., Port Townsend, Washington 98368. Phone: 360-379-9544.

3236. Harvest Direct, Inc. 1996. Harvest Direct: Food you can live with [mail order catalog]. Knoxville, Tennessee. 16 p. 27 x 16 cm.

• ***Summary:*** Contents: Salad dressings. Meals in a minute (Fantastic Foods). Ground meat alternatives (Protean–The versatile replacement for ground meat, Harvest Direct). Soups, spices, condiments. TVP. Ribs, tofu & tofu meals (Fantastic Foods, Mori-Nu, Arrowhead Mills). Meat Alternatives (Worthington Foods, Fantastic Foods). Soup & meal cups. Beans & Beano. Pasta & sauces. Breads & baked goods. Substitutes for sugar, eggs & fat. Dairy alternatives. Baby foods. Glassware. Gift baskets.

On the cover are nine round, dark brown patties arranged in a circle on a blue and white plate. In the center is a sliced red grapefruit, with a strawberry at its center, blueberries scattered around the periphery, and one sprig of celery. Address: P.O. Box 988, Knoxville, Tennessee 37917. Phone: 1-800-835-2867.

3237. **Product Name:** Morningstar Farms Veggie Burger Kit [Garden Grille, or Southwestern].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1996 June.
Wt/Vol., Packaging, Price: 9.5 oz (268 gm) paperboard box.
How Stored: Shelf stable.
New Product–Documentation: Worthington Foods. Second quarter financial report. 1996. Aug. "Veggie Burger Kits have just started appearing in a few produce sections of supermarkets. It is too early to determine the sales potential of this product, but it has generated a lot of interest with newspaper food editors."

Talk with Joan Lieb of Worthington Foods. 1996. Aug. 22. This product was introduced on 1 June 1996. Two product description sheets sent by Worthington Foods. 1996. Aug. 22. (1) "Create healthy profits! Grow impulse sales in your veggie patch." The products are sold in a Prepack Shipper Display Case, including 48 units. This is meant to be placed near the high-margin pre-cut vegetables. The text on the case reads: "Fat free. Create your own fresh veggie burgers in minutes! Just add fresh veggies." The text on the front of the package reads: "Ready in minutes. Just add fresh veggies. Makes 4 servings." Note: The words "Dry mix" do not appear. (2) "Veggie Burger Kit: Garden Grille & Southwestern." Talk with Trudy of Worthington Foods. 1996. Oct. 3. (1) This is a dry mix. (2) Each box contains two packages; one contains soy protein granules and one that contains flavors and binders. The box does not contain any buns. (3) The consumers mixes the contents of the two packets, adds water, makes a patty. Then has to supply their own buns and vegetables. Note: This literature is extremely unclear and confusing on what this product is. Nowhere in the literature or on the front of the package is the information provided by Trudy given.

3238. Beeley, Robert A. 1996. A brief history of Dixie USA and the company philosophy (Interview). *SoyaScan Notes.* July 31. Conducted by William Shurtleff of Soyfoods Center.

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• ***Summary:*** Forty some years ago, Robert started out with a burning interest in emergency medicine. This continued into the Air Force, where he was in the medical corps, teaching for the American Heart Association, etc. About 20 years ago he started Dixie USA as an emergency medical supply company. The company has done very well and Robert is still in that business, but it is tapering off for many reasons, none the least of which is the consolidation in the medical industry, etc.

About 15 years ago Brenda Oswalt, joined the company as an equal partner with Robert–primarily for her artistic, writing, and publishing skills. She was raised a Seventh-day Adventist and was trained at the Cordon Bleu in France as a chef. About 2-3 years ago they saw the handwriting on the wall as far as the medical part of their business is concerned, so they said: We've been treating these poor people all this time, why don't we start trying to help prevent their problems." One thing led to another and now they are very much into the preventive food business by mail order. They kept the same company, Dixie USA, but now have two product lines and two catalogs. But their approach is quite different from most others who are in the so-called health food business. They have a couple of key rules: (1) "If it doesn't taste excellent, we will not get involved with it." People should enjoy eating and shouldn't have to look at it as some kind of task they have to endure. Meal time should be an enjoyable time with family and friends–a glass of wine if you want. (2) "Once a week you can go out and blow the whole thing if you want to. Eat a big steak if you must. We're trying to tell people that you can have a healthier lifestyle and still enjoy life. Splurging one day a week won't hurt you at all. Eating soy the next day will help you flush out whatever toxins are left in there. We're very pragmatic people here.

They have developed a lot of their own recipes and today they have almost new 10,000 customers on their food mailing list. After they started the company, Mark Messina's book, *The Simple Soybean and Your Health* was quite influential in focusing their interests on soy. Dixie USA now sells quite a few of Mark's books. Brenda talks with Mark at length about once a week, sharing information. Fat Not! Crème It (Soy Powder) is a tofu powder made by Clofine. Brenda developed a great recipe for using it and now it is one of the company's best sellers. They also sell Mori-Nu Tofu. Beef (not!) is ADM TVP. Address: Chairman, Dixie USA Inc., P.O. Box 55549, Houston, Texas 77255. Phone: 713-688-4993 or 1-800-233-3668.

3239. **Product Name:** Morningstar Farms Roasted Soy Butter [Reduced Fat].
Manufacturer's Name: Worthington Foods, Inc. (Marketer-Distributor). Made by Sycamore Creek Co.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085. Phone: 614-885-9511 or 1-800-628-3663.
Date of Introduction: 1996 July.
Ingredients: Roasted soybeans, soybean oil, corn syrup solids, soy protein isolate, sugar, salt, mono- and diglycerides.
Wt/Vol., Packaging, Price: 18 oz (510) plastic (PET) jar.
How Stored: Shelf stable.
Nutrition: Per 2 tablespoons (32 gm.): Calories 175, calories from fat 100, total fat 11.0 gm (17% daily value; saturated fat 1.5 gm), cholesterol 0 mg, sodium 170 mg (7%), total carbohydrates 10.5 gm (dietary fiber 1.0 gm [4%], sugar 2.5 gm), protein 8.0 gm (16%). Percent daily values are based on a 2,000 calorie diet.
New Product–Documentation: Letter (fax) with Label from Irene Stuttman of Sycamore Creek Co. 1996. Feb. 29. Today her company is making its first commercial run of soynut butter to be private labeled for Worthington Foods. Len Stuttman is in Chicago overseeing the co-packer.

Mary E. Kuhn. 1996. Food Processing (Chicago). May. p. 55. "Soy in the spotlight." A photo shows a jar of Morningstar Farms Roasted Soy Butter. On the label, below the product name, is printed: "A good source of soy protein. Contains no peanuts." A snipe in the upper right corner reads: "Reduced fat: 33% less fat than peanut butter."

Talk with Irene Stuttman of Sycamore Creek. 1996. June 11. Worthington will sell this product under two brands. The Natural Touch product, sold to natural- and health-food stores, should be on the market this month (June). The Morningstar Farms brand, sold to supermarkets and other mainstream consumers, should be out by July.

Label sent by Irene Stuttman. 1996. Aug. 9. 9 by 3 inches. Self adhesive. Red, blue, and yellow on green and white. Subtitle: "Made from roasted soybeans. Contains no peanuts." Snipe: "Reduce fat–31% less fat than peanut butter."

Spot in *Soybean Quarterly* (Nebraska Soybean Board, Lincoln, Nebraska). 2(3):5. Aug. 1996. This product is made by Sycamore Creek Co.

3240. **Product Name:** Natural Touch Roasted Soy Butter [Reduced Fat].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Road, Worthington, OH 43085. Phone: 614-885-9511 or 1-800-628-3663.
Date of Introduction: 1996 July.
Ingredients: Roasted soybeans, soybean oil, corn syrup solids, soy protein isolate, evaporated can juice, salt, mono- and diglycerides.
Wt/Vol., Packaging, Price: 18 oz (340 gm) jar.
How Stored: Shelf stable.
Nutrition: Per 2 tablespoons (32 gm.): Calories 175, calories from fat 100, total fat 11.0 gm (17% daily value; saturated fat 1.5 gm), cholesterol 0 mg, sodium 170 mg

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(7%), total carbohydrates 10.5 gm (dietary fiber 1.0 gm [4%], sugar 2.5 gm), protein 8.0 gm (16%). Percent daily values are based on a 2,000 calorie diet.
New Product–Documentation: See next page. Talk with Irene Stuttman of Sycamore Creek. 1996. June 11. Worthington will sell this product under two brands. The Natural Touch product, sold to natural- and health-food stores, should be on the market this month (June). The Morningstar Farms brand, sold to supermarkets and other mainstream consumers, should be out by July.

Label (faxed copy) set by Irene Stuttman. 1996. June 20.

Label sent by Irene Stuttman. 1996. Aug. 9. 9 by 3 inches. Self adhesive. Green, red, and yellow on tan and white. Subtitle: "Made from roasted soybeans. Contains no peanuts." Snipe: "Reduce fat–31% less fat than peanut butter."

Leaflet (front and back, 8½ by 11 inch, color) sent by Patricia Smith from Natural Products Expo West (Anaheim, California). 1997. March.

Leaflet. 1999. March. Gives nutritional facts and photo of jar with label.

3241. Worthington Foods, Inc. 1996. Second quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.
• ***Summary:*** Net sales for the second quarter of 1996 rose 20% over the same period in 1995, net income rose 46%, earnings per share rose 43%, and gross profit improved one full percentage point, as a percentage of net sales, to 39.1%. Sales of meat alternative products in the Supermarket and Foodservice categories increased 34% and 48% respectively. Foodservice sales were up at Subway units, and the Chili's and Denny's restaurants. Nationwide, the meat alternatives category is growing at about 32% a year. During the most recent quarter the company began full operation of its Zanesville, Ohio facility and eliminated contract manufacturing agreements. A second shift was added at Zanesville and 3 additional shifts are being added at the Worthington plant.

The introduction of MSF Ground Meatless continues and 39% national distribution has been achieved. Veggie Burger Kits have just started appearing in a few produce sections of supermarkets. "Three new MSF Low-Fat Breakfast Sandwiches are currently being introduced in selected markets. These hand-held sandwiches are ready for heat-and-run."

Sales to natural food stores increased 32%. "Recently we converted all of our sales to natural food stores to a national broker network that we manage... Last month three new products were introduced to this market–the Natural Touch version of Spicy Black BeanBurger, Roasted Soy Butter that tastes like peanut butter with 31% less fat, and a cappuccino version of our coffee substitute, Kaffree Roma." Address: Worthington, Ohio. Phone: (614) 885-9511.

3242. **Product Name:** Morningstar Farms Breakfast Bagel Sandwich [Scramblers–Pattie–Cheese].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1996 August.
Ingredients: Breakfast patty: Textured vegetable protein (wheat gluten, soy protein concentrate and isolate), egg whites, sodium caseinate, modified food starch, soybean oil...
Wt/Vol., Packaging, Price: 5 oz (146 m) paperboard box. Retails for $2.19 (1997/05, Lafayette, California).
How Stored: Frozen.
New Product–Documentation: Worthington Foods. Second quarter financial report. 1996. Aug. "Three new MSF Low-Fat Breakfast Sandwiches are currently being introduced in selected markets. These hand-held sandwiches are ready for heat-and-run."

Talk with Joan Lieb of Worthington Foods. 1996. Aug. 22. This product is scheduled to be introduced in Sept. 1996.

Talk with Trudy at Worthington Foods. 1996. Oct. 3. This product is sold frozen, mostly to grocery stores–not to restaurants or foodservice. Worthington started shipping in early August.

Product with Label purchased at Safeway supermarket in Lafayette, California. 1997. May. 4. Price: $2.19. Sold in the "Breakfast Foods" freezer section. Paperboard box. Red, yellow, blue, and orange on green. A color photo shows the product on a white plate with kiwi slices. "Low fat." Soyfoods Center taste test. 1997 May 4. The flavor is okay, but the product seems overpriced.

3243. Highman, Jay. 1996. Worthington's policy on licensing technology to other companies. Thoughts on building a plant overseas. New Web page under development (Interview). *SoyaScan Notes.* Sept. 3. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Worthington does not license technology to other corporations, mainly for two reasons: (1) There are many top secret techniques used in the technology, and, (2) The company is focusing all of its resources (money and attention) on keeping up with demand in the domestic market. They do a large export business, to countries such as Taiwan and the United Kingdom. Not much is exported to Australia because Sanitarium Foods makes similar products there.

Worthington is not considering construction of an overseas plant (as in England) because the domestic market is their first priority. "We're having a hard time keeping up with demand." Jay thinks there is a big market in the UK, and there could be a long-term opportunity there. Roughly 60% of the reason for not looking overseas is related to money and the other 40% would be the loss of focus from trying to do two things at once.

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Reduced Fat

NaturalTouch.

Roasted SoyButter™

- *Smooth and creamy with delicious roasted flavor. Use like peanut butter on sandwiches or in recipes.*
- *Roasted SoyButter has 31% less fat than regular peanut butter and 50% less saturated fat.*
- *Contains 6 grams of soy protein per serving. Research indicates that soy protein eaten daily may help prevent heart disease, breast cancer & osteoporosis.*
- *For those allergic to peanuts, Roasted SoyButter is a delicious alternative.*

NUTRITIONAL COMPARISON	NT SOYBUTTER	PEANUT BUTTER
Total Fat	11g	16g
Fat Calories	100	140
Saturated Fat	1.5g	3.0g
Soy Protein	6g	0g

Nutrition Facts

Serving Size 2 Tbsp (32g)
Serving Per Container 11 (12oz)

Amount Per Serving	
Calories 170	Fat Calories 100
	% Daily Values
Total Fat 11g	17%
Saturated Fat 1.5g	8%
Polyunsaturated Fat 6g	
Monounsaturated Fat 2.5g	
Cholesterol 0mg	0%
Sodium 170mg	7%
Total Carbohydrate 10g	4%
Dietary Fiber 1g	4%
Sugars 3g	
Protein 6g	
Vitamin A 0% • Vitamin C 0%	
Calcium 0% • Iron 2%	

*Percent Daily Values are based on a 2,000 calorie diet.

UPC
0 28989 23005 8
Product Size
18 oz.
Case Dimension
12.75"x 9.75" x 5.75"
Cube
.35
Case Weight
14 lb.
Gross Weight
2940 lb.
Pallet Tie & Tier
15 x 14
Cases/Pallet
210

INGREDIENTS: ROASTED SOYBEANS, SOY OIL, CORN SYRUP SOLIDS, SOY PROTEIN, EVAPORATED CANE JUICE, SALT, MONO- AND DIGLYCERIDES.

Worthington Foods 900 Proprietors Road, Worthington, OH 43085 • 1-800-243-1810

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Worthington is developing a web page; Jay is in charge of it. He would to have a cross-link with Soyfoods Center. Address: Senior Manager of Marketing and Sales for the specialty markets, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085. Phone: 614-885-9511.

3244. Sheridan, Margaret. 1996. Is tofu ready for the big leagues? *Los Angeles Times.* Sept. 26. p. H8, H10, H11.
• ***Summary:*** The article begins: "Tofu, the spongy off-white soybean cake that spells B-O-R-I-N-G for so many people, is about to get a marketing makeover. Slick packaging, toll-free consumer hotlines, new products, and a blitz of cookbooks created by chefs rather than earnest vegetarian activists are some of the strategies tofu companies plan to use to bring tofu into the mainstream." A number of second generation tofu products found in supermarkets, and forthcoming cookbooks are listed.

"But some advertising and marketing professionals say that's not enough." The author talks with many such people who dislike tofu for various reasons: "Tofu is a joke... Tofu is a sissy. Bland, white, boring. It needs to take a stand. Become something. And that name! Its terrible." "Tofu goes against the American palate... Very little in American food, except baby food or gelatin, has that texture. Even buying tofu is alien. What else do you buy floating in water? And Americans love convenience. Bean curd is anything but. It's not an open-and-eat product." "I buy tofu but it just sits there, floating in my refrigerator. It makes me feel stupid and guilty. What do you do with it? I end up tossing it out." Hinoichi is America's largest tofu manufacturer. In March 1997 the company plans to move from its present 50,000 square foot plant in Los Angeles to a facility three times that size in Garden Grove. Harry Tanikawa, Hinoichi sales manager, notes that tofu and soy have been helped by good research and press from the medical community. He adds: "When you see fast-food places such as Panda Express in the shopping malls adding more tofu items to the menu, when you can buy a tofu hot dog at Dodger Stadium, you know tofu has arrived." Note: Dodger Stadium is a major league baseball park in Los Angeles.

Worthington Foods has experienced a sales rush in meat alternatives; the category went from nothing four years ago to $150 million a year. The company's best-selling items, sold under the Morningstar Farms brand, are breakfast patties, sausage links, garden burgers, and spicy black bean burgers–according to Don Burke, executive vice president of sales and marketing. The people who buy Worthington products are "the masses, people who want to cut down a little on meat and saturated fat. Most are aging baby boomers who want taste, convenience, and a health benefit."

Tofu "recipes for the mainstream" include: Red flannel hash. Mushroom scrambler. Tofu-stuffed French toast. Tofu slaw. Tofu citrus shake. Tofu cheesecake (p. H11).

The article ends with two sidebars: 16 "Tofu do's and don'ts." Soy food: Its many looks (p. H11)–Defines different soyfoods: Tempeh, miso, textured vegetable protein (TVP), soy milk, soy flour, soy cheese, soy sauce, tamari. Address: Times staff/food writer.

3245. **Product Name:** Morningstar Farms Breakfast English Muffin Sandwich [Scramblers–Pattie, or Scramblers–Pattie–Cheese].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1996 September.
Ingredients: Breakfast patty: Textured vegetable protein (wheat gluten, soy protein concentrate and isolate), egg whites, sodium caseinate, modified food starch, soybean oil...
Wt/Vol., Packaging, Price: 5 oz (146 m) paperboard box. Retails for $2.19 (1997/05, Lafayette, California).
How Stored: Frozen.
New Product–Documentation: Worthington Foods. Second quarter financial report. 1996. Aug. "Three new MSF Low-Fat Breakfast Sandwiches are currently being introduced in selected markets. These hand-held sandwiches are ready for heat-and-run."

Talk with Joan Lieb of Worthington Foods. 1996. Aug. 22. This product is scheduled to be introduced in Sept. 1996.

Talk with Trudy at Worthington Foods. 1996. Oct. 3. This product is sold frozen, mostly to grocery stores–not to restaurants or foodservice. Worthington started shipping in early August.

Product (Scramblers-Pattie) with Label purchased at Safeway supermarket in Lafayette, California. 1997. May. 4. Price: $2.19. Sold in the "Breakfast Foods" freezer section. Paperboard box. Red, yellow, blue, and orange on green. A color photo shows the product on a white plate with kiwi slices. "Low fat." Soyfoods Center taste test. 1997 May 4. The flavor is okay, but the product seems overpriced.

3246. Longa Life Vegetarian Products Pty. Ltd. 1996. United States Products: Dietary information and product information (Leaflet). Yatala, QLD, Australia. 1 p. Single sided. 28 cm.
• ***Summary:*** This photocopied black-and-white leaflet gives dietary, nutritional, and ingredient information on the following products: Notchicken, Notham, Notbacon, Notpepperoni, and Notchicken Nuggets. All are vegetarian and free of MSG. The first two are vegan, egg free, and dairy free. All are Halal (like kosher for Moslems). Two contain less than 0.3% gluten. In the first two products, the main ingredient is wheat gluten; in the others it is soy protein.

The U.S. distributor for these products is: United Specialty Foods Inc., 2475 Bransford Ave., Nashville, Tennessee 37204. Phone: 615-269-7476. Talk with Don Michalenko, founder and head of United Specialty Foods. 1997. April 4. He was with Worthington Foods for 8 years as national sales manager for their natural foods line.

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Longa Life Foods started about 10-12 years ago by a man who was a butcher, who became a Seventh-day Adventist and a vegetarian. People encouraged him to start line of meatlike vegetarian products. The managing director is an entrepreneur and the butcher is still one of the partners. Address: 6 Binary St., Yatala (near Brisbane), QLD 4207, Australia. Phone: +61 7 3807-2433.

3247. McCord, Holly. 1996. Let 'em eat crumbles [Textured soy protein granules]. *Prevention* (*Emmaus, Pennsylvania*). Oct. p. 56-57, 60.
• ***Summary:*** Crumbles (a term coined by the author) are healthy new soy products designed to mimic the taste and texture of crumbled ground beef–with zero fat. They are now appearing, usually in the freezer case of supermarkets and natural food stores. They have many amazing pluses: Most are fat free and low in calories. They are very convenient, requiring no pre-cooking–just add them to your recipe. "Some crumbles contain isoflavones, which are natural compounds in soy that may help fight breast and prostate cancer, heart disease, osteoporosis... even hot flashes. Because crumbles are meatless, there is no chance of heterocyclic amines, possible cancer-causing compounds that develop when you cook ground beef or poultry using high heat."

Recently a prevention team sampled Sloppy Joes made with the following crumbles products: (1) Morningstar Farms Ground Meatless ("Taste and texture excellent. Pretty darned close to ground beef"). (2) BeefNot! (contains 62 mg isoflavones). (3) Green Giant Harvest Burgers for Recipes ("Definite smoky flavor. Larger pieces than the others"). (4) Lightlife Meatless GimmeLean! ("It tastes lighter than real ground beef–I like it better"). Photos show: Holly McCord. A burger with buns. Address: RD, Nutrition editor.

3248. Worthington Foods, Inc. 1996. Who says a fat-free burger has to taste like one? (Ad). *Vegetarian Times.* Oct. p. 3.
• ***Summary:*** This full-page, color ad is for Morningstar Farms Better 'n Burgers–Fat Free. A large photo shows a meatless burger between buns with all the trimmings, next to an ear of corn on a plate. "Now you can enjoy a big, juicy burger and hold the guilt, when you try Morningstar Farms Better 'n Burgers. Because they're all vegetable. And all natural. All that's missing is the fat. Bake them. Microwave them. Or throw them on the grill. And they'll satisfy your burger craving. Remember, when you help yourself to Morningstar Farms, you really are helping yourself. Look for them in your grocer's freezer." The name of the company (Worthington) does not appear in the ad.

This ad also appeared in the Feb. 1996 issue (rear cover) of this magazine. Address: Worthington, Ohio 43085.

3249. Worthington Foods, Inc. 1996. Third quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.
• ***Summary:*** Net sales are up 20% for the first 9 months of 1993 compared with the same period one year ago. Third quarter sales are up 22.5%. Even better, net income (profits) for the first 9 months of 1995 are up 38.5%, and for the third quarter are up 44%. Gross profit for the third quarter was 40.2% of net sales.

Foodservice sales increased 47.5%, the fifth consecutive quarter with sales increases over 40%. The company has introduced 16 new products during the first nine months of 1996. The board declared a four-for-three share split to be distributed on 6 Dec. 1996. The board also approved a $11.5 million capital expansion at the Zanesville plant. A second production line will be added "to produce hot-air oven veggie burgers." Address: Worthington, Ohio. Phone: (614) 885-9511.

3250. Worthington Foods, Inc. 1996. Natural Touch. 900 Proprietors Rd., Worthington, OH 43085. 4 panels. 28 cm. Undated.
• ***Summary:*** This color catalog shows each of the products in Worthington's Natural Touch line, which now contains about 17 products. For each product there is a color photo of the label, a brief product description, ingredients, and Nutrition Facts. "Veggie Burger Kits" are include in this latest catalog. Inserted into this catalog are large (8½ by 11 inch) single-sided product sheets for Vegan Crumbles, Veggie Burger Kits, and Roasted SoyButter.

On the front of the catalog, in large letters, is a "Purity Pledge: Natural Touch products are completely free of anything artificial... no artificial additives, colors, flavors or preservatives... you have our word on it."

Talk with marketing rep at Worthington Foods. 1997. May 14. This catalog was printed in late 1995. When asked if these products now contain genetically engineered soybeans he says "I don't know. Talk to Ron McDermott." Address: Worthington, Ohio. Phone: 1-800-628-3663.

3251. **Product Name:** Natural Touch Vegan Burger Crumbles, or Vegan Sausage Crumbles (Fat Free).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1996 October.
Ingredients: Vegan Burger Crumbles: Textured vegetable protein (wheat gluten, soy protein concentrate), water, contains 2% or less of autolyzed yeast extract, natural flavors from non-meat sources, modified food starch, black malt powder, salt, corn starch, garlic powder, sugar, onion powder, soy sauce (water, soybeans, salt, wheat), tomato powder, spices,...
Wt/Vol., Packaging, Price: 1 lb roll (chub pack).
How Stored: Refrigerated.

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New Product–Documentation: Leaflet (glossy color, single sided, 8½ by 11 inches) sent by Patricia Smith from Natural Products Expo East. 1996. Oct.

3252. Gerstner, Patsy. 1996. The temple of health: A pictorial history of the Battle Creek Sanitarium. *Caduceus* (*Southern Illinois University School of Medicine*) 12(2):1-99. Autumn. Special issue. [101* endnotes]

• ***Summary:*** This special issue, a nicely bound book with a color illustration on the cover, offers a remarkable look at the Battle Creek Sanitarium, including 115 photos, illustrations and other graphics, and a well-written text and balanced appraisal.

Contents: Acknowledgments. 1. From gentle obscurity to worldly fame, 1866-1902. 2. The temple rises from the ashes. 3. The treatment. 4. Never enough space. 5. A moment of glory, 1928 and after. 6. The Battle Creek Sanitarium: An appraisal. 7. Further reading and notes. Picture credits. About the author (and Garth "Duff" Stoltz's remarkable collection of Sanitarium memorabilia). "Certainly the Sanitarium was one of the grandest experiments in health care in the nineteenth and twentieth centuries" (p. 99).

Soy acidophilus milk contained a bacillus similar to the one in yogurt that created lactic acid. Intended "to suppress the putrefactive bacteria in the colon and replace them with 'good' bacteria," this soy-based milk "became a standard item on the Sanitarium menu after 1915" (p. 43).

"Among his [Dr. Kellogg's] most successful efforts were Sanitarium exhibits at the World's Columbian Exposition, the great fair held in Chicago [Illinois] in 1893, and the Louisiana Purchase Exposition, the 1904 world's fair held in St. Louis [Missouri]... Kellogg and others began to refer to the Sanitarium as a 'University of Health'" (p. 81).

"Kellogg recognized the importance of endorsements from well-known personalities... Henry Ford was not only a frequent visitor but the first guest in the 1928 Towers addition. Other famous visitors were presidents William Howard Taft and Warren G. Harding,... arctic explorer Roald Amundsen, industrialist John D. Rockefeller, grape juice manufacturer Edgar Welch, author Upton Sinclair, educator Booker T. Washington, aviatrix Amelia Earhart, and merchandisers J.C. Penney, Montgomery Ward,... First Lady Eleanor Roosevelt was among the noted visitors, but not as a patient" (p. 81).

Figures (Photos unless otherwise stated): (1) People in the grand parlor, Battle Creek Sanitarium (the San), 1880s. (2) Ad for the Health Reform Institute in Battle Creek (1870s), forerunner of the San. (3) Illustration of John Harvey Kellogg, in his early 20s, shortly after he became superintendent of the Western Health Reform Institute. (4) Illust. Dansville, New York, water-cure facility. (5) Exterior of the Western Health Reform Inst. in 1866. (8) Illust. "Women and men share a workout in the gymnasium, 1888." (9) Woman at the punching bag, 1910. (10) The Sewing Department, ca. 1915. (11) Exterior of the 1878 building–5 stories. (12) Diagram of the first floor. (13) Audience in Grand Parlor awaits a lecture; inset illust. shows a doctor interviewing a patient. (14) Illust. Typical San guest room, 1888. (15) Rate card from 1888, showing all basic costs / expenses. (16) The Sanitarium Hospital, completed in 1888. (17) By 1895, the San had been enlarged by a 5th story plus two additions. (18) Menu for dinner, July 15, 1888. (19) Leaflet promoting Sanitarium Training School of Nurses. It opened in 1883 with a six-month program. It grew to a full two-year course. (20). The front of an urban vegetarian restaurant and "Battle Creek Sanitarium Treatment Rooms," location unknown. (21) The dispensary of the Chicago Mission. The sign reads: "American Medical Missionary College: Dispensary." Constructed 1887. (22) Dr. John Harvey Kellogg poses ca. 1895 seated outdoors with some members of the medical and nursing staff. (23) The fire of 18-19 Feb. 1902; it burned the main San building and the hospital to the ground. Only one patient died in the fire. San losses were valued as high as $400,000 and the loss of guests' personal property as high as $500,000. (24) A group of San employees by the ruins. (25). Laying of the cornerstone for the new San on 4 May 1902. (26) Aerial view of the huge new San from the rear, showing the gymnasium and two treatment wings. (27) Entrance to the San. (28) The loggia. (29) A patient wearing the blanket / robe designed by Dr. Kellogg. (30) A Porte-air directing fresh air to the head of a patient in bed. (31) The Grand Lobby, with a "Ladies Corner" at center back. (32) Guests in the Grand Parlor. (33) A guest room being prepared for a new arrival. (34) The San switchboard, 1903. (35) Guests at the roof promenade. (36) The San kitchen. (37) Diagrams of the grounds and buildings of the Battle Creek Sanitarium. (38-39) Scenes from the San laundry, ca. 1910. (40) The annual ice caravan (pulled by horses) makes its way to the San. (41) Many patients being led in outdoor breathing exercises. (42-45) San patients receiving a thorough medical examination. Note: Between 1890 and 1898 Dr. Kellogg adopted the theory of "autointoxication" (mainly from the colon) as the most important cause of disease. (46) A laboratory; an important aspect of diagnosing autointoxication was laboratory analysis of body wastes. (47) Menu of special dietaries. (48) The food booth, located just outside the Palm Garden. (49) Local Rotarians having dinner in one of Dr. Kellogg's dairy barns as a demonstration of its cleanliness. (50) Label of a box of Kellogg's Bran, marketed as a cure for constipation. (51) Labels of Paramels, Ssylla, and Kaba, bulk-producing products developed at the San and sold by the Battle Creek Food Co. (52) A sign that reads "Fletcherize" is prominently displayed in the San's dining room. (53) Program / schedule for the day on a typical day, 22 Feb. 1915, printed on the back of the day's menu. Everyone was expected to participate in the activities listed and each guest also received a personal schedule of treatments. (54) The gymnasium in

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1903; round the upper level is a running track. (55) Kellogg's Universal Dynometer measured the strength of all major muscle groups. (58-64) The Mechanical Movement Room, ca. 1890; incl. vibrating belts and chairs, a mechanical horse and an abdomen-bending machine. (65) A walking party in front of the San. (66) Members of an exercise class pose with Indian clubs on the front terrace. (67) Improved posture and mental and physical dexterity were the goals of sloyd [Scandinavian exercises], ca. 1903. (68) A bedridden patient engaged in approved exercises. (69). (69) An electrotherapy device in 1888 with San helpers. (70) Electrostatic generator, which Kellogg claimed was the largest ever made. (71) A man standing inside a wire cage of coils; the rapidly oscillating electric field within this coil generated a high-frequency electrical treatment. (72) Electrotherapy in a bath tub. (73) Laboratory of Experimental Hydrotherapy (1800s). (74-78) Hydrotherapy treatments. (79) The outdoor sand bath in a huge sand box. (80) The air bath was usually used to cool the body after a heat bath. (81-82) Three versions of the light bath. (83) In diathermy, a high-frequency alternating current delivered penetrating warmth to a specific part of the body. (84) Kellogg standing in white suit presides at a dinner in the Annex dining room. The average patient stayed a month at the San. (85) Exterior view of the Annex. (86) The new hospital building–formerly the Sanitas Food Co. factory, 1914. (87) An operating room. (88) Horseback riding party in front of the Annex. (89) Illust. of the 1928 Twin Towers addition to the Battle Creek San. (90) Map of San grounds showing new addition. (91) The luxurious lobby. (92) The men's parlor. (93) The elegant Towers dining room. (94) The pre-dinner rooftop Grand March. (95) Towers accommodations (bedroom). (96) Miami Battle Creek [Florida], 1931. (97) In "1942 both the 1903 building and the towers addition were sold to the federal government for $2.25" million. Kellogg relocated San activities to the Annex and a building on the former campus of Battle Creek College. (98) The Annex in the 1940s. (99) The fountain, now part of the Battle Creek Federal Center. (100) A view of Battle Creek from the San sun roof. (101) Advertisement for the Sanitas Nut Food Co. (102) Page from a Kellogg recipe book shows how Malted Nuts might be used. (103) Ad for Sanitarium Health Food Co. (Battle Creek). (104) Eddie Cantor on the San's golf course. (105) Eleanor Roosevelt at the San. (106) Certificate awarded the San in 1919 by the American College of Surgeons. (107) Ella Kellogg at home. Married in 1879, the Kelloggs adopted 42 children. (108) Menu for Christmas Dinner, 1930. (109). Dr. Kellogg tending orchids in his lush tropical palm garden. (110) People in an early horseless carriage, ready for an excursion in the fresh air. (111) Outdoor exercise class at entrance to 1903 building. (112) Hollyhocks in bloom around the 1903 San. (113) The colonnade. (114) Guests checking into the San. (115) Two people in a horse-drawn sleigh in front of the San in winter's snow. Address: Chief Curator, Dittrick Medical History Center.

3253. Worthington Foods, Inc. 1996. Morningstar Farms: Number one in meatless (Portfolio). Worthington, Ohio. 4 inserts. Glossy color. 28 cm.
• ***Summary:*** See next page. This portfolio was produced by the Morningstar Farms Foodservice Division. The inserts are: (1) Garden Vege Patties: The veggie burger with the best taste–Bar none! (2) Meatless / IQF Pizza Crumbles: So good, so convenient, and so much lower in fat, calories, cholesterol. (3) Morningstar Farms meatless restaurant guide (Shows most of the restaurant chains at which Morningstar Farms products are served, by region as follows: National. East, Southeast, Southwest, Midwest, Central, West). (4) Spicy Black Bean Burger: Knock-your-socks-off flavor and only 1.5 grams fat.

On the inside front cover is a full-page photo of Grillers and this text: "Entrees: Pre-cooked and frozen. No waste." On the inside rear cover and fold-over portfolio flap are listed all Worthington-made foodservice products. Most are Morningstar Farm brand but a few are Natural Touch–but the brand is not given here. For each is given the name, a brief description, product number, case pack, case weight, and usually color photo of the prepared product. The products are: Breakfast Links. Breakfast Patties. Breakfast Strips [like bacon]. Garden Vege Patties. Crispy Patties. Garden Grain Patties. Spicy Black Bean Burger. Eggrolls. Okara Patties. Breaded Cutlets. Lentil Rice Loaf. Deli Franks. Better'n Burgers. VegiMax. Address: Worthington, Ohio.

3254. Keleny, Kathleen. 1996. The first century of health foods. Gloucester, England: Published by the author. Sole agent: Nuhelth Books. 44 p. Illust. No index. 21 cm.
• ***Summary:*** Contents: Dedication (to James H. Cook, Kathleen's father). Introduction. Early beginnings. Beginnings of food reform. Conversion. The first vegetarian restaurant and hotel. The first health food store. The new factory. Health foods. Kathleen's upbringing. Famous customers. Spanish figs. Wartime. Vitaland (health food factory). Demonstrations. Visitors and staff. Vitaland catalogue.

Kathleen talking. Vegetarian beliefs and ethics. The same ideals (In 1933 she met Frank Mayo, a keen vegetarian; they fell in love, were married a year later, and started a health food store in the City Arcade, Coventry). Effects of war (World War II, from Sept. 1939). After the bombing (returned to Warwickshire). The sale of Vitaland (after World War II). The Bircher Benner Clinic in Zurich [Switzerland]. The Hunzas. The new venture (1950 buy Coombe Lodge near Wotton-under-Edge, in southwest England)... The rest of the book is about her life and work, vegetarianism and veganism in England after World War II, Mad Cow Disease, etc.

The author, a "life vegetarian brought up on a vegan

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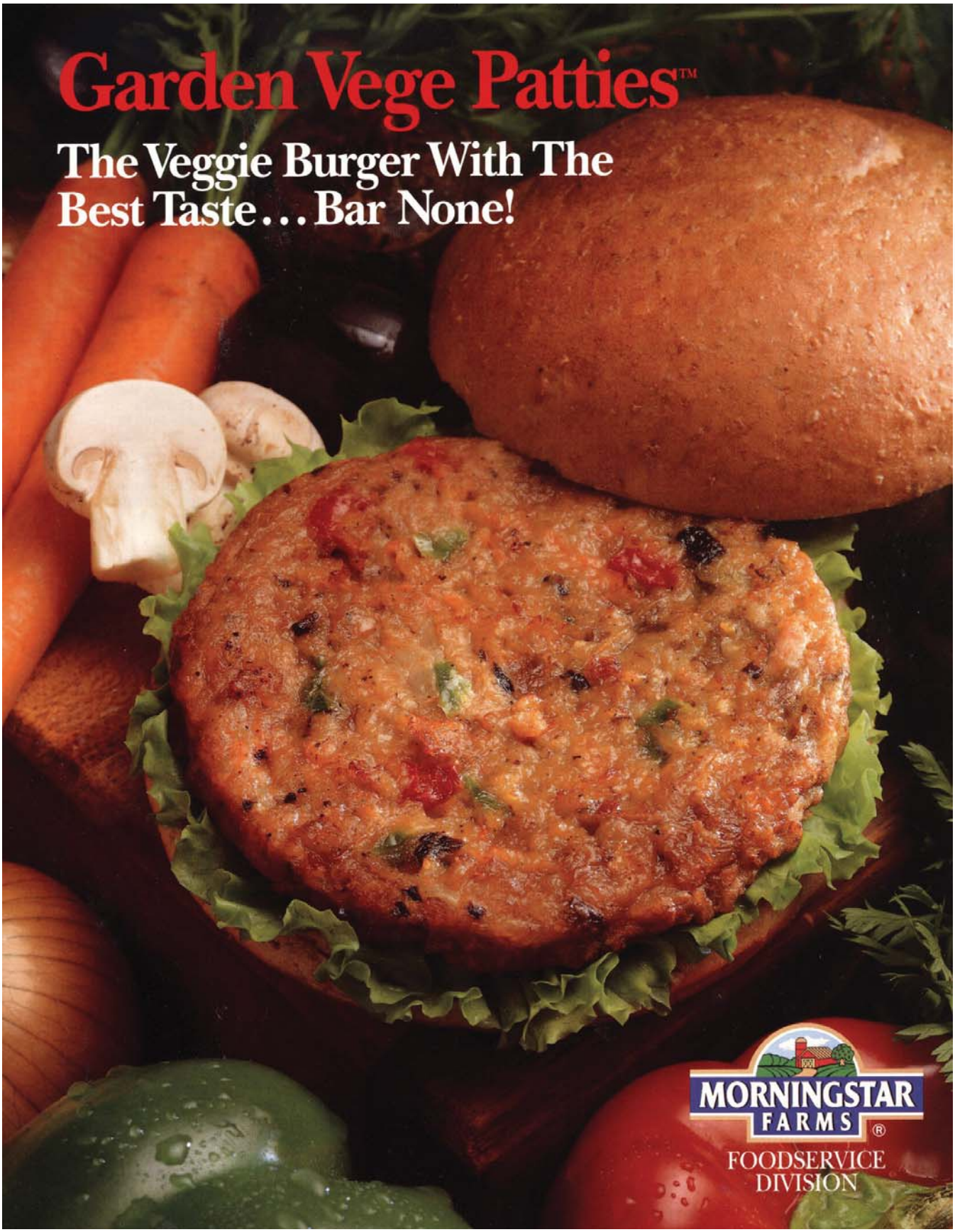

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diet...” writes pages 6 through 11 of this book as if her father, James Henry Cook, were the author. It starts: “Early beginnings: My daughter is 88. When she was born I wanted her to have continuous good health,...”

Chronology of the early health food movement in the UK, according to this book:

1869–James Henry Cook, the pioneer, is born on the Isle of Wight. In 1885 he moved to Wolverhampton, where he was influenced by an elderly vegetarian, Mr. George Snape.

1895–Cook attends a meeting of the Vegetarian Federal Union where the President, Arnold Hills, a well known business man and Managing Director of the Thames Iron Works, speaks for an hour on vegetarianism and its benefits. During that speech Cook is converted to vegetarianism. His health soon improves dramatically. Before he changed his diet, he was physically very delicate, and was refused by three insurance companies. A few weeks later, enjoying the live-giving powers of dietary reform, he was accepted as a first class life risk.

1896 to early 1898–The next time Mr. Arnold Hills (an inspiring speaker) visited Birmingham, he called together a group of business men and said that he would like to see a first-class Vegetarian Restaurant in Birmingham, and if they would start one, he would subscribe 10 per cent of the cost. “In 1896 it so happened that a new building was being erected in Corporation Street, Birmingham. After much deliberation, the corporation of business men rented the whole of the basement and ground floor for use as a vegetarian restaurant.” As Mr. Cook was very keen on the whole idea, he was appointed manager. Then the landlord asked the group of business men if they would like to take the whole of the seven storey building and convert the upper five storeys into an hotel.

1896–A vegetarian restaurant opens on Corporation Street in Birmingham, with financial help from Arnold Hills. James Cook is appointed manager. It is on the ground floor of a seven-story building. The vegetarian meals are an immediate success and hundreds of people soon lunch there daily.

1898 [Oct. 20]–The Pitman Vegetarian Hotel, England’s first vegetarian hotel, opens on the top five stories of the building housing the restaurant. It is “named after Sir Isaac Pitman, inventor of Pitman Shorthand, who had been a vegetarian for 60 years, and at the time was the best known vegetarian in England.” Customers of the restaurant “start asking for food which they could take home with them.” James Cook starts to make simple, appetizing “foods from nuts, cereals, fruits and vegetables to take the place of meat, lard, butter, cheese and jelly made from animals.”

1902?–”Six years before Kathleen was born the ‘Health Food Store’ was opened and the manufacturing side increased.” James “realised it was not economic to run a factory in the centre of Birmingham, so he bought a site in Aston” where he built the first [sic] health food factory in England.

1905–The Pitman Health Food Company opens. Its most popular products are Nuto Cream Soup and Nut Cream, followed by Pitman Dandelion All products are dairy-free.

1929–A bigger and better health food factory, called Vitaland, is built in a beautiful building in green fields at Four Oaks, Sutton Coldfield Park, Warwickshire.

Photos show: (1) Portrait of James Henry Cook, handsome, bearded, and in his 60s or 70s. (2) Vitaland, the whole building taken with wire fence round it, seen from ground level. (3) Many photos of Kathleen and friends, yoga group, husband, Coombe Lodge, etc.

An old illustration shows the Pitman Hotel and (according to the caption) “Health Food Stores.”

Note 1. In the section titled “Beginnings of health reform” (p. 6) Bernarr McFadden (of U.S. physical culture and publishing fame) is said to have written that James Cook had coined the term “’Health Food’ advocating Food Reform for Vital Health.” No date is given, so we must assume it was coined in about 1902. In fact, the earliest documented use of the term “Health Food” in the UK is in the name of the Pitman Health Food Co. in July 1905. However the term was used in the United States as early as Oct. 1875 by the Health Food Company of New York, and was widely used in the USA during the late 1800s.

Note 2. James Cook’s date and place of marriage and Kathleen’s date and place of birth are never mentioned in this book. In an article published in Oct. 1898 in *The Vegetarian* (London), James Cook said that he was unmarried and intended not to marry so that he could devote his full energies to his work as manager of the vegetarian restaurant, hotel, and retail store in Birmingham. Eventually he married Grace Marian Cook, a well-known singer. “She was one of the first cookery demonstrators of vegetarian dishes in the Midlands, and she experimented with making very many of the new lines for the Pitman Health Food Company” (p. 9).

Note 3. While this book is a nice tribute by the author to her father, James H. Cook, it is not an accurate history of the early health food industry in the UK, where the pioneer manufacturer was the International Health Association Limited (I.H.A.), a Seventh-day Adventist organization, starting in 1899. That company was renamed Granose Foods Ltd. in 1926. Moreover, two key dates related to the history of Pitman’s work with health foods are vague.

Note 3. During World War II “Pitman Health Foods Ltd.” ran many ads for its foods in the Vegetarian Messenger (UK). “Ask your Health Food Store for these grand foods.” By 1942 the company’s name had been shortened to “Messrs. Pitman, Ltd.” (Vitaland, Four Oaks, Warwickshire). Address: Coombe Lodge, Stroud, Gloucestershire, SW England.

3255. Landrum, Carl; Landrum, Shirley. 1996. Landrum’s Quincy. Vol. 1. Quincy, Illinois: Justice Publications. [viii] +

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200 p. See p. 142-44. Illust. No Index. 26 cm.
• ***Summary:*** An excellent, detailed history of three companies: Egg-O-See Breakfast Food Company, Battle Creek Breakfast Food Company. The Egg-O-See which was established in Battle Creek, Michigan by John E. Liniham, who was born there in 1866; he later became secretary of the corporation and general manager of the plant. In 1901 the company began to make breakfast foods in Battle Creek, "promoting the Cero-Fruito Food Company in that city." In 1903 the company went bankrupt and was purchased by The Battle Creek Breakfast Food Company.

"The latter company, formed in Quincy by John W. 'Jack' Cassidy, and a number of other Quincy businessmen, brought Liniham to Quincy on 1 Jan. 1903, as an officer in the company and to manage the operation."

Cassidy was born on 20 Jan. 1865 in Kankakee Co., Illinois, and came to Quincy as a young man. A brief biography is given. He died in San Francisco on 15 April 1922.

On 7 Jan. 1903 "Cassidy announced that the Battle Creek Breakfast Food Co. of Quincy was setting up machinery in the building, or buildings, at 111-39 South Front and would probably be in operation by" Jan. 20. It three main products were Egg-O-See Corn Flakes, E-C Corn Flakes Toasted, and Toasted E-C Oats.

A detailed history of the company follows. In 1910 the company's name was changed to United Cereal Mills Company. In 1919 the company was apparently thriving, however in 1921 it went bankrupt and in Sept. 1921 was sold at auction for $50,000 to Barron Collier Co. to satisfy creditors.

"The company was absorbed by the Kellogg Breakfast Food Company of Battle Creek and the local mill was abandoned."

The building was next used to process soybeans! On 29 Aug. 1935 "a charter was issued by the secretary of state to J.H. Ball, John B. Heberkern, and David Coffman for National Mills, using the old Egg-O-See plant for the extraction of soybean oil until the summer of 1939, when the business was sold to the Quincy Soybean Products Company" [owned by Irving Rosen]. Note 1. All of the old Egg-O-See buildings of the original business were razed in about 1958.

Photos show: (1) Front of Battle Creek Breakfast Food Co. at 111-29 South Front in around 1903, with railroad cars nearby. (2) Portrait of John W. "Jack" Cassidy. (3) Early front view (undated) of the 5-story Battle Creek Breakfast Food Co. and surrounding buildings.

Note: This is Vol. 1 of a four-volume work. An index, created after the book was published, is located at the Quincy Public Library in Quincy, Illinois. The date of publication, which does not appear in the book, was taken from the Quincy Public Library cataloging record. The book expands on articles by Carl Landrum first published in the *Quincy Herald-Whig*. The date of the original article is printed at the bottom of each page in the book. Address: Quincy, Illinois.

3256. Peanut Advisory Board. 1996. American peanuts: The gold standard. Atlanta, Georgia: PAB. 16 p. 28 cm.
• ***Summary:*** Contents: About the Peanut Advisory Board (established in 1980, it represents peanut growers in Georgia, Florida, and Alabama). Map of major peanut production areas in the USA. The gold standard (Peanuts are the 12th most valuable cash crop in the USA, with an annual farm value of $1.2 billion. The peanut is the 4th most valuable oil crop worldwide. The USA is the world's third largest producer of peanuts, after India and China). Golden Days (Brief history of peanuts). Nutritional value of peanuts and peanut butter. Peanut varieties, cultivation, and prices. Peanut butter and its history. Adult Peanut Butter Lovers' Fan Club (established about 1990, now has 60,000 members). Peanut products: Snack peanuts, peanut confections, others, peanut oil. Exports. Nuggets of information.

The section on peanut butter and its history (p. 7-8) is quite similar to that in their 1990 book, *The Official Peanut Butter Lovers' Centennial Cookbook*. It begins: "Peanut butter is one of America's favorite foods. Found in about 75% of American homes, peanut butter is considered by many to be a staple like bread and milk. As comedian Bill Cosby once remarked, 'Man cannot live by bread alone. He must have peanut butter." This section again, and without documentation, credits George A. Bayle with inventing peanut butter. It adds a statement similar to that published in 1990: "At about the same time, Dr. John Harvey Kellogg in Battle Creek, Michigan began experimenting with peanut butter as a vegetarian source of protein for his patients. His brother, W.K. Kellogg, was business manager of their sanitarium, the Western Health Reform Institute, but soon opened Sanitas Nut Company which supplied foods like peanut butter to local grocery stores... However the Kelloggs' peanut butter was not as tasty as the peanut butter today because the peanuts were steamed, instead of roasted, prior to grinding." Address: Peanut Advisory Board, 1950 North Park Place #525, Atlanta, Georgia 30339. Phone: (404) 933-0357.

3257. Seventh-day Adventist encyclopedia. 2nd rev. ed. Commentary reference series, vol. 10: California Conference. 1996. Hagerstown, Maryland: Review and Herald Publishing Assoc. See Vol. 10. p. 276. Commentary Reference Series.
• ***Summary:*** "In 1887 William Healey held tent meetings in San Diego, where a church was built on 18th and G streets. Treatment rooms were opened in the late 1890s by a graduate nurse from Battle Creek [Michigan] and E.G. Fulton and M.A. Hollister opened a vegetarian restaurant in San Diego."

"In 1896 a vegetarian restaurant and treatment rooms were opened under the direction of a certain Dr. Moran

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between Broadway and Hill on Third Street, Los Angeles."

Note 1. The vegetarian restaurant in Los Angeles was soon (or perhaps even initially) called the Vegetarian Cafe, and was located at 257 South Hill St.

Note 2. This is vol. 10 of a 12 vol. commentary set. Address: Washington, DC.

3258. Soya World Inc. 1996. So Good–Dairy free beverage: 5 easy to make, nutritious recipes. Product information guide (Leaflet). Vancouver, British Columbia, Canada. 6 panels each side. Each panel: 15 x 10 cm.

• ***Summary:*** This attractive, full-color, glossy leaflet is folded into 12 panels. On the front panel is a photo of a carton of "So Good: Dairy-Free Beverage." It is "Very high in calcium. Enriched with vitamins and minerals. Soy protein rich. Lactose free. Cholesterol free." Contents: The story of So Good. Five recipes and color photos. The So Good family of soy beverages. Tips for using So Good. The ingredients in So Good: Filtered water, soy protein, vegetable oil, maltodextrin, rice extract, fructose, cane sugar, mineral salts (calcium phosphate, potassium phosphate), food acid (potassium citrate), flavours.

Why choose so good? (Nine reasons, incl. contains up to 9.3 gm of protein per 250 ml serving). Nutritional information for each of the five flavors: Original, Fat Free, Absolutely Vanilla, Utterly Chocolate, and Seriously Strawberry.

Note: These products are made by Soya World Inc. under license from the Sanitarium Health Food Company, New South Wales, Australia. Address: P.O. Box 3018, Vancouver, BC V6B 3X5, Canada. Phone: (604) 420-3240.

3259. Van Dolson, Bobbie Jane; Van Dolson, Leo R. eds. 1996. Seventh-day Adventist encyclopedia, 2nd rev. ed. 2 vols.: White Memorial Medical Center. Hagerstown, Maryland: Review and Herald Publishing Assoc. See vol. 2, p. 797-98.

• ***Summary:*** On 29 Sept. 1913 this institution began as a clinic that opened in a rented building at 941 East First St. in East Los Angeles. The clinic was originally started as a teaching facility of the College of Medical Evangelists' School of Medicine (now known as Loma Linda University). On 21 April 1918 the clinic's name was changed to White Memorial Hospital and formally dedicated to the memory of Ellen G. White.

"On Jan. 1 1964 Loma Linda transferred ownership and direction of the White Memorial Hospital and Clinic to the Southern California Conference and the hospital was renamed White Memorial Medical Center, Inc. Although White Memorial is no longer under the guidance of Loma Linda University, the hospital still maintains a strong clinical program for medical, nursing, and allied health profession students, and a continuing program for interns and residents in advanced medical education programs."

Today White Memorial Medical Center is a 377-bed hospital serving more than 100,000 people each year. It is now located in a predominantly Latino part of Los Angeles at 1720 Cesar E. Chavez Avenue. Address: Washington, DC.

3260. Van Dolson, Bobbie Jane; Van Dolson, Leo R. eds. 1996. Seventh-day Adventist encyclopedia, 2nd rev. ed. 2 vols.: Harry Willis Miller (1879-1977). Hagerstown, Maryland: Review and Herald Publishing Assoc. See vol. 2, p. 71-72.

• ***Summary:*** A good, detailed biography of Dr. Miller. "In later years Harry Miller worked seriously with the soybean. He made products that were tasty and practical. These included "vegeburgers," "wieners," and soy cheese [tofu]. His crowning accomplishment, however, was a tasty, affordable, nutritious soy milk, which literally saved the lives of many Chinese babies. Before his death Miller saw his grain-and-soybean-based foods adopted as alternatives to meat all over the world.

"In his 90s Harry Miller continued as a consultant to the World Health Organization and the Food and Agriculture Organization of the United Nations, and still made frequent trips to eastern Asia." Address: Washington, DC.

3261. Van Dolson, Bobbie Jane; Van Dolson, Leo R. eds. 1996. Seventh-day Adventist encyclopedia, 2nd rev. ed. 2 vols.: La Sierra University (Formerly La Sierra College). Hagerstown, Maryland: Review and Herald Publishing Assoc. See vol. 1, p. 899-904.

• ***Summary:*** Contains a good history of this university which is owned and operated by the Seventh-day Adventist (SDA) Church. In May 1922 the Southeastern California Conference organized La Sierra Academy. It opened on 3 Oct. 1922 as a full-fledged 12-grade school. In 1927 La Sierra Academy became Southern California Junior College. On 1 May 1933 it was accredited as a junior college. In 1939 La Sierra College was accredited as a three-year college by the Northwest Association of College and Universities, and in 1946 it was accredited as a four-year college.

During World War II, La Sierra increasingly established a unique link with the nearby College of Medical Evangelists (CME–later Loma Linda University). "SDA students began to look to La Sierra to provide them with the skills and contacts needed to make them successful applicants for admission to the church's health-science school. (The 1966 Danforth Foundation study, 'Church-sponsored Higher Education in America,' noted that a higher percentage of La Sierra graduates had received M.D. degrees in the years 1950-1959 than those of any other church-related institution of higher learning in the United States.)"

By 1965 La Sierra College had a graduate division. In 1967 La Sierra became Loma Linda University's Riverside campus. "Productive scholarly interchange and creative synergy resulted from the merger." On 7 March 1991 La

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Sierra College was renamed La Sierra University. The current academic programs are discussed under the following headings: College of Arts and Sciences. School of Religion. School of Education. School of Business and Management. Center for Lifelong Learning. Gives the names and dates of the Presidents of La Sierra University and its predecessors (from 1922). Address: Washington, DC.

3262. Van Dolson, Bobbie Jane; Van Dolson, Leo R. eds. 1996. Seventh-day Adventist encyclopedia, 2nd rev. ed. 2 vols.: Andrews University (Originated as Battle Creek College in 1874. Moved to Berrien Springs, Michigan, and Was Renamed Emmanuel Missionary College in 1901). Hagerstown, Maryland: Review and Herald Publishing Assoc. See vol. 1, p. 72-79.

• ***Summary:*** In 1874 Battle Creek College was founded in Battle Creek Michigan, owned and operated by the Seventh-day Adventist Church. It evolved from a "select" private school established in 1868 by G.H. Bell. "The early 1890s were years of deepening emphasis at the college... Throughout the decade, revivalism marked college activities. A study made in 1897 showed that 38 percent of all ordained ministers in the denomination had received some training at Battle Creek College. The highest enrollment to be recorded at Battle Creek was reached in 1893-94 (768, including 337 in preparatory departments)."

In 1897 Edward A. Sutherland became president on a reform platform backed by Dr. John Harvey Kellogg and Percy T. Magan. Classical studies were abolished, and all traces of apparently worldly education were eliminated. The new curriculum focused on the Bible plus New Testament Greek, New Testament [Vulgate] Latin, and medical Latin. College industries were established and denominational workers, especially church school teachers, were prepared. Sutherland desired a spacious rural setting for his college, and such a site was found near Berrien Springs, Michigan. The college moved there in July 1901, reopened that summer, and was renamed Emmanuel Missionary College at the time it reopened. The curriculum consisted largely of secondary school courses. The first class, graduated in 1908, consisted of all secondary students.

In 1960 the entire institution merged with an educational organization (Potomac University) in Washington, and was renamed Andrews University. "In 1974 Andrews University celebrated the one hundredth anniversary of its founding as Battle Creek College with a variety of special convocations and conferences." Address: Washington, DC.

3263. Van Dolson, Bobbie Jane; Van Dolson, Leo R. eds. 1996. Seventh-day Adventist encyclopedia, 2nd rev. ed. 2 vols.: Loma Linda University (Founded in 1905 as the Loma Linda College of Evangelists and Chartered in 1909 as the College of Medical Evangelists). Hagerstown, Maryland: Review and Herald Publishing Assoc. See vol. 1, p. 940-953.

• ***Summary:*** In 1905 this university was founded as the Loma Linda College of Evangelists, located in southern California 60 miles east of Los Angeles; in 1909 it was chartered as the College of Medical Evangelists (CME). This was the second Seventh-day Adventist (SDA) medical college; the first was the American Medical Missionary College (AMMC, 1895-1910) which was connected with the Battle Creek Sanitarium in Michigan; both went out from SDA control in about 1907. There was no organizational or legal connection between AMMC and CME.

The buildings that comprised the College in 1905 were originally part of the Victorian-styled Loma Linda resort hotel, constructed in 1887-1888 as part of the Mound City development, which was part of the larger southern California real estate boom of 1887-88 and subsequent bust of the late 1880s.

The resort hotel was purchased in 1900 by the Loma Linda Association, a group of Los Angeles businessmen and physicians, the latter hoping to establish a health resort. The association remodeled and richly furnished the hotel, adding five patient cottages and a recreation hall, landscaping the hill, and raising the total investment above $150,000. This venture also failed. By 1904 the luxury hotel stood almost empty.

In 1905 Ellen G. White, charmed by the beauty of the San Bernardino Valley and impressed by its potential for a country sanitarium, asked John A. Burden to look for a site. He found Loma Linda (Spanish for "Hill Beautiful") for sale (including 76 acres of land) for $110,000. When they lowered the price to $40,000, Mrs. White told Burden to accept. The option was signed on 26 May 1905, with a down payment of $1,000. In about Oct. 1905 Loma Linda began to receive patients. On 15 July 1910 the assets of the Loma Linda Sanitarium were transferred to the College of Medical Evangelists, thus making the Sanitarium an integral part of the College.

CME was first accredited in 1937 by the Northwest Association of Secondary and Higher Schools. On 1 July 1961 it became Loma Linda University.

Relationship with La Sierra University: When Loma Linda trustees voted to consolidate the four years of medical education on the Loma Linda campus (the third and fourth years had previously been taught in Los Angeles at what is now the White Memorial Medical Center), the need was felt to undergird the professional studies on the Loma Linda campus with expanded courses offerings in the liberal arts. The trustees eventually decided to merge La Sierra College (located 20 miles away) with Loma Linda University; the merger became effective on 1 July 1967. The La Sierra College campus was renamed Riverside Campus of Loma Linda University. Then in 1990 the Loma Linda University Board of Trustees voted to separate the two campuses as independent corporations. This was done in order to enable each campus to more clearly define and focus on its

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distinctive mission. The Riverside Campus became known (as it still is) as La Sierra University.

Loma Linda University is now a health sciences university. Note: It has pioneered the scientific study of vegetarianism in the Western World, especially with the Adventist Health Studies. Address: Washington, DC.

3264. Van Dolson, Bobbie Jane; Van Dolson, Leo R. eds. 1996. Seventh-day Adventist encyclopedia, 2nd rev. ed. 2 vols.: Loma Linda Foods / La Loma Foods. Hagerstown, Maryland: Review and Herald Publishing Assoc. See vol. 1, p. 939-40.
Address: Washington, DC.

3265. Van Dolson, Bobbie Jane; Van Dolson, Leo R. eds. 1996. Seventh-day Adventist encyclopedia, 2nd rev. ed. 2 vols.: Great Britain and Northern Ireland–Development of Seventh-day Adventist Work. Hagerstown, Maryland: Review and Herald Publishing Assoc. See vol. 1, p. 626-29.
• ***Summary:*** Early Seventh-day Adventist work in England began in 1878, but work with health foods did not start until a little more than 20 years later (i.e., after 1898). Address: Washington, DC.

3266. Crane, Milton G. 1996? Does "every body" need milk? Weimar, California. 8 p. Undated. Unpublished manuscript. [23 ref]
• ***Summary:*** An excellent introduction to the subject. Introduction: Breast milk is the perfect food for baby mammals. However let us try "to formulate an intelligent conclusion about the wisdom of the use of milk from other mammals for human food."

The hazards of milk protein. Hazards from lactase deficiency. Hazards from infections (especially cancer viruses). Hazards from the type of lipids present ("Human milk contains 47% of calories from fat and 6% of calories from protein. The corresponding values for whole cow's milk are 48% and 22%"). Hazard from homogenization. What to guard in the diet when giving up milk (calcium, vitamin D, vitamin B-12, etc.). Address: M.D., Preventive Endocrinologist, Weimar Inst., Box 486, Weimar, California 95736. Phone: 916-637-4111.

3267. **Product Name:** Morningstar Farms Chik Nuggets.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1997 February.
Ingredients: Textured vegetable protein (soy protein concentrate and isolate), egg whites, wheat flour, water, corn oil...
Wt/Vol., Packaging, Price: 10.5 oz (298 gm) paperboard box. Retails for $2.95 (1998/03, Lafayette, California).
How Stored: Frozen.
New Product–Documentation: Worthington Foods. First quarter financial report. 1997. April. Three new Morningstar Farms products were introduced into selected U.S. markets starting on 17 Feb. 1997: Chik Nuggets...

Product with Label purchased at Safeway supermarket in Lafayette, California. 1998. March 22. It is sold in the "Breakfast Foods" freezer. 8 by 4 by 2.5 inches. Paperboard box. Blue, yellow, red, and white on green. A color photo shows many nuggets on a white plate around a bowl of red dipping sauce, with a sprig of parsley. "Vegetable and grain protein nuggets. 75% less fat than chicken nuggets." A new slogan (registered trademark) appears on both sides: "The change will do you good." On the back panel a table compares meatless Chik Nuggets with meat chicken nuggets: Cholesterol: 0 vs. 45 mg. Total fat: 4 vs. 17 gm. Saturated fat: 0.5 vs. 4 gm. A small logo on the back has a leaflike green "V" inside the circular words "Suitable for vegetarians."

Note: By 26 April 1998 the price at Safeway had increased to $3.19 from $2.95. By March 10 1999 the price had increase to $3.59. The package has been redesigned with the new Morning Star farms logo to create a brand "umbrella." The front panel text now reads: "75% less fat than chicken nuggets. See Nutrition Information for Sodium Content. Veggie nuggets." Soyfoods Center taste test. The texture and flavor are very good but these Chik Nuggets are much too salty! Four nuggets contain a whopping 670 mg of sodium, or 28% of the recommended Daily Value.

3268. **Product Name:** Rice Moo (Non Dairy Beverage Mix) [Original, Vanilla].
Manufacturer's Name: Sovex Foods, Inc. (Marketer-Distributor).
Manufacturer's Address: Box 2178, Collegedale, TN 37315.
Date of Introduction: 1997 March.
Ingredients: Brown rice syrup solids (partially milled), tapioca, maltodextrin, natural flavor, sea salt, carrageenan, titanium dioxide (a mineral for color), guar gum, xanthan gum.
Wt/Vol., Packaging, Price: 19 gm foil packet.
How Stored: Shelf stable.
New Product–Documentation: Products with Label sent by Patricia Smith from Natural Products Expo West, Anaheim, California. 1997. March. Label: 4 by 5 inch foil packet. Blue and pink on white. "Cholesterol free. Tastes great. Just add water. Fat free. Makes one 8 oz glass."

3269. Worthington Foods, Inc. 1997. Annual report 1996. 900 Proprietors Rd., Worthington, OH 43085. 20 p. 28 cm.
• ***Summary:*** Total sales rose to $109.1 million in 1996, up 19.8% from $91.1 million in 1995. This is the first time the company's sales have topped the $100 million mark. Net income (profit) rose to $7.393 million in 1996, up 41.3%

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W O R T H I N G T O N F O O D S

1 9 9 6 A N N U A L R E P O R T

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Allan R. Buller

Dale E. Twomley

from $5.230 million in 1995. Earnings per share rose to $0.83 in 1996, up 38% from $0.60 in 1995.

The company's statements of mission, vision, and values are a model of good sense, good judgment, and traditional values. "Our mission–Worthington Foods is solely dedicated to producing and marketing vegetarian and other healthful foods.

"Our vision–We envision 'veggie burgers' becoming a billion dollar mainstream food category within the next ten years, with our Company continuing to be the leader.

"Our values–More than just an organization to make money, Worthington Foods holds, without compromise, our core values summarized in G.R.I.P. Good taste–good nutrition. Respect for our employees. Integrity is more important than profits. People are whole beings." Each is explained briefly.

"The increased sales were primarily driven by Morningstar Farms meat alternative products in retail supermarkets and foodservice operations."

"For each of the past seven quarters, retail sales of Morningstar Farms meat alternatives have exceeded sales of prior year quarters by 25 percent, while foodservice sales grew at a rate exceeding 40 percent for the past year."

"Worthington Foods introduced a record 21 new products this year. All of these products meet our criteria for new products: Good taste, low or reduced fat, and convenience." Note: The 21 new products are: Morningstar Farms (MSF) fat free ground patties. MSF low fat prime patties. Two MSF veggie burger kits (Garden grille, and Southwestern). Roasted SoyButter [soynut butter] (MSF & Natural Touch). Natural Touch spicy black bean [non-soy] burgers. Three low fat Worthington products (Low fat FriChik, Low fat Veja Links, and Low fat Chili). Natural Touch vegan burger & sausage crumbles. Kaffree Roma Cappuccino. Foodservice pizza and burger crumbles. Three MSF breakfast sandwiches (Scramblers, sausage & cheese on English muffin; Scramblers & sausage on Enlace muffin; Scramblers, sausage & cheese on bagel). Three MSF refrigerated meat case products (Low fat prime patties, Spicy black bean burgers, Garden veggie patty).

"*Chik Nuggets*, an absolutely delicious chicken-like nugget with 75 percent less fat than nuggets made of real chicken, was introduced in February, 1997" (p. 2).

"Worthington Foods is the world's largest company dedicated solely to the manufacture and marketing of vegetarian foods and other healthful items. Since its start in 1939, Worthington Foods has become the market leader in quality and innovation in the rapidly growing $250-million category for meat alternatives" (p. 4).

"Over the past five years, Worthington Foods' sales to Foodservice accounts have been the Company's fastest growing market. Posting sales gains of more than 40% in 1996, our Foodservice sales topped $12-million" (p. 7).

Color photos show: (1) The packages of 6 Morningstar Farms meatless products plus Fat Free Scramblers (cover). (2) Portraits of Allan R. Buller and Dale E. Twomley (p. 2). Five Natural Touch and three Worthington canned products.

A "Notice of annual meeting of shareholders" (23 p.) is attached. Address: Worthington, Ohio. Phone: (614) 885-9511.

3270. McDermott, Ron. 1997. Thoughts on the use and labeling of genetically engineered soybeans in Worthington's food products (Interview). *SoyaScan Notes.* April 25. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Worthington Foods is still working to establish a policy on this subject. The company had to start dealing with this issue in a big way in July 1996, before the U.S. soybean harvest, when British Retailer's Association (BRA) sent a letter to all of their suppliers, including Worthington, alerting all food manufacturers that genetically modified (GM) Roundup Ready soybeans would become part of the U.S. soybean crop in the fall of 1996, and asking them to please contact their suppliers immediately to request only non genetically modified soybeans. The issue for the BRA was not the safety of the soybeans but the consumer's freedom of choice and labeling. Therefore the BRA wanted to avoid having to sell GM soybeans. The UK is Worthington's largest export market, so the company must take the concerns of British consumers very seriously. Ron understands that concerns over GM foods in Germany are even greater than in the UK.

The BRA sent out a second letter to suppliers in about Sept. 1996, before the U.S. soybean harvest, which basically said that they had come to realize that segregation of non-GM foods was not possible at this time.

The first major problem for Worthington is that they buy most of their soybeans in the form of defatted soybean meal–not whole soybeans. Currently it would almost impossible to find a soybean crusher willing to segregate

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non-GM soybeans. However in thinking through this with Ron, Shurtleff realizes that within the next year or two, some of the small soybean crushers will probably start to crush non-GM soybeans is order to create a new niche market and a competitive advantage over the big crushers. Worthington would then have a good source–if it wanted one.

A second issue is labeling. Worthington has three different labels for many of its best-selling products. One for the USA market, one for Canada (which must be bilingual, in English and French), and one for the UK–since each has different labeling requirements.

A third issue is the U.S. natural foods market–which has shown that it will probably not sell GM food products. Worthington makes its okara patties from whole soybeans and sometimes buys organic soybeans. No one knows whether or not GMO products will be able to obtain kosher certification.

Note: What are the big issues? They probably have little to do with science. At present there are no benefits to consumers from GM soybeans, and consumers feel a fair amount of uncertainty about genetically engineered foods. If there were some big benefits (such as higher levels of genistein), the decision might be more difficult for consumers. The real issue is freedom of choice. Since 1906 the U.S. Pure Food and Drug Act has required that all ingredients in food products appear on the label so that consumers can decide what to eat. It is unlikely that such a basic, long-standing principle will be changed.

Ron believes that consumers will eventually decide this question. But as a scientist, he has been trying to follow this debate, and listen to both sides. It is unfortunate, he thinks, that the very first application of genetic engineering to soybeans is related to soybean production (weed management through Roundup herbicide) rather than, say, improved nutrition. How many consumers are interested in consuming Roundup Ready soybeans? Ron has heard that Roundup is better for the environment than most other herbicides, and that much less is required to do the job. It could take pesticide application from tons per acre to grams per acre. People who are really concerned about the environment will probably buy organically grown foods. At Anaheim this year, one group speaking out against GMO foods was named "Mothers for Natural Law." Their position is "don't fool with Mother Nature." Ron thinks that Monsanto has done a poor job at educating the public–perhaps because most of the benefits accrue to farmers; they seem to think that this whole issue will soon go away.

To date, Worthington has not had a great deal of consumer concern in the form of letters or phone calls about GM soybeans. In the USA it seems to be more of an activist issue than a consumer issue. Ron has heard that Tivall is having a terrible time on this question, because a large percentage of their products is sold in the UK and continental Europe. Ron does not know whether or not a GMO product can be certified kosher.

Most of the Natural Touch products are NOT from whole soybeans; only the okara patty is. Address: Vice President Research & Technology, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

3271. Worthington Foods, Inc. 1997. First quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.
• ***Summary:*** Net sales for the first quarter of 1996 rose 8.8% over the same period in 1996, net income rose 44%, and earnings per share rose 40%–to $0.21 per share. Three new Morningstar Farms products were introduced into selected U.S. markets starting on 17 Feb. 1997: Chik Nuggets, Burger Crumbles for Recipes, and Sausage Crumbles for Recipes. Garden Grain Patties have now been reformulated to contain portabella mushrooms and are now called Garden Grille.

At the Annual Meeting of Shareholders in April, the number of authorized shares of common stock was increased to 30 million. Address: Worthington, Ohio. Phone: (614) 885-9511.

3272. Poirier, Tim. 1997. Computerizing the Ellen G. White papers and published works (Interview). *SoyaScan Notes.* May 6. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The Ellen G. White estate now has a database containing all of Ellen G. White writings, including her published works, letters, diaries, unpublished manuscripts, and even a few major works about her life (such as her 6-volume biography written by her grandson). Her published works are now available on a CD-ROM which was introduced in 1990 and sells for $179.00.

The current focus is computerizing her unpublished works. The text of this information is fully indexed, and can be searched in an instant using the database indexes. The software is Paradox (from Borlund). This material will be available on an Ellen G. White CD-ROM in about 1998. Tim Poirier sent copies of 2 letters from John Harvey Kellogg to Ellen G. White free of charge.

A computerized search using the indexes shows that there is no mention of the words "soy" "soybean" "soya" etc. in any of Ellen White's writings. Likewise, she never mentioned the word "gluten" in her writings. Ellen G. White died in 1915. Address: Assoc. Director of Information Access, Ellen G. White Estate, General Conference of Seventh-day Adventists, 12501 Old Columbia Pike, Silver Spring, Maryland 20904-6600. Phone: 301-680-6540.

3273. Johnston, Trevor. 1997. Recent nightmares at Bean Supreme Ltd. in New Zealand (Interview). *SoyaScan Notes.* May 7. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The last 18 months have been a marketing nightmare for Trevor. The problems started when a

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toxicologist, who works for the government in New Zealand, fed his parrots a soy-based formula and they died. He blamed the soy. He and others formed "The Soy Toxin Team" and have been working ceaselessly to (1) get soy-based infant formula banned from the market in New Zealand, and (2) alert the public to what they feel are the dangers of the phytoestrogens in soybeans. Trevor has a huge file of anti-soy and anti-phytoestrogen articles published in New Zealand. Note that in the USA almost all of the many articles about the phytoestrogens in soybeans consider them to be one of the main benefits of soybeans.

The second major problem has been Roundup Ready soybeans–which are genetically engineered by Monsanto. Greenpeace in Australia has made these soybeans their major project; they are working to alert the public to the fact that most food products that contain soybeans–unless specifically labeled otherwise–probably contain at least a small percentage of Roundup Ready soybeans–which are not labeled as being genetically modified (GM). These soybeans offer no benefits to consumers and Greenpeace argues that they main contain some real dangers. They have conducted a number of media actions, such as taking soy products off supermarket shelves to point out that they contain soy–as the cameras roll. The result has been to give soy a negative image in Australia. A group called the Natural Food Commission (an offshoot of Maharishi's Transcendental Meditation or TM) has been formed and is now circulating a draft proposal on genetically modified organisms in foods–urging that they be labeled.

Trevor's sales have decreased by 25% over the past 18 months. His biggest specific problem is trying to find a source of soy protein isolates that are guaranteed to be free of GM soybeans. Protein Technologies International is refusing to deal with this issue by saying that their isolates are safe. There are other big users of soy protein isolates in Australia: A large sausage company and Sanitarium Foods. Of his various products, Trevor's isolate-based soymilk has suffered the greatest drop in sales. Sales of his tofu products have not decreased, and sales of his soy ice creams are down only a little. Address: Managing Director, Bean Supreme Ltd., P.O. Box 12082, 140 Hugo Johnson Dr., Penrose, Auckland, New Zealand. Phone: (09) 590 592.

3274. Seemo (H. Shapira). 1997. Re: History of Dakini Health Foods Pvt. Ltd., in Pune/Puna, India. Letter (fax) to William Shurtleff at Soyfoods Center, May 13–in reply to inquiry. 7 p. Handwritten.

• ***Summary:*** Seemo is Mr. H. Shapira from Israel and Kairava is Mrs. J. Spaelstra from the Netherlands. Seemo is in charge of tempeh, Kairava in charge of tofu & soymilk. They are making the earliest known commercial soybean tempeh in India. For their first letter see Dakini (1997).

Both Seemo and Kairava are devout disciples of Osho (formerly called "Sri Rajneesh"), he since 1984 and she since 1986. They arrived in Pune to stay in about 1988/89. Initially to support themselves, they had a gem and crystal shop, a wholesale new-age jewelry operation, and a motor bike repair shop. Now they have finally found what they want to do for work. "It's love and Zen." Osho died in Pune on 19 Jan. 1990; they returned to India the next day; the fire was still burning at the burning ghat. In the year before his death, his discourses were mostly about Zen. He died in Pune due to heavy metal poisoning and radiation damages done to him by U.S. marshalls in an Oklahoma jail cell, where he was kept unlawfully in 1985.

Their company started with the idea of making white tahini and possibly Turkish halva [halvah] (in which white tahini is a main ingredient). It was extremely difficult to get started. As foreigners doing business in India, they had to register a "Pvt. Ltd." company. Then they could not find a space for the company, since Pune is a rapidly growing city. So Seemo pulled down the back garden in his rented house, constructed a shed with a floor area of 25 square meters, and moved his bedroom up to the second floor. This gave him an additional 24 square meters where the bedroom used to be. They also have a 25 square meter storeroom where they make the tempeh. He got electrical connections then waited for 8 months while a colloid mill (copy of a 1940 model), hot air oven, and filling machine were delivered. The mill proved to be a technical nightmare; he had to totally rebuild it. Finally their small factory started operation. Then they added peanut butter and brown tahini to their product line–with no additives or preservatives. They had to set aside their plan to make halva.

Spicer College, run by Seventh-day Adventists, is located in Pune. They have a health food store and they make peanut butter–nearly edible, with too much sugar and salt, plus other ingredients. Their sesame butter (brown tahini) is gritty, rancid, and inedible. They also produce grape juices (very, very sweet), pastries (Mmmm good). And they make and bottle soy milk in plain and chocolate flavors, but it is loaded with white sugar and Class II permitted preservatives! They also make pretty good tofu; Seemo used to eat it now and then for the last 8 years. "Besides being actually able to taste the Bible in it, I had no reason to complain." This tofu is now served at the Osho commune. "Pune old timers told me that once–20 years ago–the place was managed by an enthusiastic old American woman and the quality of their products was very good.

At Dakini, they now also make hummus in their kitchen, 15 kg/week in summer and 60 kg/week in winter. They pack it in 200 or 400 gm cups and sell it at various shops in town to foreigners and Indians. They like it.

Seemo started developing the tempeh about 8 months ago. Last year a friend of his found a book titled *Handbook of Indigenous Fermented Foods,* edited by Dr. Keith H. Steinkraus, in a pavement stall for 400 rupees (US$13.00). Since he had been to Bali, Indonesia, many times, he tried

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making some of the foods but rarely got any edible products. So before leaving Pune, he gave the book to Seemo as a gift. As he read it, Seemo got really excited. He had grown up in a meat-eating family. Even while traveling and living in Europe, he continued to eat meat and junk foods. "Then I understood it was not good for me on all levels, and went vegetarian." Living in Holland later on, he started to learn about tofu, and then tempe, tamari, etc. "So now I was a healthy, well-fed vegetarian." Then he moved to India, but after some years of eating fried foods, lentils and lots of dairy products, he started to eat meat again, 2-3 times a month. "It did not feel too good, but I had no idea how to manage my diet, and living on mostly dairy products did not suit my body. So when Dr. Steinkraus' book fell into my hands, I got excited and realized that it might be possible to make tempe here in India at a small, affordable investment.

"So I first got a small incubator built; its actually like a cool box ½ meter wide and 1½ meters high, made of galvanized sheet metal with insulation and 8 shelves (of which I now use only 3)." At the bottom are heaters, which give 250-540 watts of heat. Two old computer cooling fans distribute the heat, and a thermostat regulates it. "It's not a perfect machine but I can do 5-12 kg/day when I want and, most important, I can produce in it excellent spore powder–since it is difficult to import anything here. Actually, I nearly gave up the project, because I was making sporulated tempeh, then sun-drying it and running in through my spice grinder. The powder looked great. The tempe cakes used to get hot, then very hot, then smelly with funny colors (no white mold). I double-checked everything. In the end, only the grinding was left, so I bought a small hand-turned grain mill (500 rupees = US$15.00). Since then, perfect tempeh has been happening.

"For starter, I first got a packet of spores from Holland. Later I got 1 gram of white tempe starter from an American friend in Goa (she used to make her own supply down there), and playing with it I found it a bit more suitable for my use. So most of my spore stock now is from this starter, and some is mixed. I still have to study how to make tempe and starter during the different seasons here. Now it is very hot and dry. Next month is monsoon (wet), followed by a month that is hot and humid, and then the 3-month 'cold' season."

About half of all tempe produced is sold frozen; the other half is sold fresh. Seemo also plans to try making dry tempeh. He gives away lots of tempe as samples; most people love it. Starting this July, it will appear on the menu of one restaurant, possibly two–first as Tempeh Stroganoff and Tempeh Shashlik (steamed, then spiced, then barbecued). "When I get *The Book of Tempeh* I will introduce it to more places. Meanwhile, I have totally forgotten about eating meat. I feel strong and light. I find my vision benefits too; I haven't noticed that with tofu. Now that I am a bit more confident working with the mold, I hope to raise some capital, move to a suitable place (possibly well out of town), and then start to make tamari shoyu, and definitely some miso too. So that's a little of our story. Thank you." Address: Dakini Health Foods Pvt. Ltd., Vidyut Nagar, Plot A2, Kawdewadi, Pune / Puna 411 001, India. Phone: 0091-212-63-1990 (phone and fax).

3275. Burros, Marian. 1997. Trying to get labels on genetically altered food: Eating well. *New York Times.* May 21. p. B8.

• ***Summary:*** In December 1996, Whole Foods Market (WFM), the largest natural foods supermarket chain in America, sent a letter to more than 400 of its suppliers asking if their products contained genetically engineered ingredients. About 75% of the suppliers have not yet responded–According to Margaret Wittenburg, quality assurance director of WFM; she wrote the letter. More soybeans are genetically engineered than any other food crop. "They [most Americans] have no idea what foods on their supermarket shelves contain genetically engineered ingredients because the Government does not require those products to be labeled. A small but growing movement of people is pushing for that to change."

"Europeans have been quicker than American to react to transgenic food... In Austria and Luxembourg genetically engineered food is banned. Most observers suggest that Europe's response is so much more intense because of the European experience with mad cow disease."

"There are signs that the consumer movement is gaining momentum. Nebraska and Maine are considering legislation for labeling. Mothers for Natural Law, a nonprofit consumer advocacy group, has begun a public awareness campaign. The group, which is affiliated with the Natural Law Party, which promotes transcendental mediation, wants to collect a million signatures on a petition asking the Food and Drug Administration to require testing and labeling of transgenic foods."

The article then asks how widespread transgenic foods are in U.S. supermarkets. "[The *Times*] asked Genetic ID, a company in Fairfield, Iowa, that tests foods for genetically engineered ingredients, to test four soy-based baby formulas and eight other products made with soy or corn. The infant formulas–Carnation Alsoy, Similac Neocare, Isomil and Enfamil Prosobee–all tested positive. Eden Soy milk tested negative. Morningstar Farms Breakfast Links and Morningstar Farms Better 'n Burgers, Betty Crocker Bac-os Bacon Bits, all soy-based products, also tested positive. And so did three corn-based chips–Fritos, Tostitos Crispy Rounds and Doritos Nacho Cheesier."

3276. Hymowitz, Ted. 1997. Thoughts on genetic engineering and Roundup Ready soybeans (Interview). *SoyaScan Notes.* May 26. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Ted has just received a letter from Greg

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Gambrill of Sanitarium Foods in Australia asking how they should relate to consumers who do not want to consume genetically engineered (Roundup Ready) soybeans. Address: Prof. of Plant Genetics, Univ. of Illinois, Urbana, Illinois.

3277. Haumann, Barbara Fitch. 1997. Soy protein foods gain store space. *INFORM* (*AOCS*) 8(6):588-596. June.
• ***Summary:*** Contents: Introduction. Nutritional drive. Meat alternatives. Soymilk and tofu markets. Soybeans as vegetables. Emerging products. Products consumers want. Hurdles. Possible health claim? School lunch opportunities (federal school lunch program). Product promotion. Nutraceuticals.

Soy protein foods sold in supermarkets are no longer targeted at only vegetarians; they're becoming mainstream products. Many U.S. consumers are decreasing their consumption of meat. USDA food intake surveys show that from 1977 to 1994 per capita beef consumption decreased 54% and pork consumption dropped 45%.

The leader in meat alternatives is Worthington Foods, which has seen sales rise approximately 20% in each of the past 3 years. Its Morningstar Farms brand, sold in frozen food sections in supermarkets and geared for mainstream consumers, represents 75% of the company's offerings.

PMS Foods, Inc. in Hutchinson, Kansas, is among the companies that make meat alternatives, including soy-based beef, chicken, ham, pepperoni, bacon, sausage-flavored crumble, sloppy joe mix, soy-based taco mix, and soy-based chili mix–which it sells wholesale, primarily to foodservice operations. Some of its products are used as ingredients in supermarket products–such as bacon bits and salad dressing mixes.

Steve Demos, founder and president of White Wave, jokes: "We're primarily a dairy without a cow. We 'milk' soybeans. Founded in 1977, the company now sells 54 retail products and produces about 125 tons a week of soy proteins via aqueous extraction. White Wave has up to 30 linear feet in the refrigerated sections in some natural food stores. White Wave has experienced 25-30% sales increases per year over the past decade.

The Soy Protein Council in Washington, DC, now has 3 members: ADM, Cargill Inc., and Central Soya; all produce soy protein concentrates, isolates, and soy flours. The council promotes the growth of the soy protein industry and works to broaden the acceptance of soy products in foods. The council's Web site is http://www.spcouncil.org.

Fourteen state soybean boards, the United Soybean Board, and the Soy Protein Council gave joined together to form the "Soy Protein Partnership," whose goal is to promote domestic soy protein use in human foods. Seven members of the partnership–the state soybean boards from Indiana, Iowa, Kansas, Michigan, Nebraska, Ohio, and South Dakota–are providing $270,000 to fund the partnership's first project, a "Food Manufacturer's Initiative." The group in using the slogan "New Food, New Uses: How soy protein can expand your business, to reach food marketing executives and food technologists and to increase their awareness of the demand for soy products and their use in food products.

Surveys by Wiese Research Associates have shown that consumer awareness concerning soy protein increased from 55% of consumers polled in 1991 to 79% in 1996. Likewise, those saying they wee likely to purchase a product if they knew it contained soy protein increased from 20% in 1988 to 32% in 1996.

In addition, a national Gallup survey conducted in 1996 for the Nebraska Soybean Board showed that 56% of the 600 school foodservice directors polled currently use soy products. And studies by the National Restaurant Association indicate that 97% if colleges and universities and 80% of restaurants have incorporated meatless entrees into their daily menus.

Schouten USA Inc. of Minnesota, whose parent company is the Schouten Group in the Netherlands, manufactures SoyLife, a soybean [sprout] extract containing 25-30 mg of isoflavones per gram. According to Laurent Leduc, Schouten USA's international marketing manager, it is presently used as an ingredient by more than 40 different vitamin and supplement companies as a source of isoflavones in their products, and is being incorporated into "functional foods" around the world. Leduc notes that research has indicated that consuming 60-80 mg of isoflavones a day may provide health benefits. He adds: "The only other way to get that much is by eating 8-9 ounces of tofu or drinking two-thirds of a liter of soymilk a day. The average American is not going to do that."

William Shurtleff of Soyfoods Center "said it currently is no longer usual to field questions from consumers in Midwestern states who would like to know how to incorporate soy as part of their diets to lower cholesterol.

"'I credit much of this to the state soybean checkoff boards that are promoting interest in soyfoods, particularly in the heartland. This is changing the demographics for the market throughout the United States. Within the past two years, these boards have collectively become the single biggest force promoting soyfoods in America.'" Address: Senior editor/writer for INFORM.

3278. **Product Name:** So Good (Soymilk Based on Soy Protein Isolates) [Fresh, or Aseptic].
Manufacturer's Name: SoyaWorld Inc.
Manufacturer's Address: 4074 Lozells Ave., Burnaby (suburb of Vancouver), BC, Canada. Phone: 604-420-3240.
Date of Introduction: 1997 June.
New Product–Documentation: Talk with Peter Joe of Sunrise. 1999. May 26. So Good is created under a licensing agreement with Sanitarium Foods in Australia. It was first test marketed in mid-1997 (with the name SoyaWorld Inc. on the package), then in Jan. 1998 the product was officially

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launched with a big TV advertising campaign. It is sold in both fresh and UHT packaging, but 90% of the sales come from the fresh product. It is targeted at mainstream Canadian consumers and sold mostly in supermarkets.

Note: This is the earliest record seen (Aug. 2013) concerning SoyaWorld, Inc.

3279. Worthington Foods, Inc. 1997. Second quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.
• ***Summary:*** Net sales for the second quarter of 1997 rose 14% over the same period in 1996, net income rose 27.3%, and earnings per share rose 27.3%. Gross margins of 42.8% were another record for the Company (compared to 39.1% last year). Address: Worthington, Ohio. Phone: (614) 885-9511.

3280. Sandler, Matthew. 1997. New developments Luppy and with soymilk in the USA (Interview). *SoyaScan Notes.* Sept. 15. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** At the Natural Products Expo in Baltimore, Matt introduced Luppy, a pudding based on organic milk. For years he had wanted to make a soy-based pudding but he was unable to realize his dream, largely for two reasons. He was unable to buy soymilk at a reasonable price, and when the soymilk was heated to aseptic temperatures, it developed off-flavors that he was unable to get rid of.

Matt buys organic nonfat dried milk for $2.30/lb. One pound makes 10 gallons with 10% solids. So the cost of a gallon of liquid is $0.23.

Matt heard that American Soy Products (makers of Edensoy) has recently doubled the capacity of their soymilk plant.

Matt also heard that Elmer Schettler, president of Devansoy, Inc. (Carroll, Iowa), recently sold his company to Sovex. Devansoy started making Solait (powdered soy beverage) as its own brand in Jan. 1993; Solait had previously been made by Miller Farms. Devansoy also made "Better Than Milk" (powdered soy beverage) for Sovex. Note: Talk with Elmer Schettler, owner of Devansoy, Inc. This is not true. Devansoy is not for sale and has not been sold. Address: Co-owner, Luppy Natural Foods, Inc., P.O. Box 5997, Snowmass Village, Colorado 81615. Phone: 970-923-0333.

3281. Shurtleff, William; Aoyagi, Akiko. comps. 1997. Soy in Africa–Bibliography and sourcebook, 1857 to 1997: Detailed information on 1,617 published documents (extensively annotated bibliography), 109 unpublished archival documents, 111 original interviews (many full text) and overviews, 97 commercial soy products. Lafayette, California: Soyfoods Center. 518 p. Subject/geographical index. Author/company index. Language index. Printed Sept. 28 cm. [1794 ref]
• ***Summary:*** Brief History of Soy in Africa: The Society for Acclimatization in France did most of the pioneering work with soybeans in Africa. In 1857 they were asked to send soybeans to the island of Réunion, and one member asked that large-scale soybean trials be undertaken in Algeria. In 1858 Mr. Koenig-Bey of Alexandria, Egypt, wrote the Society about the cultivation of soybeans in Egypt. In 1880 the Society's soybean expert, Auguste Paillieux, published a report from Dr. Bertherand of Algiers (Algeria, which was then a French colony) dated 19 Nov. 1880. It stated: "The breeding nursery cultivated soybeans (Soya; Glycine hispida) many years ago. Soya does rather well here, but its seeds are hard and remain tough. This is the earliest document seen that clearly describes soybean cultivation in Africa.

By 1873 Haberlandt of Austria reported that soybeans were being grown in Tunisia–but gave no details.

By 1903 soybeans were being grown in South Africa, by 1907 in Tanzania, and 1908 in Mauritius.

In 1908 the world price of linseed oil and cottonseed oil skyrocketed. During the next few years the first large shipments of soybeans were imported to Europe from Manchuria. European colonial powers (and South Africa) quickly began to investigate the possibility of growing soybeans in their African colonies, but without much success, since suitable varieties had not yet been developed. Nevertheless in 1909 trials were conducted in Gold Coast (today's Ghana), Kenya, and Gambia, and in 1910 in Nyasaland (Malawi), Southern Rhodesia (Zimbabwe), and Nigeria.

Starting in the 1960s, serious interest in soybeans in Africa began to grow–slowly but steadily. Total production increased from 50,000 tonnes (metric tons) in 1960 to 75,000 tonnes in 1969, a growth of 50% in ten years. The great majority of these soybeans were grown in Nigeria. Starting in the mid-1960s, large amounts of soy flour, in the form of cereal-soy blends, began to be shipped from the U.S. to Africa under the P.L. 480 (Food for Peace) Program. In 1962 Africa's first two commercial soy products were introduced: Pro-Nutro, a cereal soy blend, by Hind Brothers in Durban, South Africa, and a Soy-Fortified Whole Wheat Bread by Harrison Foods in Ghana.

Then in about 1973 there was a rapid rise of interest in soybeans and soyfoods in Africa, paralleling the new interest worldwide. The three major reasons for this strong interest in Africa were the sudden rise in world soybean prices, the work of the International Institute of Tropical Agriculture (IITA at Ibadan, Nigeria) starting in 1970, and the work of INTSOY (the International Soybean Program headquartered at the University of Illinois) starting in 1973. IITA and INTSOY developed soybean varieties and management practices that for the first time gave high yields under African conditions, and sponsored conferences on soybean production and utilization in Africa.

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Interest, production, utilization, and research grew dramatically during the 1980s. Africa's leading soybean producing countries in 1987/88 were Egypt (144,000 tonnes), Zimbabwe (100,000), Nigeria (75,000), South Africa (49,000), and Zambia (26,000 tonnes).

By 1995/96 Africa's leading soybean producers were Zimbabwe (110,000 tonnes), South Africa (84,000), Nigeria (80,000), Egypt (64,000), and Zambia (35,000 tonnes).

In October 1995 the Third Bi-Annual SoyAfrica Conference was held in Johannesburg, South Africa.

The future for soybeans and soyfoods in Africa, a continent with long-term protein shortages, looks extremely bright.

This is the most comprehensive book ever published about soy in Africa. It has been compiled, one record at a time, over a period of 20 years, in an attempt to document the history of this subject. Its scope includes all known information about this subject, worldwide, from A.D. 1857 to the present.

This book is also the single most current and useful source of information on this subjects, since 97% of all records contain a summary/abstract averaging 181 words in length.

This is one of more than 50 books on soybeans and soyfoods being compiled by William Shurtleff and Akiko Aoyagi, and published by the Soyfoods Center. It is based on historical principles, listing all known documents and commercial products in chronological order. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 510-283-2991.

3282. Worthington Foods, Inc. 1997. Natural Touch: Purity pledge. Worthington, Ohio. 2 panels each side. Each panel: 8½ by 11 inches.

• ***Summary:*** This glossy color leaflet describes 19 Natural Touch products–including Vege Frank, Dinner Entree, Loaf Mix, Stroganoff Mix, Taco Mix and Vegetarian Chili.

For each product is given: A photo of the front of the package. A brief description of the product. The weight of each package and number of packages per carton. Ingredients. Nutrition facts.

The Purity Pledge on the front panel states: "Natural Touch products are completely free of anything artificial–no additives, colors, flavors, or preservatives–you have our word on it." Address: 900 Proprietors Rd., Worthington, Ohio 43085. Phone: (614) 885-9511.

3283. Davis, Jean; Stoltz, Garth "Duff." 1997. Seventh-day Adventist historical landmarks in Battle Creek, Michigan (Brochure). Battle Creek, Michigan: Printed by Benedict Printing. 10 panels. Oct.

• ***Summary:*** Contents: Twenty-nine historical landmarks, each with a description, an illustration or photo, and its location shown on a map. Key to numbers on tour map. Map of Battle Creek showing historical landmarks. Oak Hill Cemetery map, plus key to numbers on map. Adventist history tours. Chronology of events in Battle Creek Adventist history–1850-1928.

The historical landmarks include: The first four Adventist churches (starting fall 1855 to 1922). Note from Jean Davis, Jan. 1999. "The second church [opened Nov. 1857] has been replicated in the Historic Adventist Village and looks great." 8. John Harvey Kellogg's spacious residence (demolished 1958). 9. The home of James and Ellen G. White, co-founders of the SDA Church, 63-65 N. Wood Street. James and Ellen moved to Battle Creek in the fall of 1855. Note: This home is undergoing restoration and is in the heart of the Historic Adventist Village. 13. The building that stood at 169 W. Emmett. "It was built in 1901 by W.K. Kellogg for his brother, Dr. John Harvey Kellogg, to house the Sanitas Nut Food Company. Corn flakes, peanut butter, and other health foods were manufactured here until 1913 when it was moved to larger quarters in a former organ factory." From 1989 it was "used for the Health and Heritage Museum until it was demolished in 1996 to make way for the Family Health Center."

17. Battle Creek College, founded in 1874, was the first in the denomination. The building was dedicated on January 4, 1875. It flourished, and in 1901 it was relocated at Berrien Springs, Michigan, and was renamed Emmanuel Missionary College. It is now Andrews University.

"18. On December 25, 1865, Ellen White was shown that SDA's needed a health institution. Her counsel was heeded and the Western Health Reform Institute opened September 5, 1866, in a residence on N. Washington. In 1876 Dr. John Harvey Kellogg became medical director, and in 1877 changed the name to" Medical and Surgical Sanitarium, which that same year came to be known as simply "the Sanitarium." A large new brick Sanitarium was opened 'on the grounds of the old Health Institute' in 1878. Its fame spread and it became known worldwide... The San burned February 18, 1902 and was replaced by a larger structure in 1903. Expansions continued and in 1928 the 14 story towers addition was added to accommodate increasing patronage. Due to financial reverses it was sold to the government in 1942, and served as Percy Jones General Hospital until 1953. Today it is known as the Battle Creek Federal Center.

"19. In 1855 James White accepted the invitation of Michigan Adventists to move the *Review* office from Rochester, New York, to Battle Creek... Four men purchased a lot and erected a two-story building 20 by 30 feet on the southeast corner of West Main (now West Michigan). It was moved to the rear in 1861 and survived the fire of 1902." The Review and Herald Offices were moved to Washington, DC, in 1903. Note: Joseph Lambert had his factory in this building, which will be replicated in the Historic Adventist Village.

Key events: "1850–Samuel W. Rhodes, earliest known

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Sabbatarian Adventist minister to visit Battle Creek, came in August with C.J. Bowles,–visited 'one brother' and had 'strong hopes of his embracing the truth.'

"1852–David and Olive Hewitt accepted the Seventh-day Sabbath and sanctuary doctrine brought to them by Joseph Bates. They became Battle Creek's first Sabbathkeeping Adventists.

"1854 June 9-11–The first SDA evangelistic tent meetings were conducted in Battle Creek.

"1855 April 28-29–James White held his first public meetings in Battle Creek with D.P. Hall in the Universalist Hall.

"1855–Review moved to Battle Creek" from Rochester, New York. First issue printed Dec. 4. Uriah Smith began his long term as resident editor.

"1860 Oct. 1–The name Seventh day Adventist was adopted for the denomination."

"1867 April 9–Health Reform Institute, forerunner of the Battle Creek Sanitarium, was incorporated."

"1874–Battle Creek College was founded. Building completed on Washington (opposite Sanitarium) and dedicated January 4, 1875."

"1901–College was moved to Berrien Springs, Michigan and became Emmanuel Missionary College, now Andrews University.

"1902–Sanitarium burned February 18. Review and Herald burned Dec. 30.

"1903–Sanitarium rebuilt on larger scale. Last Review printed here [in Battle Creek] August 11. Publishing Association and General Conference headquarters moved to Washington, DC.

"1915–Funeral of Ellen G. White was held in the Dime Tabernacle July 24." Address: Battle Creek, Michigan.

3284. Sanitarium Health Food Co. 1997. So Good now: The fresh taste of today (Booklet). 146 Fox Valley Rd., Wahroonga, NSW 2076, Australia. 8 p. April. 15 cm.
• ***Summary:*** The first 2 pages of this attractive full-color booklet contain information about these soymilk products: Soy & linseed–a recipe for good health. What's so good about So Good. Rich in phytoestrogens. The Omega 3 benefit. Calcium. Vitamin B-12. Low fat. There follow 7 pages of recipes. Address: Wahroonga, NSW, Australia.

3285. Stuttman, Irene. 1997. Update on Sycamore Creek and their soynut butter (Interview). *SoyaScan Notes.* Nov. 18. Conducted by William Shurtleff of Soyfoods Center. Followed by a fax of June 19.
• ***Summary:*** Sycamore Creek has no formal contract with T&G Food Ingredient Services (the company which markets their soynut butter) or with the co-packer. In the early days, T&G wanted Sycamore Creek to split off their soynut business into a separate company, then T&G wanted to own half of that soynut butter business. As far as Irene knows, T&G has not done that with other companies whose products they market. This could become a problem if Sycamore Creek sells their company to people who have the funds to make and market the soynut butter themselves, and if T&G decides (working with the co-processor) to continue making and marketing the soynut butter in competition with the new owners–or to stop only for a hefty price. Shurtleff feels that Sycamore Creek is in a potentially vulnerable position, but Irene does not feel vulnerable because T&G does not know how to roast the soybeans, and her company knows what it is doing. Irene could sell her company without telling T&G; she has no plans to tell them. But recently she tested the water, asking T&G if they would like the first right of refusal when she puts the company up for sale; they said "no." She told them she planned to get aggressive about it.

Irene is proud to have accomplished her three goals over the past few years: To get the company back from the guy who was milking it, to build it up, and to get it ready to sell. The company is now profitable and the plant is running at capacity.

Irene could never have done what T&G did in terms of financing the soynut butter launch. She financed the first go-around during which she had to come up with $80,000 worth of raw materials. Since she had hardly any money to do this, she used creative entrepreneurial techniques; she had to talk her suppliers into giving her "terms" until Worthington paid. It worked the first time around, but she could not have continued in that way. Moreover, the co-processors have made some big processing mistakes which required them to throw product away and swallow the financial losses. Irene could never have been able to pay for those losses. So in the final analysis, things have worked out well with T&G. Address: President and CEO, Sycamore Creek Co., 200 State St., Mason, Michigan 48854. Phone: 517-676-3836.

3286. Cho, Sungsoo; DeVries, Jonathan W.; Prosky, Leon. 1997. Dietary fiber analysis and applications. Gaithersburg, Maryland: AOAC International. xv + 202 p. Illust. No index. 26 cm. [500+* ref]
• ***Summary:*** Contents: Preface. 1. The definition of dietary fiber. 2. The structure and chemistry of dietary fiber. 3. An overview of dietary fiber analytical methodology. 4. AOAC International approved dietary fiber methods. 5. The physico-chemical properties of dietary fiber. 6. Analytical methods for measuring the physico-chemical properties of dietary fiber. 7. Future needs for analytical methods for dietary fiber. 8. Dietary fiber content of foods.

In Chapter 8, table 8.4, "Dietary fiber data on foods of Japan, contains a section titled "Grain products" (p. 158-59) which gives values for TDF % (total dietary fiber), SDF % (soluble dietary fiber), and ISF % (insoluble dietary fiber) for the following foods: Miso, barley-koji. Miso, rice-koji, dark yellow type. Miso, rice-koji, light yellow type. Miso, rice-koji, sweet type. Miso, soybean-koji. Natto, Hikiwari,

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fermented soybean. Natto, Itohiki, fermented soybean. Okara. Tofu, Kinugoshi, soybean curd. Tofu, Kori-dofu, soybean curd. Tofu, Momen, soybean curd. Yuba, dried.

The three values for okara are 9.8%, 0.3%, 9.5%. Thus, most of the dietary fiber in okara is insoluble. Address: 1. Kellogg Co., 235 Porter St., Battle Creek, Michigan.

3287. Hogan, David Gerard. 1997. Selling 'em by the sack: White Castle and the creation of American food. New York, NY: New York University Press. x + 199 p. See p. 99, 100, 107. [261* ref]

• ***Summary:*** A fascinating book, very well researched and written. White Castle, a regional restaurant chain, was founded in 1921 in Wichita, Kansas–at a time when Americans were hesitant to eat ground beef after Upton Sinclair's 1906 novel *The Jungle* had publicized the poor sanitation practices of the meat packing industry. It became the first American hamburger fast food restaurant chain.

It made the hamburger a U.S. institution and launched the fast-food industry.

In the chapter "White Castle goes to war," the section titled "Victory coffee without the coffee" (p. 98-100) states that coffee was in short supply during World War II only because consumers, in the early summer of 1942, fearing it would be rationed, "fulfilled their own prophecy of scarcity by clearing grocery shelves and hoarding coffee in their cupboards." Rationing was imposed a few months later.

White Castle first considered extending the existing coffee supply by adding "chicory or soy meal." Eventually most wholesale roasters added 6-8% chicory to their mix, which did not alter the flavor much. White Castle soon accepted this "chicoried" coffee at most Castles in the chain.

They also tried a variety of other hot drinks to help make up the coffee shortage, such as Postum (an extract from roasted wheat bran flavored with molasses)–but it was quite expensive.

White Castle also considered and tested, but ultimately rejected, other coffee substitutes such as "Soykee, a soy derivative sold by Battle Creek Food Company; Soyfee from Cubbison Company; and Kofy Sub, another soy-based substitute" [made by Dr. Jackson Foods in Toronto, Ontario, Canada]. The only coffee substitute that White Castle considered seriously was Breakfast Cup, sold by Loma Linda Foods of California in 12-ounce packages; it was made from soy, bran, fig, wheat, and honey, but was eventually considered too expensive.

Since meat was also scarce during the war, White Castle also searched for alternatives to their hamburgers–and even considered meatless alternatives. Battle Creek Foods of Michigan offered the most varieties. Special Foods of Columbus [sic, Worthington] Ohio, made Numete, based on peanuts and corn flour. Many companies made a soy burger, while Loma Linda Foods made Vegelona (from soybeans, tomatoes, onions, and peanuts) and Proteena (from soy, tomato juice and yeast extract). Central Soya Co. made soya flour, which White Castle considered using as a meat extender. But there is no evidence that White Castle ever mixed its hamburger meat with any extender.

Brief story of Betty Crocker: The first company to pioneer a corporate hostess for image making was General Mills in 1921–though at the time the company was named Washburn, Crosby, and Company, it "was becoming frustrated with the growing negative publicity about the white bread made from its bleached Gold Medal Flour. White bread was being denounced as having no nutritional value and being full of additives. In response the company created the popular yet fictional gray-haired 'Betty Crocker,' who was portrayed to the public as both an expert on nutritional issues and the ideal role model of the feminine and organized homemaker." The program began with just one secretary signing this pseudonym to all public relations correspondence, but quickly expanded. Address: Assoc. Prof., American History, Heidelberg College [Tiffin, Ohio].

3288. Nutrition Education Service, Sanitarium Health Food Company. 1997. Sensational soy cookbook. Sydney, London, Vancouver, New York: Murdock Books. 64 p. Illust. Index. 20 cm. [32 ref]

• ***Summary:*** A saddle-stitched vegetarian cookbook on glossy paper loaded with color photos and lightweight text. The author and nutritionist is Cathy McDonald of Sanitarium. Recipes developed by Wendy van der Veer of Sanitarium. Contents: The story of soy. The soy family: Miso, soy beans, soy breads & cereals, soy cheese, soy drink, soy flour, soy grits & soy flakes, soy 'meats,' soy pasta, soy sauce, soy snacks, tempeh, TVP, tofu, tofu desserts (ice cream and yoghurt). Breakfasts. Soy for health (isoflavones, menopause, breast cancer, osteoporosis, prostate cancer, heart disease). Light meals. The secrets of soy. Main meals. Soy in perspective. Desserts. Sensational soy (sample menus). Snacks. Know your nutrients. Bibliography. Estimated isoflavones in soy foods (table). Address: 1 Sanitarium Drive, Berkeley Vale, NSW 2261, Australia.

3289. Quick, Graeme R. 1998. The early history of the combine in the United States (Interview). *SoyaScan Notes.* Feb. 23-24. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Graeme, an Australian who got PhD at Iowa State University, is an expert on this history of the combine and the co-author (with Wesley Buchele) of the classic book on that subject, *The Grain Harvesters.* He is now working on a new edition of that book, and welcomes the suggestion to include a glossary of basic terms (such as cutterbar, floating cutterbar, reel, pickup reel, header, etc.) for the non-professional reader. Graeme's PhD thesis was about improvements in the combine for soybean harvesting. The combine (and the word "combine") existed as early

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as 1883. Graeme is a Seventh-day Adventist and has been a vegetarian for 40 years. Wes Buchele is now retired and living in Baja California, Mexico; he often returns to Iowa during the summer.

The Grain Harvesters includes a long and very original chapter on the history of combines in soybean production titled "Cinderella Soybean" (p. 235-32). One especially interesting part of this chapter is the story of the invention and development of the floating cutterbar by Joe Zeb, Horace D. Hume, and J. Edward Love. In 1976 Graeme conducted in-depth interviews with Hume and with John E. Love, the son of J. Edward Love, who now runs the family combine business in Garfield. These interviews form the basis of the story of the floating cutterbar. A floating cutterbar "floats" in two directions to cut as low as possible on changing terrain. The blade is flexible from left to right, like a long cross-cut saw. Moreover, the header itself is mounted on shoes that run along the ground and allow it to move up and down. Graeme also invented the Kwik-Cut Head which was released in 1977 and improved the performance of the cutterbar.

The coulter is an ancient piece of farm equipment, which goes back to the days of the horse-drawn plow, perhaps as early as the 1820s. It is a blade (initially a knife, now a disc) that runs in front of the plow, and makes a shallow cut into the soil to help the plow. Note: According to the *Oxford English Dictionary,* the word coulter (spelled *cultre* at the time), was first used in about 1000 A.D. by Aelfric, an abbot and writer in England (in the work *Colloq.*). It is defined as "The iron blade fixed in front of the share in a plow; it makes a vertical cut in the soil which is then sliced horizontally by the share."

Graeme has not done much research on the early history of the soybean in Australia. The man to contact on that subject would be Don Byth, who is known as "Mr. Soybean" in Australia. He is probably still active at the Dep. of Agriculture, Univ. of Queensland, St. Lucia, Queensland, Australia.

Graeme had not realized that the tractor first began to be used in soybeans at almost exactly the same time as the combine. He thinks that is a very profound observation. Tractors existed in the late 1800s, but why weren't they used in soybeans until about 1923? Graeme can think of at least three reasons: First, in the early 1920s, soybeans were generally grown in small fields / tracts–probably too small to make efficient use of a tractor. Second, soybeans were grown mostly for forage and hay at that time, and fed to livestock. Farmers who did this would be more likely to get their draft power from horses. Third, the early combines were very large, and mostly of the pull type, which required a large tractor, that would not fit well on a small soybean farm. The horse was the dominant source of draft power until about 1919, the year of the peak number of horses on U.S. farms. By this time, the number of tractors was increasing rapidly, and it continued to do so until the Great Depression, when they took a savage blow. Only after the Depression, with the start of World War II, did they start to rise again.

The combine was one of the reasons that soybeans switched from being a hay crop to a seed crop. Not until 1941 did acreage of soybeans planted for seed pass that planted for forage and hay. Address: Dep. of Agricultural Engineering, Davidson Hall, Iowa State Univ., Ames, IA 50011-3080. Phone: 515-294-1320.

3290. **Product Name:** Gardenburger–Hamburger Style Veggie Patties (With Soy) [Regular, or With Cheese].
Manufacturer's Name: Gardenburger Inc.
Manufacturer's Address: 1416 S.E. 8th St., Portland, OR 97214. Phone: 1-800-636-0109.
Date of Introduction: 1998 February.
Ingredients: Incl. soy protein.
New Product–Documentation: Talk with Mr. Lige Weill of Vegetarian Awareness Network. 1998. Feb. 25. Gardenburger Inc. has just come out with a new Gardenburger that contains soy. He thinks they are doing this to compete with the Boca Burger.

News release by Gardenburger. 1998. Oct. 20. "Daily news of soy's health benefits rocketing sales of soy-based veggie patties: Gardenburger Hamburger Style Fat Free Veggie Patties become nation's favorite soy patties." States that this pattie was introduced in Nov. 1997. Note: It was not available in stores until about a year later. Yet the release adds that since November 1997, "Gardenburger has sold more than $10 million worth of soy patties. They are among the few such products available at supermarkets nationwide." "According to A.C. Scantrack data, sales are up 45% from a year ago and 69% in the last month."

Talk with Heidi in consumer affairs at Gardenburger, Inc. 1998. Nov. 25. The company's new soy-based line was introduced this month and is just now getting into retail stores. It complements the popular grain-based line. The two products in the line are Gardenburger–Hamburger Style–Regular or With Cheese. Formerly this company promoted their products as being "soy-free."

3291. Worthington Foods, Inc. 1998. Improve your image as a couch potato. Snack on something healthy (Ad). *Vegetarian Times.* Feb. p. 3.
• ***Summary:*** See next page. This is a full-page color ad for Morningstar Farms Chik Nuggets (reduced fat). The slogan reads: "The change will do you good." Address: Worthington, Ohio 43085.

3292. Fischer, Bruno. 1998. Update on soymilk in Europe: Sojinal, Alpro and Nutrition et Soja (Interview). *SoyaScan Notes.* March 3. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** In mid-1993 Sojinal (of Issenheim, France) was purchased by a Swiss group named B&K Industry Holdings.

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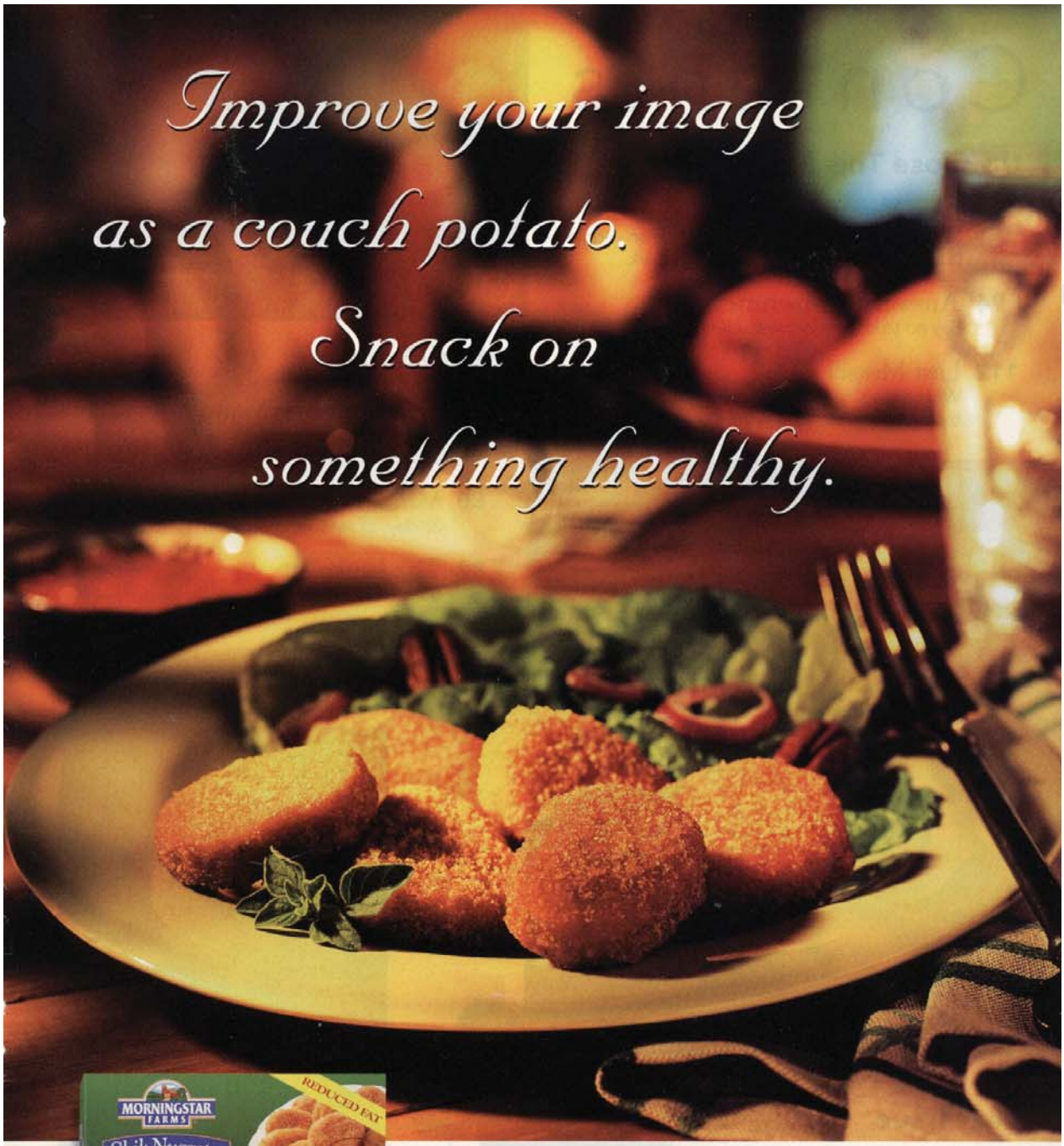

No, not the garnish, the nuggets. Go on, help yourself. With 75% less fat per serving than regular chicken nuggets, Morningstar Farms® Chik Nuggets™ let you snack away without the guilt. If you like the taste of regular chicken nuggets, you'll love our nuggets. Just heat and serve. Great tasting, meat free, quick, easy and healthy. Remember, when you help yourself to Morningstar Farms, you really are helping yourself. Look for Chik Nuggets in your grocer's freezer.

MORNINGSTAR FARMS®

The change will do you good.™

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The heirs got much of their money from disinvesting in weapons and ammunitions. Then in December 1996 Alpro (in Belgium) bought Sojinal from B&K. They now make mostly sterilized pre-pack tofu patties and other related meat alternatives. In Bruno's opinion these products are not very good–they don't fit anywhere.

Alpro dominates the European market for soymilk and soymilk products. They do a lot of private label packaging in their factory, and they now make a little pudding in a cup with a peel-off lid. Bruno heard that in 1995 they had sales of 50 million German marks. Note: In March 1998 one German mark was worth about $0.55. So, very roughly, 50 million would be worth about $27 million.

Alpro now also makes rice drink, and in 1995 launched a rice beverage made by Alpro and packaged in glass bottles.

In about Feb. 1998 Vandemoortele, Alpro's parent company, sold all of its margarine manufacturing operations to Cargill. Now Vandemoortele has only Alpro and its oilseed crushing operations.

Nutrition et Soja (in Revel, near Toulouse, France) no longer sells their soymilk in Tetra Pak cartons–so they must be using it as an ingredient in their own products.

DE-VAU-GE (which made the Grano Vita line) no longer makes soymilk. Address: Im Auel 88, 53783 Aetorf, Germany. Phone: 49-2243-4021.

3293. Soyfoods Association of North America. 1998. Membership lists (as of March 1998). Washington, DC. 1 p. March 23. Unpublished typescript.
• ***Summary:*** The Association has 34 paid members; 7 past members have not yet paid for 1998. The paid members are: ADM, American Health & Nutrition, American Soy Products, Central Soya Co., Clofine Dairy & Food Products, Corn Belt Foods, Devansoy Farms, EMB Partners, ExSeed Genetics, Galaxy Foods, GeniSoy (MLO) Products, Highland Equipment, Iowa Soy Specialties, Iowa Soybean Assoc., Kentucky Soybean Assoc., Lightlife Foods, Monsanto, MYCAL, Natural Health Magazine (Boston Common Press), Natural Products, Inc., Nebraska Soybean Board, Nutrition Advantage, Optimum Quality Grains [DuPont], P.J. Lisac & Associates, Pacific Soybean & Grain, Sacramento Tofu (California), Soyatech, Sun Rich, Sunrise Markets, Tofu Shop Specialty, Vitasoy (USA), White Wave, Wildwood Natural Foods, Worthington Foods.

The biggest paid members are ADM, Central Soya Co., and Monsanto. Address: N. Chapman Associates, 1723 U. Street, N.W., Washington, DC 20009. Phone: 202-986-5600.

3294. Gardenburger, Inc. 1998. Annual report 1997: Going from niche to mainstream. 1411 Southwest Morrison St., Suite 400, Portland, OR 97205. 29 p. 28 cm.
• ***Summary:*** Net sales (in million dollars) have grown dramatically in recent years: $13.34 in 1993, $24.45 in 1994, $36.82 in 1995, $40.53 in 1996, and $56.83 in 1997 (up 40% over 1996). However in 1997 for the first time the company suffered a loss in net income ($1.393 million). In Nov. 1997 the company successfully introduced its first two soy-based Gardenburger flavors–Hamburger Style and Hamburger Style with Cheese. They completed the hiring of a new senior management team. The big news in manufacturing was securing a new plant in Clearfield, just north of Salt Lake City, Utah, that went on-line in early 1998. It was last used by Heinz to make frozen foods sold under the Weight Watchers and Budget Gourmet names. In May 1998 Gardenburger will launch its first-ever national TV advertising campaign. On 31 Dec. 1997 (according to AC Nielsen Scantrak data) the market share of the frozen veggie patty market is: Worthington 43%, Gardenburger 25%, and Green Giant 15% (p. 11).

"In January 1996 the Company completed the acquisition of Ojai, California-based Gorilla Foods, Inc., a privately held developer and manufacturer of wheat protein-based, meatless food products, including the Garden Dog."

Accompanying the annual report is an announcement of the Annual Meeting of Shareholders and Proxy Statement (17 p.). Lyle G. Hubbard joined the Company in April 1996 as President and CEO. Prior to this he spent 15 years with the Quaker Oats Company in Chicago, Illinois.

"Paul F. Wenner founded the Company in 1985 as a sole proprietorship and acted as its Vice President from the date of its incorporation until December 1989, when he became the Company's President, Chief Executive Officer and Chairman of the Board. In 1994, Mr. Wenner relinquished his duties as President and in 1995 relinquished his duties as Chairman of the Board, at which time he held the title of Founder, Senior Chairman of the Board of Directors and Chief Executive Officer. In April 1996, Mr. Wenner became Founder, Senior Chairman of the Board and Chief Creative Officer. In 1997, he relinquished the title of Senior Chairman of the Board, but remains a Director of the Company. From 1980 through 1984, he owned and operated the Garden House Restaurant and Gourmet Cooking School (the "School"), where he developed the Gardenburger veggie patty. The School was affiliated with Mt. Hood Community College's evening educational curriculum. Mr. Wenner graduated from Mt. Hood Community College in Portland, Oregon in 1973, with two Associate of Arts degrees."

(p. 5). Wenner is the largest owner of the company's common stock, with 20.0% of the outstanding shares. Lyle Hubbard is No. 2 with 2.8%. Address: Portland, Oregon.

3295. Worthington Foods, Inc. 1998. Annual report 1997. 900 Proprietors Rd., Worthington, OH 43085. 20 p. 28 cm.
• ***Summary:*** Net sales rose to $117.9 million in 1997, up 8.1% from $109.1 million in 1996. Net income (profit) rose to $8.006 million in 1997, up 8.3% from $7.392 million in 1996. Earnings per share (diluted) rose to $0.67 in 1997, up 6.3% from $0.63 in 1996. "Worthington Foods'

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grocery market share of meat alternatives exceeded 55%, approximately the same as it was at the end of 1996." The introduction of Morningstar Farms Chik Nuggets–the first "finger food" in this line–was a major success and has already become one of the company's top selling products. "The test market sales of Morningstar Farms refrigerated products in the meat case provided convincing evidence that this concept is one we must aggressively pursue during 1998 and beyond. Accordingly, we are beginning a rollout of five refrigerated products in other selected markets, supported with increased advertising and sales personnel." Three of these items are in "modified atmosphere packaging" or MAP. A large color photo shows these five products: Garden Veggie Patties, Quarter Prime, Spicy Black Bean Burger, Chik Nuggets, and Breakfast Patties. Morningstar Farms' America's Original Veggie Dog, under development for two years, is already on the shelves of 15% of U.S. supermarkets. "Seventeen new items–nearly all low-fat or fat free–were introduced into the grocery, specialty and foodservice markets during 1997."

Includes an 11-page "Notice of Annual Shareholders Meeting." Address: Worthington, Ohio. Phone: (614) 885-9511.

3296. **Product Name:** Natural Touch Okara Pattie [58% Less Fat Than Original].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: (614) 885-9511.
Date of Introduction: 1998 March.
Ingredients: Textured vegetable protein (wheat gluten, soy protein concentrate), egg whites, okara (cooked soy pulp), corn oil, potato flour, autolyzed yeast extract, contains 2% or less of sea salt, onion, vegetable gum (guar and carrageenan), spice, paprika, celery extract, turmeric.
Wt/Vol., Packaging, Price: 9.5 oz (255 gm) box contains 4 patties.
How Stored: Frozen.
Nutrition: Per 1 pattie (64 gm): Calories 110, protein 11 gm, carbohydrate 4 gm, total fat 5 gm (calories from fat 45, polyunsaturated 3 gm, saturated 1 gm), cholesterol 0 mg, sodium 360 mg, potassium 170 mg.
New Product–Documentation: See next ppage. Ad (full page, color) in Natural Foods Merchandiser. 1998. March. p. 27. "Lower fat okara pattie: Natural Touch."

3297. Iderabdullah, Bisi. 1998. History of work with soybeans and soyfoods. Part I (Interview). *SoyaScan Notes.* April 6. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Bisi was born in Brooklyn right after World War II, and grew up there; her father was from Jamaica and her mother from the American South. After graduating from high school, Bisi's entrepreneurial spirit began to appear. She and her mother bought a Carvel ice cream franchise, and she began to make money. On her own initiative, she traveled to Europe three times–before she had even entered college! In 1968 she entered Brooklyn College in New York. During her first year as pre-med student, she was introduced to soyfoods and soybeans when she read Jethro Kloss' book *Back to Eden.* Her college friends were also exploring more natural lifestyles, including natural foods. Bisi liked to cook so she experimented with Kloss' recipes for soybean butter, soybean cheeses, etc. Also during her first year she met her husband-to-be. In 1970 he converted to Islam and changed his name to Mahmoud. As part of her medical program, she had to see an autopsy. "It really shook me up. When they peeled the person's skin back, it looked just like chicken. The only meat I could eat after that was hot dogs–and that got tiring after a while." She had taken the first steps to becoming a vegetarian.

In 1973, during her junior year at Brooklyn College, Bisi converted to formal Islam (she did not become a Black Muslim) and was married to Mahmoud in an Islamic wedding. "At that period in U.S. history Islam was strongly linked with Africa and African myths; many converted to Islam because they felt it was more African. It wasn't as much religion as it was traditional carriage." Mahmoud was a pre-med student studying to be a health educator. Three months later she won a scholarship to study abroad–anywhere in the world she wanted. She chose Africa. Bisi wanted to return to study her roots, to learn more about where she (as an African-American) had come from. So, leaving her husband studying in Brooklyn College, she flew to Zambia for 5 months and studied at the University of Zambia in Lusaka. When school was out there, she flew to Ghana, where she was joined by her husband. She studied archaeology at the University of Ghana in Legon for one year. When in Ghana, they tried unsuccessfully to study with a traditional natural healer.

Returning to the USA (Brooklyn), pregnant with their first child, she decided not to continue her pre-med education, because of its lack of emphasis on healthy lifestyles, nutrition, prevention, etc. They bought a house in Queens. Her husband was working at a clinic, but in 1974, one week before the birth of their first child, a boy, he lost his job. When the child was born, the delivery was extremely long, difficult and painful. In 1976, shortly after the birth of their second child. Bisi started making jewelry as a hobby, then professionally to earn money. They bought a camper, took their two kids, and began to travel all over America. "We became free spirits, traveling to wherever there was an art show, to enter our jewelry."

They ended up settling in an apartment in Fort Lauderdale, Florida. Expecting a third child in 1978, they decided to do the birth themselves–with a midwife. So they bought the book *Spiritual Midwifery,* by Ina Mae Gaskin, published by The Farm. They also bought one of the Farms' cookbooks. From these books Bisi learned about the many

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NaturalTouch®

Lower Fat Okara Pattie

58% LESS FAT THAN ORIGINAL

Nutrition Facts
Serving Size 1 pattie (64g)
Servings Per Container 4

Amount Per Serving	
Calories 110 Calories from Fat 45	
	% Daily Value*
Total Fat 5 g	**8%**
Saturated Fat 1 g	**5%**
Polyunsaturated Fat 3 g	
Monounsaturated Fat 1 g	
Cholesterol 0 mg	**0%**
Sodium 360 mg	**15%**
Potassium 170 mg	**5%**
Total Carbohydrate 4 g	**1%**
Dietary Fiber 3 g	**12%**
Sugars 0 g	
Protein 11 g	
Vitamin A 0% • Vitamin C 0%	
Calcium 4% • Iron 6%	

Original Okara Pattie	12g Fat
Reduced Fat Okara Pattie	5g Fat

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Potassium		3,500mg	3,500mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

INGREDIENTS: TEXTURED VEGETABLE PROTEIN (WHEAT GLUTEN, SOY PROTEIN CONCENTRATE), EGG WHITES, OKARA (COOKED SOY PULP), CORN OIL, POTATO FLOUR, AUTOLYZED YEAST EXTRACT. CONTAINS 2% OR LESS OF SEA SALT, ONION, VEGETABLE GUM (GUAR AND CARRAGEENAN), SPICE, PAPRIKA, CELERY EXTRACT, TURMERIC.

Now you can enjoy the great taste of Okara Pattie with 58% less fat. Also, Okara Pattie contains 10 grams of soy protein which has been shown to contribute to the reduction of cholesterol in the blood. Enjoy the healthy benefits of soy in the great tasting Okara Pattie... now with less fat.

Worthington Foods, Inc.
A PUBLICLY TRADED COMPANY

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creative things done by The Farm–such as donating food and relief help to developing and poor countries.

They bought a house in Miami and decided, now with three kids, to end their itinerant life. First they opened a jewelry shop in Miami; soon it was thriving. Then they joined a co-op and many of their friends were Rastafarians–who are vegetarians. Soon they decided firmly to become vegetarians and soy became a large part of their diet. Bisi made her own tofu for her family, using *The Book of Tofu* by Shurtleff & Aoyagi. She also made her own whole-wheat breads and other natural foods. Bisi decided to start an alternative school in Miami to give her sons a better education. She incorporated the school and became the principal. Many Rastafarians sent their kids to the new school.

When she was in Ghana in 1973, Bisi decided that someday she definitely wanted to return to Ghana. Over the years she had worked hard to save her money for the return trip. One place in Africa she knew she didn't want to go was Liberia, where she heard the indigenous people were treated badly. Now she realized that if she waited any longer to return to Africa, their eldest son would resist the move. So they pulled up roots in Miami, rented their house in Queens, and Bisi flew to Africa to prepare the way for her family. She decided to settle–of all places–in Liberia, arriving in 1985. After finding a place to live, she returned to New York to bring her family back with her. Her goal was to do something to help the people of Liberia and to find a place where she and her family could pursue their own development.

In 1986 Bisi and her husband started the African Islamic Mission in Monrovia, Liberia, as a non-governmental organization (NGO). Its focus was to be on agriculture and education, helping the people of Liberia to feed themselves, and also on promoting Islam. Because of their lifestyle, they were very interested in organic, sustainable agriculture. But the local people became suspicious; who were these foreigners who were not connected with any known organization? When Bisi and Mahmoud finally got a permit to open their own school, they decided instead to teach at an existing Liberian school (pre-school to 9th grade) in Monrovia. Bisi taught there from late 1986 to 1990. Mahmoud taught there for one year, then got a private-sector job to earn needed money. In their spare time they started programs at their Mission–teaching literacy, English as a second language, and sex education for young girls. Their agricultural work was limited to a backyard garden.

In about 1985-86 Koreans started coming to Liberia to farm. They started selling small amounts of tofu in about 1989, and Bisi started buying it from them in Monrovia–but unfortunately the tofu didn't stay fresh very long. Bisi has no idea where they got the soybeans to make the tofu.

In about 1987 or 1988 the extension service at the University of Liberia in Monrovia tried to grow soybeans. They collected some statistics, but everything was lost during the civil war. Methodists in Liberia had experimented with growing soybeans just before the war, but the project was a total failure. A friend of Bisi's who is a vegan and a Methodist missionary, Bill Whitfield, convinced the Methodist Farm Project to grow soybeans, because he eats soyfoods in place of meat and dairy products–and he was having to import the soybeans. They did grow the soybeans successfully. Bisi bought a 50-lb bag from the Methodists, so that her African Islamic Mission could start making tofu again. But it was a failure because the farmers and the Liberian people weren't interested, and Bill Whitfield had left Liberia and didn't go to the extension service to show people how to use the soybeans. Continued. Address: Director, Imani House, 76A Fifth Ave., Brooklyn, New York 11217. Phone: (718) 638-2059.

3298. Richards, Bill. 1998. Gardenburger bets the (soybeans) farm on the last 'Seinfeld.' *Wall Street Journal*. April 13. p. A1, A6.

• ***Summary:*** This humorous article paints Lyle Hubbard, the company's new CEO, as irresponsible and fairly reckless in his "go-for-broke" "shoot the moon" splurge-style marketing strategy. Gardenburger plans to spend $1.5 million on a spot during the last episode of Seinfeld, NBC's wildly popular sitcom. This spot is the centerpiece of a $14 million, five-week blitz of TV ads promoting the company's meatless burgers. These ads will air about 1,500 times over 5 weeks in May and June but only about two dozen of the ads will appear on network television in prime time. The rest will be on inexpensive cable, late at night, or on syndicated shows. The campaign has gobbled up nearly all the company's cash. A preview of the ads, which poke mild fun at veggie burgers, considered them unimpressive.

Marketing experts doubt the strategy will work. Donald Burke, executive vice president of marketing and sales at Worthington Foods, says that only 8% of Americans have ever tasted a veggie burger. One TV spot is not a good way to change people's perceptions. He notes that Gardenburger unsuccessfully tried another ad campaign several years ago to launch a meatless hot dog called Garden Dog–the product has since been abandoned.

Paul Wenner started the company in 1985 "selling meatless patties made from leftovers at his vegetarian restaurant in Gresham, Oregon. The restaurant flopped, but Mr. Wenner kept peddling the veggie burgers out of his van, under the name Wholesome & Hearty Foods. After then company went public in 1992, its stock rocketed to $30 from $3 on rumors that burgers bigs like McDonald's were planning to sell the meatless patties. It crashed after rumors proved untrue." The shares now sell for $12.75 on the Nasdaq Stock Market. An illustration (dot-style) shows Lyle Hubbard. Address: Staff reporter.

3299. James, Richard F. 1998. Work to expose the dangers

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of toxic substances in soybeans (Interview). *SoyaScan Notes.* April 18. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Richard James, who was born and raised in New Zealand and still speaks with a "down under" accent, lives with his wife Valerie and many exotic birds in Whangarei, a fairly large city near the northern tip of New Zealand's North Island, about 80 miles north of Auckland. Before he moved to New Zealand, he was a lawyer and real estate agent in the San Francisco Bay area.

After many of Richard and Valerie's parrots began to die, Richard started to notice that a number of different animal species, including humans, were having some adverse reactions to the consumption of soy products. First he spent a considerable amount of his own money phoning around New Zealand, starting with agricultural people who were having trouble with their birds. It turned out, bit by bit, that rabbits, guinea pigs, pet hamsters, race horses–indeed everything being fed soy products was having some really nasty problems. And yet we couldn't quite put our finger on exactly what it was. We noticed that it was also affecting the reproductive capacity; we were getting deformed babies and infertile eggs. Valerie, apart from being distraught at watching all her lovely friends dying in miserable ways, spent a lot of time talking to Rob Shaw, the technical manager of a health food company–whose phone number Richard would be glad to share. Because the end results are so diverse, because these bloody soybeans have so many levels of toxicity, you almost couldn't put your finger on what was happening. Ultimately Valerie mentioned to Rob that the bird food was being advertised as producing 11-week-old baby birds that had the sexual characteristics of 2-year-old birds. At this point Richard and Valerie had no idea what an estrogen was, but Rob had enough biochemistry (and he really is quite a brilliant fellow) that he said immediately: Oh! That's premature maturation. Not many people in this part of the world would have known about that. Other good men are Dan Sheehan (of the USA) and Glen Plymate (616 Westland Dr., Alameda, CA; a personal friend of Richard's to whom Richard has sent many documents implicating the toxicity of soy).

Sheehan's revenge: Two important scientific papers have been published. The most recent was published in Nov. 1997 in *Biochemical Pharmacology.* The significance of these two is that they did basically what Richard suggested to Sheehan and his co-workers. They examined the huge number of thyroid cases that are reported in the medical literature. Note that one of the first places the effects of the estrogenic chemicals (like DDT, the dioxins, cadmium, mercury, etc.) shows up is in the thyroid gland. Having discovered that, see if you can prove the link between that and soy. The soy industry's defense has always been that their processing gets all the toxins out; that's why nobody else ever complained. In response to that, we have produced all these published research papers about prostate tumors in dogs, and liver cancer and infertility in cheetahs, mice, rats, hamsters, etc. Richard and his research team has the best library of this type of research in the world. Richard offers to send Shurtleff copies of page 1 and the bibliography of many of these key papers.

Back to Sheehan's revenge: They set out to prove that flavonoid compounds cause thyroid cancer. Again, there were two key papers.

There has been a major cover-up. When Rob Shaw look at the early literature Richard and his team were collecting on their literature review, he was very upset: He said the U.S. government must have known (for at least 20 years) the estrogenic content of soy infant formulas, and that that in some cases little girls fed soy infant formula show premature breast development, premature menstruation, premature menopause (at about age 22), etc. It doesn't show up until the kids reach puberty. Then (according to the dosage) the thyroid deficiency and the problems mentioned above start up; the evidence is unequivocal.

Another thing that has never been revealed properly or has been propagandized, like the premature thelarche in Puerto Rico: The only food correlation they found was with soy infant formula. The Centers for Disease Control (CDC) went off and did another search and absolutely, completely ignored soy infant formula, the foods fed after infant formula, and they ignored boys–so they came up with the answer that there is no incidence of anything–no problems. Basically, they defined the scope of their study no narrowly, that they defined away the problem. But even in this limited definition of girls who had problems, they were 2¼ times as likely to have been fed soy formula as anything else.

The other two emidemiologies were on Long Island, New York, where the North Shore Community Hospital went looking for a reason for the high incidence of auto-immune thyroid disease in children age 10 plus or minus 4 years. This occurs when the immune system has gone berserk and is actually attacking the thyroid gland. This is a permanent debilitating disease; its manageable, but chances of early death are fairly high. Kids with that syndrome were 2½ times as likely to have been fed soy formula. The same North Shore Community Hospital also found that kids with insulin-dependant diabetes–which is another auto-immune disease–were twice as likely to have been raised on soy formula. Moreover, some kids with this type of diabetes also had the auto-immune thyroid disease–and no one looked at abnormal breast development in these two groups of kids.

ADM stated to the FDA that they had determined that the soy isoflavones they are now selling [Novasoy pill with 70 mg of soy isoflavones in a softgel form] were safe to be used as a general additive to all foodstuffs. This is "totally toxic."

In 1966 the National Academy of Sciences, National Research Council, Food and Nutrition Board, Food

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Protection Committee, compiled a very important book titled *Toxicants Occurring Naturally in Foods* (Washington, DC: NRC Press, 301 p.). A greatly expanded 2nd edition was published in 1973 (vii + 624 p.). Their basic approach was: Gee whiz, isn't it great that we have these analytical methods so that we can detect when these toxicants are getting into our foodstuffs. They concluded that the main source of estrogens in foodstuffs is the isoflavones in soy products. Hormone replacement therapy isn't necessarily the same as the chemicals that are in soy; they both mimic hormones but they may not have the same biochemical effects.

"I could go on weeks talking like this but I'll tell you the basics that we can document... We were absolutely 'monstered' by some of the biggest and nastiest companies in the world. But also by certain arms of the U.S. government, particularly the U.S. Department of Agriculture." A professional journalist is now writing a book about this. The small things were late night phone calls. But the pitch that was made all over New Zealand was: "We can buy TV channels. We can divert medical schools. We can influence governments. And we have millions of dollars and teams of lawyers–and we crush nutters like you. You won't last six months. We will destroy your credibility. We do this to 20 or 30 like you every year. I am not a retired bird raiser. My professional training was as a lawyer. I practiced in New Zealand, in London, and in San Francisco–all quite successfully–until the California Bar Association lowered the boom on lawyers who hadn't passed the California Bar. I had an office at Bechtel Corporation in the legal department on the 20th floor, the corner office, facing out towards the Ferry Building. He also got an MBA at Golden Gate University in San Francisco (part time; it took about 5-7 years). "Right now I am the soy industry's biggest friggin' pain in the ass." After I quit Bechtel, we were in the real estate business in Walnut Creek, directly east of San Francisco. We hit the boom in 1976, invested quite carefully in California real estate, and made a few million dollars. Returned to New Zealand and decided to do what the liked–raising exotic birds. His wife has dual citizenship (U.S. and New Zealand).

Dr. Clifford Irvine was (Richard believes) the "chairman of the governing board of Lincoln University in Canterbury, New Zealand. He was also dean of the Dep. of Animal Sciences. His secretary intercepted so many terrifying phone calls–death threats and whatever–that she finally left and went home. She broke down. Cliff was told that if he went to the USA to Dan Sheehan's conference, he should wear body armor and travel on a separate plane from Mike Fitzpatrick–which he did. Mike also was told to wear body armor and to watch out. This was not very nice stuff. Mike's employer was driven out of his mind. I've got it documented from Bill Grayson, who owned Grayson Laboratories, that the pressure was coming from Bean Supreme and Nestlé. If you phone somebody three times a bloody day and tell him the whole New Zealand Food Industry is going to take their business away from his laboratory, you'll frighten the sh*t out him.

"The soy boys pick a pinch hitter in some country. They started with Bean Supreme, then dumped him, and they've been using a fairly big Seventh-day Adventist owned health company–the most corrupt, dishonest company in the world–and I can document that for sure." They have been putting incredible pressure on Richard and the others in his group. Continued. Address: 1868 Whangarei Heads Road, Rural Delivery 4, Whangarei. Phone: +64 9 434 0564.

3300. Worthington Foods, Inc. 1998. America's Original Veggie Dog: We're teaching an old dog new tricks (Ad). *Nation's Restaurant News.* April 27. p. 56. Address: Worthington, Ohio 43085.

3301. **Product Name:** Better than Milk–Soy, and Better than Milk–Rice.
Manufacturer's Name: Hearty Life. Div. of Sovex Natural Foods, Inc.
Manufacturer's Address: 9104 Apison Pike, Box 310, Collegedale, TN 37315. Phone: 800-227-2320.
Date of Introduction: 1998 April.
New Product–Documentation: Ad (3-page color) in Vegetarian Times. 1998. May. p. 11-13. "The comparison of milk substitutes requires a sharpened number two pencil." "For a free sample, call 1-800-227-2320, ext. 302.

Talk with Jay Jones of Hearty Life Sales Dept. 1998. May 11. Hearty Life is a new division of Sovex Natural Foods; it was created in March 1998 at Anaheim as the natural foods line of Sovex. The old name of the soy product used to be "Better than Milk?" In April 1998 it was changed to "Better than Milk–Soy." The Rice product was introduced at the same time. Ad in Vegetarian Times. 1999. July. p. 77. "Better Than Milk."

3302. Soyfoods Association of America. 1998. Soyfoods once a day for life! (Special advertising section). *Vegetarian Times.* April. 12-page color insert after p. 58.
• ***Summary:*** Contains large color ads by Nasoya (tofu and TofuMate), Morningstar Farms (Chik Nuggets), Eden Foods (organic black soy beans) Vitasoy (creamy original natural soy drink), Westbrae (Westsoy soymilks), Westbrae (Vigoraid nutritional drink), Sno Pac (frozen Sweet Beans–organic green vegetable soybeans), and GeniSoy (soy protein bars). On the rear cover are additional small ads (each with a logo) for Lightlife Foods, Lisanatti, Monsanto, Soyco Foods–Div. of Galaxy Foods Co., Soyfoods Association of North America, and United Soybean Board.

Interspersed with the ads is advertorial text and "Soy facts." The text on page 1 begins: "Miracle food. Health insurance in a pod. Nutritional powerhouse. The bean supreme. Nutritionists, physicians, researchers, chefs, and food experts of all kinds are raving about the healthfulness and great taste of soyfoods, and it's no wonder; soy truly is a

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nutritional and culinary gift from nature.

"Soyfoods are delicious, convenient, and versatile. At breakfast, soy can make an appearance in the form of soymilk, scrambled tofu 'eggs,' or soy 'sausages.' A soy shake or veggie burger makes a great lunch. Try a tempeh stir-fry, or perhaps a creamy tofu dessert.

"So dig in... with the huge variety of soyfoods available at your local natural foods store, it's easy to get your daily intake of soy, and reap the many benefits of the bean supreme."

The inner contents: Food as medicine. Heart health. Fighting cancer. Menopause? What menopause? Strawberry smoothie. Protein punch.

Soy cooking tips (p. 4): Easy ways to incorporate soy into your baking: Use soy flour in your baking. Be aware that soy flour contains no gluten, and therefore yeast breads will not rise without the addition of some gluten-containing flour. About ¼ cup of soy flour per cup of unbleached white flour is recommended for breads, pastas, and pastries. In place of olive oil, try adding a few ounces of Nasoya Silken Tofu and a dash of lemon juice to mashed potatoes. Try mashing miso into your root vegetables in place of butter. When adding miso to dishes, add roughly 1 tablespoon per four servings. Add GeniSoy Natural Vanilla Soy Powder to your baked goods such as muffins or pancakes. Buy Eden Organic Soybeans in a can and use them the same way you would any other canned bean: over rice, with pasta, in stir-frys, etc.

It's not only what you eat; its also what you don't eat. Making healthy eating taste great. Soy fact: soybeans were traditionally considered one of five sacred crops in China.

No time to cook? Try these quick ways of getting soy in your diet.

Strong bones... a matter of calcium retention. Miso.

Soy fact: there is no word for "hot flash" in Japan. Soy beverage.

Miraculous tofu. So soy convenient. Soy fact: Western culture discovered tempeh through the Dutch colonization of Indonesia. Soy fact: tofu was unknown to most people in the United States until Chinese immigrants came to this country in the 1800's. Tofu.

Tempeh. By the handful. Soy fact: miso was developed in China about 2,500 years ago. Where to find it. Address: Washington, DC.

3303. Fischer, Bruno. 1998. Bruno Fischer GmbH and soyfoods in Germany (Interview). *SoyaScan Notes.* May 13. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** This interview was conducted at Soyfoods Center during Bruno's trip to California. Bruno Fischer GmbH, a family-owned business, is located in northwestern Germany, in Aethorf; the nearest big cities are Bonn (35 km away), Cologne (55 km away), and Frankfurt (150 km away). Bruno now owns half of the business; his father owns the other half. The company was founded at Taunusstrasse 13, 5000 Cologne 91. They had their first butcher shop in a place his parents rented. They stayed there until about 1991. On the other side of the street are some dairy industries. The company now employs about 60 people, including 6 in R&D and quality control. The company does the equivalent of about US$10 million a year in sales. They have 60 different products comprising 140 SKUS. All are vegetarian and they make 132 of these products (SKUs) themselves. Bruno and his parents are Seventh-day Adventists. They prefer not to do joint ventures with other companies, since they do not work on Saturday (as a trade shows).

At BioFach, the biggest organic show on earth, since 1992 three prizes have been awarded on the stage each year for "product of the year." Bruno has won a prize for six years in a row–the only German company to do this well.

Bruno is now a vegetarian, but he was once a master butcher, from a family of four generations of butchers. Address: Im Auel 88, 53783 Aetorf, Germany. Phone: 49-2243-4021.

3304. Fischer, Bruno. 1998. Leading soyfoods manufacturers in Germany (Interview). *SoyaScan Notes.* May 13. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The biggest soyfoods company in Germany is probably Noelke (Nölke), which is a big, private meat-processing company with four plants throughout Germany. Their headquarters is in the Osnabrueck area (Osnabrück, 30 miles northeast of Muenster). Their products, which are mostly meat alternatives (especially sausage alternatives) are marketed under the Eden brand in Reform Houses. No. 2, DE-VAU-GE (pronounced day-fau-GAY, whose Granovita brand is very popular), also makes many meat alternatives, such as links (sausages).

No. 3 is Life Food GmbH in Freiburg (Taifun brand). No. 4 may be Huegli, but they are not really a soyfoods manufacturer. They did buy Soyastern, Yamato, and Horst Heiler, and they sell products under those three brands–not under the Huegli brand.

No. 5 is Albert's Tofuhaus; he produces a lot of bulk tofu for other companies. No. 6 is Viana. The others are fairly small. Geestland started with soy then tried to introduce Lupino (made from Lupins), but the Lupins was not very successful. They are a regional tofu plant, a little bigger than Christian Nagel in Hamburg. Svadesha still exists, but they have been sold to non-soy people, who are fiddling around. They are quite regional and don't make very much soy at present.

TKW (pronounced TAY-kah-vay) has an unusual history. They are a branch of a machinery manufacturing company. They were asked to make a tofu plant, but their customer went bankrupt. So rather than letting the equipment just stand idle, they decided to make tofu. TKW was owned by two brothers who didn't get along very well with each other. So one went into making tofu and the other stayed with

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the making machinery. "They still seem to do something, somewhere, for somebody. I think they are more into the bulk tofu business."

Henselwerk in Switzerland is not a soyfoods manufacturer. In fact, they don't process any foods; they bottle lecithin, package texturized protein, etc. Soyastern doesn't exist any more; the factory was closed but Huegli still uses the Soyastern brand. Address: Im Auel 88, 53783 Aetorf, Germany. Phone: 49-2243-4021.

3305. Nordquist, Ted. 1998. Sanitarium Foods' So-Good soymilk now being made in Canada by Dairy World (Interview). *SoyaScan Notes.* May 28. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Sanitarium Foods is Australia's leading soymilk manufacturer. Their flagship soymilk product, based on isolated soy protein, is named So-Good. In a joint venture between Sanitarium Foods and the Canadian company Dairy World, So-Good is now being made in Canada.

So-Good, with sales in Australia of about $70 million a year, has roughly 85% of the Australian soymilk market. Sanitarium Foods' total sales are said to be about $130 million a year. The company is also Australia's leading manufacturer of breakfast cereals, and they been very successfully in using their cereal advertisements and packaging to promote their soymilk. Address: TAN Industries, Inc., 49 Stevenson St., Suite 1075, San Francisco, California 94105-2975; 660 Vischer Ct., Sonoma, CA 95476. Phone: 415-495-2870.

3306. Berry, Rynn. 1998. Tofu comes west: The spread of vegetarianism from Asia's religions. *Vegetarian Voice* (*NAVS, Dolgeville, New York*) 23(1):14-17, 26-27. Spring. [3 ref]
• ***Summary:*** Discusses: Asian religions in America, Asian Ahimsa-based beliefs, William Shurtleff and Akiko Aoyagi, roshi Philip Kapleau, Ron Pickarski, Rev. Prof. Dr. Andrew Linzey (Anglican priest and professor at Oxford University, the world's first to hold an academic post on the ethical and theological aspects of animal welfare; he has written or edited more than 13 books on the moral status of animals), Ellen G. White, The Bible Christian Church, the Order of the Cross (founded in 1904 in England by the Rev. John Todd Ferrier; would-be members must take a vegetarian vow).

Says Prof. Linzey: "From my perspective, it is not inconceivable that Jainism, in its care and respect for creation, has more understood the Christian doctrine of Love than the Christians have themselves."

Says Ron Pickarski: "It may not be in my lifetime, but someday the Western Church will adopt many of the features of Asian religions such as karmic doctrine, reincarnation, vegetarianism, and ahimsa."

Includes six recipes from Berry's book *Food for the Gods.* Address: 159 Eastern Parkway (2H), Brooklyn, New York 11238. Phone: 718-622-8002.

3307. Hearty Life. Div. of Sovex Natural Foods, Inc. 1998. The comparison of milk substitutes requires a sharpened number two pencil (Ad). *Vegetarian Times.* May. p. 11-13.
• ***Summary:*** The first page of this 3-page color ad is mostly white paper. Above the title are three dotted circles the diameter of a pencil. Next to each is written: "Insert point here."

When the reader turns the page, a 2-page color spread appears. On the left page, two cartons of liquid soymilk are leaking on the table from the holes supposed punched in them. To their left is a cylindrical container of "Hearty Life Better than Milk–Soy." In front of it is a conical heap of fine white flakes. The right page is filled with text, and topped with this headline: "We're easier to afford, carry, cook with, mix to your taste, and, yes, even clean up." The text explains that Better than Milk Soy and Rice beverage mixes enable consumers to save up to 40% per quart over liquid soymilk. The products are sold at natural and health food stores, not via mail order. "For a free sample, call 1-800-227-2320, ext. 302." Address: Collegedale, Tennessee. Phone: 800-227-2320.

3308. Winter, Ralph E. 1998. Worthington says rival's ad campaign lifted sales of its own meat-free foods. *Wall Street Journal.* June 19. p. B4A.
• ***Summary:*** Gardenburger Inc., a rival maker of veggie burgers and meat replacements, recently launched a 5-week, $14 million TV advertising barrage, which included a spot on the last episode of "Seinfeld." While Gardenburger's sales skyrocketed, so did those of other makers of veggie burgers. Gives figures for the sales increases of both companies.

3309. Kehoe, John. 1998. Growing up behind glass: The bizarre and tragic lives of the Dionne quintuplets. *Biography magazine.* June. p. 96-102, 117.
• ***Summary:*** These five identical twin girls were born on 28 May 1934 in a farmhouse in Callander, Ontario, Canada. The mother, Elzire, a farm wife, was 26 years old, and the attending physician was Dr. Roy A. Dafoe. The father was Olivia. Olivia and Elzire already had six children, and were poor. Within a week after their birth, these little girls ("the Quints") were the most famous children the world had ever known. Today, three of them survive. They are bitter about their inhuman, exploitative upbringing, and they live as poor recluses. Nothing is left of the tens of millions of dollars generated by their endorsement and advertising deals.

The Ontario provincial government wrested control of the quints away from their parents, and became the legal guardians. Then the government built what was the forerunner of a modern theme park–Quintland. From 1935 to 1943 the Quints were on display 7 days a week, with 2-3 "shows" a day. During these years more than three million

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people made the trip to Callander to see them–but the children could not see the gaping public that was watching them through a scrim (one-way window). By 1938 the then-astonishing sum of $600,000 was placed in a trust fund for the Quints; nearly all of it was derived from commercial endorsements. The amount collected would eventually amount to $11.5 million in today's dollars. None of it went to their parents.

The first Quint to die was Emilie, in 1954, of epilepsy. Annette was the first to marry in 1957. Others married later but none of their marriages lasted. Marie died in 1970. Contains many photos of all quints at various ages–1934, 1936, 1943, 1951. Address: Contributing editor.

3310. Elliott, Barbara. 1998. Re: New developments at FarmSoy Company in Summertown, Tennessee. Letter (fax) to William Shurtleff at Soyfoods Center, July 8. 1 p.
• ***Summary:*** "Correct me if I'm wrong but no one has challenged the claim that FarmSoy Company is the oldest non-Asian soy dairy in the U.S. [Note: Soyfoods Center believes that claim is correct for companies started after 1970. But a number of Seventh-day Adventist soy dairies, including one in Madison, Tennessee–near Summertown, started in the 1920s and 1930s]. We presently are using only certified organic soybeans that are not genetically modified and all of our products are certified organic by Florida Growers & Consumers, Inc."

"Our soymilk is now a principal ingredient in a new drink just out in the market, called Fruit Quest by Del Valle Food Products, Inc. It is the first drink in the U.S. to combine soymilk and fruit juice. Fruit Quest is very tasty and is available through Whole Foods, Wild Oats, and Tree of Life." Address: 96C The Farm, Summertown, Tennessee 38483. Phone: 615-964-2411.

3311. Gardenburger, Inc. 1998. Second quarter financial report 1998. 1411 Southwest Morrison St., Suite 400, Portland, OR 97205. 11 p. 28 cm.
• ***Summary:*** This unconventional quarterly report consists of: (1) A letter to shareholders outlining the results of recent huge advertising expenditures. "Gardenburger's first national television advertising campaign that began on May 4 and was highlighted by a 30-second spot on the last episode of 'Seinfeld.' The Seinfeld spot created a tremendous amount of public awareness for Gardenburger including stories in *The Wall Street Journal* and a piece on the NBC Nightly News with Tom Brokaw.

"Since the start of 1998, the veggie patty category in the retail grocery channel has grown 61 percent. Gardenburger has captured about 75 percent of this growth while our nearest competitor, Worthington Foods, has captured about 15 percent... As a result, Gardenburger's share of the veggie patty category has grown steadily, and stands at approximately 50 percent as of the date of this report."

(2 p). (2) A news release titled "Gardenburger reports 91% rise in net sales during second quarter to $25.7 million." However, during the most recent second quarter, Gardenburger lost $6.240 million, compared with a loss of $1.371 last year. (3) Balance sheets. (4) Three graphs using A.C. Nielsen scanner data. Graph #2 shows unit share of the veggie patties market from 3 Jan. 1998 to 4 July 1998. On Jan. 3 the market shares of three major products were as follows: Worthington (incl. Morningstar Farms, Loma Linda, Natural Touch, and Worthington): 42%. Gardenburger 27%. Harvest Burger 16%. Only July 4 the market shares were: Gardenburger 50%. Worthington 27%. Harvest Burger 10%. Graph #3 shows the unit market share of total meatless. On Jan. 3, veggie patties had 51% of this market and all other meatless products had 49%. On July 4 veggie patties had 70% and all other meatless products have 30%. Address: Portland, Oregon.

3312. Messina, Mark. 1998. Perceptions on soyfood–Past, present and future. *Soy Connection* (*The*) (*Jefferson City, Missouri*) 6(3):1, 8. Summer.
• ***Summary:*** Contents: Introduction (Dr. John Harvey Kellogg, USDA, *The Book of Tofu*, by Shurtleff & Aoyagi). Concerns about women's health. Functional foods. Interest in plant-based diets. Development of better tasting and more convenient soyfoods. Ethnic influences on meals (esp. Asian).

It is reported that 26 million Americans eat soyfoods. Address: PhD.

3313. Worthington Foods, Inc. 1998. Second quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.
• ***Summary:*** Net sales for the second quarter of 1998 rose 14.8% over the same period in 1995, and net income rose 16%. Address: Worthington, Ohio. Phone: (614) 885-9511.

3314. Hartocollis, Anemona. 1998. Peanut butter is under fire: A few schools have banned childhood staple because of its growing status as a lethal allergen; East Bay takes precaution. *Contra Costa Times* (*California*). Sept. 23. p. A1, A16.
• ***Summary:*** Says that peanut butter was invented by George Washington Carver [Note: Not true; it was invented by John Harvey Kellogg]. Americans now consume it at the rate of 3 pounds per year. But peanut allergies can be lethal, and they are on the rise. So, out of fear of litigation based on the 1990 Americans with Disabilities Act, a small but growing number of private and public schools across the USA have banned peanut butter from their cafeterias. Others have set up committees to figure out what to do. One option is to take precautions such as pointing out all items containing peanuts on menus sent home.

Those favoring a ban are often supported by the Food

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Allergy Network, a 8-year-old advocacy group in Fairfax, Virginia. The Center for Disease Control reports 88 deaths in the USA from allergies to food (including peanuts) between 1979 and 1995. "But allergists supported by the Food Allergy Network contend that fatalities are under reported and that 0.5 to 1 percent of all Americans suffer from peanut allergies. The network estimates that every year 125 people die from food allergies, the majority from peanuts."

The Transportation Department has informed airlines that, under new disability rules, it must offer "peanut-free buffer zones" defined as at least three rows for any passenger who declares in advance a medically documented severe allergy to peanuts. Some airlines have a policy of sending no peanuts on a flight if a passenger alls in advance with a notice of an allergy. Address: New York Times.

3315. McDermott, Ron. 1998. Thoughts on Gardenburger's recent spate of advertising for meat alternatives (Interview). *SoyaScan Notes.* Oct. 7. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** "Gardenburger" is a great product name, and this advertising campaign has done a lot to build awareness of the category, as well as of the Gardenburger line of products. This has helped all companies in the category, including Worthington. As this category continues to grow, Worthington's goals are to have the widest variety of products (which it now has), the best quality, and the most innovative products. Address: Vice President Research & Technology, Worthington Foods, 900 Proprietors Rd., Worthington, Ohio 43085-3194. Phone: 614-885-9511.

3316. Harrigan, Brian. 1998. ProSoya Inc. and International ProSoya Corp. (Interview). *SoyaScan Notes.* Oct. 15. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** ProSoya Inc. and International ProSoya Corp. (IPC) are definitely two separate organizations; each is very different in its activities and philosophy. IPC was not created out of ProSoya, but rather as a separate entity with different owners to license ProSoya's large-scale soymilk technology. This relationship as licensee still exists. IPC does not make equipment or sell equipment worldwide; they make soy products using ProSoya's technology. ProSoya has some ownership in IPC and they have a very small ownership in ProSoya Inc. People do associate these two companies, not realizing that they are totally separate. This confusion (and some things that people from IPC have said and done) has caused ProSoya quite a few problems.

ProSoya does not presently make any soyfood products. The plant on Canotek Road (in Gloucester, near Ottawa), where they used to make some products and have their offices, was originally used solely for R&B, but it expanded so much that it eventually also became a commercial soyfoods production facility. In Oct. 1996 ProSoya sold this plant to IPC and in Jan. 1997 ProSoya moved to separate offices about 500 feet away, on the same road; there they have offices plus a small area at the back for R&D, shipping, and receiving. ProSoya can still take customers and others to see this plant and its operation, but sort of as visitors.

ProSoya is an R&D and technology company. Their equipment is manufactured by other companies (as in India and Russia) for them.

There has been quite a shake-up at IPC recently and things there are rather chaotic. Their soymilk, SoNice was the number one seller in Canada while it was out. It was made in two plants–in Vancouver (BC) and in Ottawa (Ontario, on Canotek Rd.). It's arrival expanded the market for all soymilks sold in Canada; so while Edensoy and Vitasoy lost market share to SoNice, they actually saw their sales volume increase. But recently IPC has had major problems their soymilk; it is no longer being manufactured, but small amounts are still left in the retail pipeline. The product is good, but it is mostly financial factors that have caused it to disappear from the market. IPC has not really commercialized their soy yogurt yet, except perhaps on a small scale for the Vancouver area–and there they were having problems with the formulation, though not with the taste. For more details, contact George Conquergood, who is the vice-president of operations. He is quite open in telling interested people what is happening. The plant in Scotland is a totally separate venture from IPC; Dusty is still there.

A new brand of soymilk in Canada is SoGood. Based on soy protein isolates, it is the same as that made by Sanitarium Foods in Australia. In Canada, it is made (mixed and packaged) under license from Sanitarium by Sunrise (owned by Peter Joe) in Vancouver. Sunrise and Dairyworld (the biggest dairy in Canada) now have a joint venture named SoyaWorld. Dairyworld distributes SoGood soymilk along with their line of dairy products. SoGood is now doing very well in Canada. When SoNice was on the market, it had a bigger market share than SoGood. But SoGood conducted a national advertising campaign that cost several million dollars, and greatly helped their sales. Brian finds the flavor of SoGood rather artificial and the list of ingredients is very long, so consumers tended to prefer the more natural and better tasting SoNice–until it ceased to be available.

Raj Gupta is now more involved with ProSoya Inc, than ever before. He comes to the office every day. When he started ProSoya he was working for the National Research Council (NRC) and working with ProSoya part-time on the side. Now he works on ProSoya full time; about 3 years ago he gave up his position at NRC. ProSoya was growing so much that the company need his full-time presence, and could afford to pay him what he needed.

Note: Other sources say that IPC recently declared bankruptcy. Address: Executive Vice-President, ProSoya Inc., 2-5350 Canotek Road, Ottawa, ONT, K1J 9N5, Canada. Phone: 613-745-9115.

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3317. Bynum, William. 1998. Soy Amazing and Better than Milk. Big changes at Hearty Life, Sovex Natural Foods, McKee Foods, and Fuller Life Inc. (Interview). *SoyaScan Notes.* Oct. 28. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** William has been with the company for about 6-7 months. Soy Amazing is a new product, introduced less than 2 years ago; it is actually the original Better Than Milk formula. However there is another product named Soy Amazing, sold only in Canada, which is the same as the present U.S. Better Than Milk; that is because it is illegal to use the name "Better Than Milk" for this product in Canada.

For many years, Sovex Natural Foods has been owned by the McKee Foods Corporation of Collegedale, Tennessee. The Southern Adventist University is also located in Collegedale. Founded, owned, and run by Jack McKee (a well respected Seventh-day Adventist), McKee Foods makes mostly popular snack foods. Their most popular product line is "Little Debbies," consisting of about 40 different varieties of snack cakes–from Jello Rolls to Honey Buns. For this reason they kept an arms-length relationship with Sovex Natural Foods. Glen Fuller has been with McKee Foods for about 20 years, and has been the vice-president for the past 10-12 years. Glen developed the Better Than Milk formula and line of dry soymilk products about 7 years ago.

On July 3 of this year, Sovex was merged into its parent company, McKee Foods, and made a division of that company; it was no longer a separate subsidiary. Sovex also makes a wide variety of cereals, bran, granola, and the like. The name Sovex ceased to exist; it is now McKee Plant No. 6. Shortly after McKee absorbed Sovex, probably at Glen's urging, McKee decided to spin off and sell him the Hearty Life brand and the Better Than Milk product line–which includes the Soy Amazing products. That transaction was finalized last Friday, October 23. So now Glen is president, CEO, and sole owner of a new company named Fuller Life Inc. The address has changed to 1628 Robert C. Jackson Drive, Maryville, Tennessee 37801. Phone: 423-681-4171. Maryville is about 100 miles from Collegedale, and the site of Glen Fuller's main home; called his "mountain home," the property backs up on the Great Smoky Mountains. Their main product is Hearty Life Better Than Milk–which includes Soy Amazing and many SKUs including five flavors of the soy Better Than Milk, two flavors of the rice Better Than Milk. Most of it comes in canisters or 25 lb bulk bags, but they also have an aseptic UHT liquid soy Better Than Milk (original flavor). William will send some press releases and a sales brochure, with the date that each product was launched.

In 6-8 months Fuller Life plans to introduce a new product name Better Than Milk Plus, which will be an all-organic, enriched and fortified powdered version of the present Better Than Milk.

Follow-up talk with Darlene Foot, Glen's secretary, still at his office in Collegedale. She joined the company about 5 years ago. At that time Glen Fuller was president. John Goodbrad retired in about 1988-89 and died about 3 years ago. Sovex, the yeast product, still exists. Some years ago Sovex Natural Foods sold the rights to Village Market, located near Southern Adventist University, which subcontracts the production with some other company. Address: Consumer Affairs Administrator, Fuller Life Inc., 1628 Robert C. Jackson Dr., Maryville, Tennessee 37801. Phone: 423-681-4171.

3318. Fuller, Glen. 1998. A brief history of Sovex Natural Foods, Hearty Life, McKee Foods, and Fuller Life Inc. (Interview). *SoyaScan Notes.* Oct. 28. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Glen is interested in the history of Sovex, which is now named Fuller Foods, Inc. John Goodbrad did not buy any business from the Hurlingers in Michigan. Rather, he bought their formula for making Sovex spread and the brand name. The word "Sovex" is derived from the words "soy vegetable extract." The soy part of it was real soy sauce, and still is. Glen has heard of the Hurlingers in Holly, Michigan, but they didn't call their company Sovex. Glen does not know the name of the Hurlinger's company, but he thinks he could find it in the company archives. In about 1961 Ruth Goodbrad, John's wife, began making Sovex in their basement. In the early years, Sovex was basically Ruth's business.

In 1962 John Goodbrad called Glen about the granola business. John had an opportunity to buy a formula for granola, which he later did buy. At the time, Glen was a student at Southern Adventist College, where John worked for Collegedale Distributors, and Ruth, was still manufacturing Sovex in their basement. John bought the granola formula, under an exclusive arrangement, from a fellow named Layton Gentry–who sold the same formula with the same exclusive rights to at least 6 other individuals or companies who wanted to make granola! Every one of them thought they had an exclusive agreement! For example, the founders of the Bread Shop (in California) bought the formula from Mr. Gentry during the same calendar year. Right after John bought the granola formula, he formed a corporation and named it Sovex Foods Inc. after the spread. After John bought the granola formula, Ruth also manufactured the granola in their basement. Ruth continued making these two products in the basement of their home until about 1966, at which time they moved the food processing up into a building in Collegedale.

On 1 March 1974 McKee Foods acquired the business from Mr. Goodbrad, who didn't really want to sell it. He was a fine and honest man, very much dedicated to his company and involved in it, but he had to sell it for financial reasons. That is usually difficult for an entrepreneur. During his 1980 interview with Soyfoods Center, he may not have mentioned

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the fact that Sovex was owned by McKee since he was always sensitive to the fact that a health food company was owned by a snack food company.

Goodbrad was president of the company from that day in March 1974 until 30 June 1990. During that time he reported to Glen Fuller, who was vice-president of McKee Foods and responsible for McKee's subsidiaries. On 30 June 1990, when Mr. Goodbrad retired, Glen took over the company and moved his offices from the parent company to Sovex. He retained his position as vice-president of McKee, but also became president and CEO of Sovex. In the early 1990s, Glen changed the company name to Sovex Foods, Inc. from Sovex Natural Foods, Inc.

About 4 years ago, Sovex licensed a local business (named the Village Market) in Collegedale to manufacture the Sovex seasoning spread in their little deli kitchen. There are many other similar products worldwide, such as Marmite, Vegex, Solvex, etc.

Glen has the "Minute Book" for the corporation which goes back to the date it was established in 1962. He could resurrect most of the history from that book, with solid documentation as to dates.

John Goodbrad is deceased, but his wife, Ruth, is still living in Collegedale and very alert. She really started the manufacturing operations.

Glen has never gotten involved in the actual manufacturing of soymilk. He buys the powdered or fresh soymilk he uses from the manufacturer. Some products also use soy isolates or soybeans. Glen does the product formulation and marketing, Glen has a great deal of interest in how his products are manufactured and his company has very strict quality standards. The company is continually inspecting its suppliers, and trying to stay on the cutting edge of product development. Glen knows Elmer Schettler very well; Sovex marketed Elmer's Solait until 30 Sept. 1998, even after Sovex was merged with McKee Foods. There was apparently a falling out and lawsuit between Elmer and Willis Miller, but it was finally settled. Address: Founder, President & CEO, Fuller Life Inc., 1628 Robert C. Jackson Dr., Maryville, Tennessee 37801. Phone: 423-681-4171.

3319. Fuller, Glen. 1998. Dr. Harry Miller and his descendants (Interview). *SoyaScan Notes.* Oct. 28. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Throughout his life, Glen has heard many fine things about Dr. Harry Miller, though he never had the opportunity to meet him. Glen's wife's parents were Adventist missionaries in China, and they knew Dr. Miller very well. They returned to the USA from China in 1941, several years later than Dr. Miller. Glen's wife was only 3 at the time, but she recalls that there were on one of the last trains that left from Gulin in central China, just above the Yangtze River. Glen knows his son Willis, and Willis' son (Harry Miller III) who is now about age 30, and who married a lady named Kim Arliano, who worked briefly for McKee Foods in the audit department. Harry III (who lived in Nashville, Tennessee, when they were married) did a lot of work developing and attempting to promote and market a later generation of soymilk. He is quite a promoter of various projects and ideas. About 7-8 years ago he and Glen's nephew worked together on a promotional plan on another formula for soymilk; it never became a commercial product. Address: Founder, President & CEO, Fuller Life Inc., 1628 Robert C. Jackson Dr., Maryville, Tennessee 37801. Phone: 423-681-4171.

3320. Goodbrad, Ruth. 1998. History of Sovex Natural Foods, Inc. (Interview). *SoyaScan Notes.* Oct. 30. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Ruth, who has just turned age 81, is the widow of John Goodbrad and a Seventh-day Adventist. She and John were married for 54½ years and she has only the fondest memories of him. "Oh, he was good looking and he was the best man on earth!" In 1953 Ruth and John moved to Collegedale from Boulder, Colorado. They built a large house and moved into it in 1954. John was called to Collegedale to be assistant business manager for Collegedale Distributors, and he was for 20 years. He was in charge of many different businesses.

Ruth has always heard that her Sovex spread was first developed by the Hurlingers in Holly, Michigan. She has never heard that it was first made by a man named Mr. Sampson in California. Sovex was Ruth's business; she had nothing to do after her son and only child, Johnny (who is now age 55), graduated from college, got married, and moved to Miami. She told John that she needed something to do at home. He never wanted her to work outside their home. So he told Ruth that he had heard about a lady in Michigan who wanted to sell her Sovex spread. Ruth's mother-in-law (John's mother) made a spread similar to Sovex before; it was a concoction of the same ingredients, brewer's yeast and real soy sauce, mixed in about the same way. Ruth learned the recipe from her mother-in-law and made it at home several times for her own use. Ruth and John drove up to Michigan together, spent the weekend, watched the product being mixed and bottled, then had the mixer shipped down to Collegedale. The product wasn't cooked.

John had almost nothing to do with Ruth's Sovex business during the years that she made the seasoning-spread in the basement of their family home in Collegedale. He was busy with his full-time job at Collegedale Distributors. Sovex was a family business, but Ruth did the work. She continued to use real soy sauce, which she bought by the drum. Soon she added granola to the products she was making in her basement. She bought the granola formula from a man named Layton Gentry in Nashville but she changed the formula to make it crunchy and renamed it "Crunchy Granola." Both honey and brown sugar were

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used as sweeteners. Mr. Gentry later, and in violation of his promise to the Goodbrads, sold his granola formula to about six other people or companies. Soon the granola took off, and Ruth could hardly keep up with the demand–though she loved the work. She had three granola ovens and the Sovex mixer in their large recreation-room basement. She hired Mario DeLeon (a Seventh-day Adventist from Panama) as Head Mixer to help her make the food. One especially good customer was Mr. Dimmock, a distributor from Maryland. He would back his van up to the door and load it up with about 500 pounds of granola, in drums. Some of it was sold to Miami Beach, Florida, to large gatherings of young people. By about 1969-71 the business had outgrown the basement–thanks to worldwide granola sales. Ruth's son, Johnny, came home to help with the family business. They bought some land nearby, designed a food production plant, had it built, and moved Ruth's business up and out of the basement. The food plant has since been expanded several times. At one point they had an offer from General Foods to buy their granola business, but they refused because General Foods wanted to move the business away from Nashville. This became the subject of a story in the *Wall Street Journal.* Ruth still has this and other articles about the company.

Ruth knows Glen Fuller well. His first marriage was to her sister's daughter, Carolyn Radford–before he married his second wife, Jeanine. McKee Foods was founded owned by O.D. and Ruth McKee, both Seventh-day Adventists who Ruth knew well and liked very much. They started the company in Chattanooga, then opened a branch in Collegedale after 1953. Their son was Ellsworth McKee; he ran the company after his father retired. After McKee Bakery bought Sovex in 1974, Glen oversaw operations at Sovex, and John reported to him. But in about 1990, after Glen had surgery (a colostomy), Ellsworth McKee had told Glen, when he was in the hospital, that he would not be able to return to his former position at McKee, so he would need to find another job. Glen told John that he would have to leave so that Glen could take over his place. John did not want to retire, but he was told by Glen that either he would retire and go home or Glen would make him do so. Glen wanted John's desk and his job. John was heartbroken. He came home and just sat on the couch, looking out the window with nothing to do. Several years later he had a heart attack. He passed away about a year later on 12 Dec. 1993. Address: Collegedale, Tennessee. Phone: 423-396-2826.

3321. Shurtleff, William; Aoyagi, Akiko. 1998. The book of tofu. 2nd ed. Revised. Berkeley, California: Ten Speed Press. 336 p. Oct. Illust. by Akiko Aoyagi Shurtleff. Index. 28 cm. [321 ref]

• ***Summary:*** This edition contains a completely new "Appendix B–Directory of Tofu Makers" (p. 313-316, updated to 1 Aug. 1998). The page "About the Authors" (autobiographical) has been updated, and the original photograph has been replaced with two more recent ones–reflecting the fact that Bill and Akiko separated in Nov. 1993 and their marriage ended in May 1995.

After the first printing in Oct. 1998, the Preface was quite extensively revised (but not updated) to include more about how this book came into being (early dates and names), including the important contributions on Jeffrey and Gretchen Broadbent, and of Nahum and Beverly Stiskin. These Preface changes first appeared in the second printing of May 1999.

On page 336 is "The Best of Vegetarian Cooking from Ten Speed Press" (descriptions of eight cookbooks, with price and ISBN).

The inside rear cover has been updated, and now includes current information about SoyaScan, the unique computerized database produced by Soyfoods Center. This database now contains more than 55,000 records from 1100 B.C. to the present, and more than 73% of all records have a summary / abstract averaging 128 words in length. A description of the four different types of records (published documents, commercial soy products, original interviews and overviews, and unpublished archival documents), and the number of each type, is given.

The front and rear covers, title page, table of contents, and the first page of each section have been redesigned to give the book a much more contemporary look. Still contains 500 vegetarian recipes–both Western and Eastern style.

Ten Speed Press gave this book a new ISBN: 1-58009-013-8. Yet despite the many changes described above, the authors preferred not to have this called a "new edition" or "revised edition." Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

3322. Worthington Foods, Inc. 1998. Third quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.

• ***Summary:*** Net sales increased 21% to $35 million for the third quarter vs. 29 million a year ago. Net sales are up 18% for the first 9 months of 1998 compared with the same period one year ago. "Despite Gardenburger's concentrated efforts in the veggie burger category, including a $17 million TV campaign, 5 national FSI drops in Sunday newspapers, and very aggressive trade support for shelf space and retail price reductions, Morningstar Farms Veggie Burger sales for the past nine months are up over 13 percent. However, the veggie burger category is only 40 percent of Morningstar Farms meat substitute business! The other 60 percent of our meat alternative business has increased nearly 40 percent during the past 3 quarters."

"On October 16, 1998, Worthington Foods, Inc., closed on the purchase of the Harvest Burger brand of meat alternative products from the Archer-Daniels-Midland Company (ADM). The purchase price of $9.3 million was paid with 488,750 shares of common stock from

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Worthington Foods, Inc., approximately 4.1 percent of the outstanding shares of stock... Sales of Harvest Burger branded meat alternative products have been approximately $15 million over the past 12 months with approximately 8 percent market share. Now sold under the Green Giant brand, the Harvest Burger Original has the 3rd highest sales-per-point of distribution of all burgers. These same Harvest Burger products will begin appearing under the Morningstar Farms brand beginning January 1, 1999. Foodservice sales were up 34% for the third quarter of this year compared to 1997 and increased 37% for the first nine months of the year." Address: Worthington, Ohio. Phone: (614) 885-9511.

3323. **Product Name:** Morningstar Farms Harvest Burgers [Original Flavor, Southwestern-Style, or Italian, plus pre-cooked Crumbles for Recipes].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1998 October.
Wt/Vol., Packaging, Price: 4 Corn Dogs weigh 10.0 oz (284 gm). Paperboard box.
How Stored: Frozen.
New Product–Documentation: Worthington Foods annual report. 1999. March. p. 4-5. On 16 Oct. 1998 Worthington purchased the Harvest Burger product line from ADM. As part of the agreement ADM continues to produce the Harvest Burgers–previously marketed by Pillsbury under the Green Giant label–at its Illinois plant. A color photo shows the label.

3324. Worthington Foods; Morningstar Farms. 1998. Meatless menu innovations: We played with our vegetables and look what happened! #1 in meatless (Ad). *OnSite* (*Special Section to Nation's Restaurant News*) 1(2):69. Sept/Oct.
• ***Summary:*** See next page. This full-page color ad, targeted at restaurateurs, states: "Consumer requests to 'make mine meatless' at breakfast, lunch, and dinner skyrocket. Restaurants are attracting new customers with low-fat, great-tasting vegetarian meal options.

"National surveys show: 80% of the nation's restaurants see vegetarianism as: A fast growing business, a profitable menu option, and appealing to all age groups. 27% of all the country's restaurants will serve a veggie burger this year..." Six color photos show prepared vegetarian dishes: "Sausage Style Recipe Crumbles. Breakfast Patties, Links & Better 'n Eggs, America's Original Veggie Burgers, America's Original Veggie Dogs, Burger Style Recipe Crumbles, Chik Nuggets." Slogan: "Try Morningstar Farms. We are 'a cut above the rest.' #1 in Meatless."

3325. Bynum, William. 1998. Re: Better than Milk and Fuller Life, Inc. Letter to William Shurtleff at Soyfoods Center, Nov. 2. 1 p. Typed, with initials on letterhead.
• ***Summary:*** "Please let me know how I can obtain a copy of the book you were talking about." He will try to gather more information next time he sees Glenn Fuller, the company owner. He encloses various leaflets plus 5 different 19-gm packets of Better than Milk; each one makes one 8-oz glass of soy or rice beverage. Address: Consumer Affairs Administrator, Fuller Life Inc., 1628 Robert C. Jackson Dr., Maryville, Tennessee 37801. Phone: 800-227-2320.

3326. Peanut Advisory Board 1998. History of peanut butter (Website printout–part). www.peanutbutterlovers.com/History Printed Dec. 15.
• ***Summary:*** Contents: Introduction: Many claims, Civil War soldiers dined on 'Peanut porridge.' In 1890, an unknown physician in St. Louis, Missouri, supposedly encouraged George A. Bayle, Jr., the owner of a food products company, to process and package ground peanut paste as a nutritious protein substitute for people with poor teeth who couldn't chew meat. First patent: Dr. John Harvey Kellogg (but the peanuts were steamed instead of roasted before grinding). Joseph Lambert. George Washington Carver (He did research on other uses of peanuts, but nothing with peanut butter). Peanut Butter goes mainstream (C.H. Sumner introduced peanut butter at the Universal Exposition of 1904 in St. Louis, Missouri. Krema Products Co. of Columbus, Ohio, began selling peanut butter in 1908–and is the oldest existing peanut butter maker).

Peanut Butter as we know it (in 1922 Joseph L. Rosefield began selling a number of brands of peanut butter in California; they were churned to be smooth. One of the first companies to adopt this new process was Swift & Company for its E.K. Pond peanut butter–renamed Peter Pan in 1928. In 1932 Rosefield had a dispute with Peter Pan and in 1933 Rosefield began producing Skippy peanut butter. In 1935 Rosefield created the first crunchy style peanut butter by adding chopped peanuts to his creamy peanut butter at the end of the process. Procter & Gamble: In 1955 P&G got into the peanut butter business by acquiring W.T. Young Foods (of Lexington, Kentucky), makers of Big Top Peanut Butter. P&G introduced Jif in 1958 and today they operate the world's biggest peanut butter plant–churning out 250,000 jars a day). Address: 500 Sugar Mill Road, Suite 105A, Atlanta, Georgia 30350. Phone: 770-998-7311.

3327. Stoltz, Garth "Duff". 1998. Research on the history of Seventh-day Adventist work with foods in Battle Creek, Michigan (Interview). *SoyaScan Notes.* Dec. 15. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Concerning the early history of peanut butter: It may be mentioned in one of the early books written by Dr. Kellogg's wife. Duff has a dated menu from the Sanitarium that mentions either nut butter or peanut butter.

Concerning a biography of Joseph and Almeda Lambert:

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Meatless Menu Innovations™

We played with our vegetables and look what happend!

- *Consumer requests to "make mine meatless" at breakfast, lunch and dinner skyrocket. Restaurants are attracting new customers with low-fat, great-tasting, vegetarian meal options.*
- *National surveys show:*
  - *•80% of the nation's restaurants see vegetarianism as: A fast growing business, a profitable menu option, and appealing to all age groups.*
  - *•27% of the country's restaurants will serve a veggie burger this year.*
- *Worthington Foods, Inc. offers the widest variety of great-tasting, low-fat, precooked, meatless meal options in foodservice today.*
- *Thinking vegetarian? Try Morningstar Farms, the country's #1 consumer brand for meatless. Enjoy the benefits of great breakfast, lunch, and dinner products while taking advantage of high consumer demand.*

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America s Original Veggie Dogs™

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An obituary may have been published in the *Review and Herald.* At the local Willard Library there is an excellent vertical file containing biographies of individuals, compiled from clippings by Ross Coller. Duff will see if the Lamberts appear there. Duff owns one of the early peanut grinders made by Lambert's company. Dr. Kellogg first roasted peanut butter, but he turned to steaming and boiling when he found that roasting damaged the natural oils. Also, for most of his meat alternatives, he wanted a more bland flavor from the peanuts; roasting gives a stronger peanut flavor. There may be documents on Dr. Kellogg's work with peanuts in the files of the Bentley Historical Library at the Michigan State University in Ann Arbor–where most of Dr. Kellogg's personal papers are located. The Michigan State University Archives at Ann Arbor also has a small quantity of Dr. Kellogg's papers.

Duff has been collecting material on Seventh-day Adventist history for 20 years. It is now housed in approximately 75 ten-ream photocopy paper boxes, 5-8 file cabinets, and some drawers and cupboards, but it is not well organized. Among these are about 4 boxes of Dr. Kellogg's private papers, and 6 bound paperback volumes of the court proceedings between Dr. Kellogg and his brother Will Keith in the early 1920s. In the safe in his basement, Duff has the formula books used to make products at the Battle Creek Food Company.

There was a plan to restore the Sanitas Nut Food Co. building (built in 1901 with 21-inch thick walls) in Battle Creek but the building has been razed and the plan has been abandoned. Address: Battle Creek, Michigan.

3328. *SoyaScan Notes.* 1998. Chronology of major soy-related events and trends during 1998 (Overview). Dec. 31. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** June–Britain's Prince Charles, who practices organic farming and is a patron of the Soil Association, writes an article attacking genetically modified food that is published in Britain's *Daily Telegraph.* Explaining that he wouldn't eat such food or knowingly give it to his family or guests, he concludes, "I happen to believe that this kind of genetic engineering takes mankind into realms that belong to God and God alone." The prince's surprise article helped unleash a wave of anti-GMO activity and sentiment, that continued for weeks in the British press and carried over to the Continent.

Sept.–New European Union (EU) labeling laws, requiring labeling of genetically modified ingredients, go into effect. However the regulation exempts foods which contain no soy protein but do contain soy oil or soy lecithin. Sept.–Imagine Foods of Palo Alto, California, the natural foods leader in nondairy beverages, launches Soy Dream, the company's first soy product. They support the product with an extensive and very creative advertising campaign.

Sept.–Protein Technologies International starts to offer certified non-GMO soy protein isolates.

Oct.–The Hain Food Group (which owns Westbrae) has announced that it will start to label some of its products as GMO-Free (i.e. free of genetically modified / engineered organisms). It has developed a "Pure Food" logo and a "Just Say No to GEOs" slogan.

Oct. 16–Worthington Foods purchases the Harvest Burger product line from ADM; by agreement, ADM will continue to make the Harvest Burgers at its Illinois plant.

Nov. 1-2–Conference titled "Estrogen, phytoestrogens and cognitive function" held in Seattle, Washington (organized by Mark Messina), largely to learn more about the research of Lon White on tofu and dementia/Alzheimer's disease.

1998 Dec. 31–DE-VAU-GE acquires Bruno Fischer GmbH, which sells bottled soymilk; both companies are located in Germany.

Major trends: (1) The steady expansion of genetically engineered Roundup Ready soybeans. This year an estimated 30% of America's soybean acreage was planted to genetically engineered soybeans. This is one of the hottest and most controversial stories in most countries of the world–except the United States, where it gets unbelievably little media coverage. (2) The hype about the health benefits of soyfoods continues to increase. There are definitely some health benefits, but the exaggerated statements that now routinely appear in articles and advertisements go far beyond what can be supported by scientific evidence. The media seems intent on making as much money as possible as it whips up the story of soy's health benefits. The bigger the story it becomes, the more money they can make later debunking it. (3) The natural foods industry is changing into a supplements industry because of the higher profit margin on supplements. Many consumers are being misled into thinking that supplements are more important than healthy foods in determining good health. (4) Among commercial soy products this year, the ratio of supplements to foods has increased sharply.

Areas of potential danger on the horizon: (1) Lon White of Hawaii and his data on tofu and dementia/Alzheimer's disease. (2) Young girls discovering that overdoses of soy isoflavones could be useful in growing breasts, then publicizing that information using the Internet and World Wide Web. (3) The danger that the media will start to debunk its own hyped story of the health benefits of soy. (4) The concern that the FDA health label claim for soy will not include traditional soy products–such as tofu and soymilk–which contain too much fat. Therefore manufacturers will be tempted to add soy protein isolates to raise the protein to a level that will trigger the health claim.

3329. Jacobsen, B.K.; Knutsen, S.F.; Fraser, G.E. 1998. Does high soy milk intake reduce prostate cancer incidence? The Adventist Health Study (United States). *Cancer Causes and*

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Control 9(6):553-57. Dec. *

3330. **Product Name:** Morningstar Farms MeatFree Corn Dogs: America's Original Veggie Dog Batter Dipped on a Stick.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1998.
Ingredients: Incl. sugar, soybean oil, corn syrup solids, hydrolyzed corn, soy, and wheat protein, brown sugar, soy flour, spices, soy protein isolate.
Wt/Vol., Packaging, Price: Four Corn Dogs weigh 10.0 oz (284 gm). Paperboard box. Retails for $3.29 (1999/04, Lafayette, California).
How Stored: Frozen.
New Product–Documentation: Worthington Foods annual report. 1999. March. p. 4-5. "Frozen corn dogs make up one of the industry's top performing frozen food categories, and Morningstar Farms *MeatFree Corn Dogs* are positioned to challenge for category leadership. Made with out own *America's Original Veggie Dogs*, this product could become the company's number-one seller per point of distribution in the near future."

A color photo shows the label.

Product with Label purchased at Safeway supermarket in Lafayette, California. 1999. Paperboard box. 8 by 5 by 1.5 inches. Golden brown, red, yellow, white and blue on a green background. Regular price: $3.29 for a package of 4; on sale for $2.69. A photo shows three Veggie Dogs on a white plate. "67% less fat than meat corn dogs." On the back is a small circular logo with a green "V" inside. "Suitable for vegetarians." A table compares gives a nutritional comparison of Meatfree Corn Dogs and Meat Corn Dogs (per 1 link/dog): Cholesterol 0 / 15 mg. Total fat: 4 / 12 gm. Saturated fat: 0.5 / 3 gm. Soyfoods Center taste test. Excellent flavor and texture; a little sweeter and spicier than we would prefer.

3331. **Product Name:** Morningstar Farms Harvest Burgers.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1998.
Wt/Vol., Packaging, Price: 12.0 oz (340 gm). Paperboard box.
How Stored: Frozen.
New Product–Documentation: Worthington Foods annual report. 1999. March. p. 4-5. "Through an innovative partnership with Worthington Foods, Hard Rock Café restaurants around the world now serve this delicious, all natural blend of sauteed vegetables, grains, and roasted nuts. And the same great co-branded product is in supermarket freezers across the U.S." A color photo shows the label.

3332. **Product Name:** Morningstar Farms Buffalo Wings.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1998.
How Stored: Frozen.
New Product–Documentation: Worthington Foods annual report. 1999. March. p. 4-5. "A 'fun food,' great for kids and adults alike, these spicy vegetarian drumettes prepared from vegetable and grain protein were an instant success in 1998."

3333. **Product Name:** Morningstar Farms Chik Nuggets (Refrigerated in MAP format).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1998.
How Stored: Refrigerated.
New Product–Documentation: Worthington Foods annual report. 1999. March. p. 5. "After successfully test marketing three refrigerated items in "modified atmosphere packaging" (MAP) in 1997, we introduced two additional products in the MAP format in 1998, Chick Nuggets and Breakfast Patties. MAP products are sold in the grocer's meat case, introducing a new consumer to Morningstar Farms products... Morningstar Farms now offers five MAP products in 9,000 supermarkets–and demand is growing."

3334. **Product Name:** Morningstar Farms Breakfast Patties (Refrigerated in MAP format).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1998.
How Stored: Refrigerated.
New Product–Documentation: Worthington Foods annual report. 1999. March. p. 5. "After successfully test marketing three refrigerated items in "modified atmosphere packaging" (MAP) in 1997, we introduced two additional products in the MAP format in 1998, Chick Nuggets and Breakfast Patties. MAP products are sold in the grocer's meat case, introducing a new consumer to Morningstar Farms products... Morningstar Farms now offers five MAP products in 9,000 supermarkets–and demand is growing."

3335. Hubbard, Elbert (Fra). 1998. Olympians: Elbert Hubbard's selected writings Part 2. n.p. 476 p. See p. 321-26.
• ***Summary:*** One chapter, titled "J.H. Kellogg and C.W. Post–Pamphlet" (on pages 321-26 of the original 1998 book), is being sold by itself for an extremely high price. We suggest you avoid such books by Elbert Hubbard.

This chapter probably originated between 1909 and 1922, but its origin is deliberately obscured.

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3336. Butler, Mary. 1999. Good sources of information in Battle Creek, Michigan, on early Seventh-day Adventist work with health reform, John Harvey Kellogg, vegetarianism, Joseph Lambert, and peanut butter (Interview). *SoyaScan Notes.* Jan. 11. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** There are three good document collections in Battle Creek: (1) The Battle Creek Historical Society Archives, which is fairly well organized. Two years ago it was totally uncataloged. The Sanitarium and John Harvey Kellogg collection is better cataloged than most since they have many requests for information in it. (2) Dr. Kellogg's Discovery Center, which has a museum that opened in Oct. 1998, and will soon be connected with the Historic Adventist Village–they are in separate locations. "They have a terrific man there, Stan Hickerson, a former archivist who comes from Loma Linda University. He is a walking gold mine. He has a private collection aside from the institutional collection." (3) The private collection of Garth "Duff" Stoltz, which is unorganized–although Duff knows it well. Address: Editor, *Heritage Battle Creek* magazine, c/o Battle Creek Historical Society Archives, 165 N. Washington St., Battle Creek, Michigan 49017. Phone: 616-966-4157.

3337. Davis, Jean. 1999. Deeds related to Joseph Lambert in and around Battle Creek, Michigan (Interview). *SoyaScan Notes.* Jan. 11. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Jean found the following entries under Joseph Lambert in the Index to deeds for Calhoun County, Michigan. The date is the recording date. Jean has not yet found the actual deeds, whose dates may be several years earlier: (1) Deed from Joseph Lambert to Crescent Bakery and Confection Co., 1900 Feb. 26–Miscellaneous. (2) Lambert Good Food and Machinery Co., Ltd., articles of association, 1902 Feb. 10. Liber 175, p. 520. (3) Lambert Good Food Co., Amended articles, 1902 Sept. 10. Liber 179, p. 334. (4) Deed–Joseph Lambert and wife sold to William Martin, a lot in Marshall, Calhoun Co., Michigan (about 12 miles east-southeast of Battle Creek), 1902 Oct. 29. Liber 167, p. 537. Note 1. Jean wonders if they were getting a divorce at about this time as they were selling off land together.

Note 2: The actual deeds are hard to get. The deed books are only available on microfilm in the basement of the County Courthouse in Marshall, some films are very hard to read, and the two microfilm readers are often being used or broken. Address: 154 Homecrest Road, Battle Creek, Michigan 49017-2650.

3338. Davis, Jean. 1999. What ever happened to the Sanitas Nut Food Co. building and archives in Battle Creek, Michigan (Interview). *SoyaScan Notes.* Jan. 11. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The original building was built in 1901 by W.K. Kellogg for his brother, Dr. John Harvey Kellogg, to house the Sanitas Nut Food Company. Corn flakes, peanut butter, and other health foods were manufactured here until 1913 when it was moved to larger quarters in a former organ factory. From 1989 it was "used for the Health and Heritage Museum until it was demolished in 1996 to make way for the Family Health Center."

Jean and others tried during the early 1990s to buy and preserve the building.

Update: Talk with Jean Davis. 2004. Feb. 10. The battle to restore the Sanitas Nut Food Co. was lost in 1996. The original building was torn down, since the Adventists couldn't afford to restore it. The many precious early Adventist documents which (it was hoped) would be stored in the restored building are now stored in trailers. Duff Stoltz has many more, but they are not well organized. It is not at all clear what will happen to all these precious old documents related to early Adventist work with foods. Address: 154 Homecrest Road, Battle Creek, Michigan 49017-2650.

3339. National Securities Corporation. 1999. Equity research: Galaxy Foods Co. Marietta, Georgia. 4 p. 28 cm.
• ***Summary:*** Rating: Strong buy. Sector: Healthy food manufacturing. Description: Makes cheese & soy-based foods. Galaxy will trade at the pre-split price until the effective date of Feb. 12, 1999. Galaxy stock is now trading at $0.63 before the reverse split on Feb. 12. Stock price adjusted for 1:7 reverse split: $4.38. 52 week range: $8.97 to $2.41. Shares outstanding: $9.2 million. 3-months average daily volume: 25,000 shares. Market capitalization: $40.3 million. Insider ownership: 41%. Book value per share: $1.26.

Note: In this reverse split a shareholder will receive 1 share for every 7 shares previously owned. This will boost the value of each share in order to enable the stock to keep its NASDAQ listing thereby enhancing shareholder value. "Shareholders will vote on the reverse split on Feb. 11."

In retail sales, gross margins soared to 35.9% compared with 29.1% last year.

Comparable peer group valuation analysis. A large table shows the comparable companies: Gardenburger, Hain Food, Horizon Organic, Lifeway Foods, International Yogurt, Worthington Foods, and Galaxy Foods. For each company is given: (1) Current price of the stock (Hain is #1 at $21.88). (2) 1998 estimated revenue in million dollars (Hain in #1 at $145.0). (3) 1998 estimated earnings per share (Worthington Foods is #1 at $0.81). (4) 1999 estimated earnings per share (Worthington Foods is #1 at $0.99; Galaxy is $0.65). (5) Growth rate (Horizon Organic is #1 at 42%; Galaxy is 30%). (6) Price to earnings ratio 1998 estimate (Horizon Organic is #1 at 200.0). (7) Price to earnings ratio 1999 estimate

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(Gardenburger is #1 at 48.4; Galaxy is a scant 6.7). Address: 2441 Viscount Row, Orlando, Florida 32809. Phone: (407) 855-7485.

3340. *ADM Nutrition & Health Update.* 1999--. Serial/periodical. Decatur, Illinois: Archer-Daniels-Midland Co. Vol. 1, No. 1. Winter 1999. Quarterly. Editor: Norma Maddio.
• ***Summary:*** This newsletter is published by ADM's Nutraceutical Division. Contents of Vol. 1, No. 1: Welcome to this publication. A primer on soybean isoflavones: Phytochemicals–Changing the way nutritionists view foods, what's special about isoflavones?, defining isoflavones, isoflavones and estrogen, isoflavones are more than phytoestrogens, effects of food processing on isoflavones, approximate isoflavones content of soyfoods and soy products (table), defining optimal isoflavone intake. Novasoy update. Beverage applications. Research briefs: Summaries of six scientific articles published in 1998. In the news: (1) Worthington Foods, Inc. and ADM sign agreement. (2) ADM forms nutraceuticals division. (3) Health claim considered by FDA. Fast fact: U.S. soybean production. Meetings calendar. ADM divisions. Address: Decatur, Illinois. Phone: 217-424-5944.

3341. **Product Name:** Natural Touch Organic Green Soybeans.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1999 January.
Ingredients: Organic soybeans. Certified organic by OGBA. Certified organically grown and processed in accordance with the California Organic Foods Act of 1990.
Wt/Vol., Packaging, Price: 16 oz (435 gm) Resealable poly bag.
How Stored: Frozen.
Nutrition: Per 2/3 cup (85 gm): Calories 110, calories from fat 35, total fat 4 gm (6% daily value; saturated fat 0.5 gm), cholesterol 0 mg, sodium <5 mg (0%), potassium 240 mg (7%), total carbohydrate 9 gm (dietary fiber 5 gm [20%], sugars 2 gm), protein 9 gm. Vitamin A <2%, vitamin C 8%, calcium 8%, iron 10%. Percent daily values are based on a 2,000 calorie diet.
New Product–Documentation: Talk with Ron McDermott of Worthington Foods. 1998. Oct. 7. Worthington introduced this product at the Natural Products Expo in Baltimore, Maryland, in Sept. 1998. The first products are expected to be shipped in early December. This will be Worthington's first organic product. Worthington chose not to use the name "Sweet Beans," which is used by SunRich and Sno Pac. Ron thinks this name derives from the concept of "sweet corn," as opposed to "field corn." Among natural food buyers at Baltimore, Worthington found that the name "Sweet Beans" lead to questions as to whether the product contained added sweeteners. The green vegetable soybeans are grown by and obtained from SunRich in Minnesota. Worthington has decided to monitor the total isoflavone content itself, using an independent lab at Iowa State University, rather than rely on figures from SunRich–which are roughly twice as high as what Worthington has found.

Talk with Trudy W. Cravens, PhD, RD, at Worthington Foods. 1999. Jan. 15. This product was packed by a co-packer on 1 Dec. 1998. It was supposed to be available in retail stores in late Jan. 1999, but she learned today that the production introduction has been delayed, so she is not sure when it will be shipped. Label sent by Trudy Cravens. 1999. Jan. 15. 6¼ by 8 inches. Plastic bag. Dark green, red, yellow, and black on tan and light green. Color photo of green soybeans in salad bowl with sliced tomatoes, carrots, and lettuce. "Contains soy isoflavones–24 mg per serving. Excellent source of fiber. Serve as a side dish, in casseroles, or in soups." On the back is a colored bar chart titled "More nutritional value than corn, peas, or green beans." Green soybeans have more fiber, iron, calcium, and protein. Cooking directions for stove top, microwave, or steamer. Suggestions for use.

Leaflet (black on green, 3 panels each side). 1999. July. "Natural Touch Organic Green Soybeans." Contains six recipes.

Leaflet (8½ by 11 inch, color, single sided) sent by Patricia Smith from Natural Products Expo East. 1999. July. On the front is a color photo of the front of the package.

Spot in *Frozen Food Executive* (Harrisburg, Pennsylvania). 1999. Fall. "Natural Touch introduces Organic Green Soybeans."

3342. Lamp, Greg. 1999. Soyfoods health claim nears FDA okay: Heart-risk labeling should boost soybean demand. *Soybean Digest.* Feb. p. 68.
• ***Summary:*** Funds from the soybean checkoff helped generate the research and information that was submitted to the FDA. The process began in 1995 with financial assistance from the Illinois Checkoff Board and the United Soybean Board (USB). Roughly $1 million in soybean checkoff funds were invested in the project. "A coalition to develop the soy health claim involved ASA [American Soybean Association], USB, state checkoff boards and industry partners, such as Protein Technologies International, Central Soya and the Archer Daniels Midland Company."

An estimated 20% of all Americans (54.2 million adults) have high blood cholesterol levels–over 240. ASA predicts that if each of these people consumed 25 grams (less than 1 ounce) of soy protein each day, annual demand for soybeans would increase by more than 55.2 million bushels.

Consumption of U.S. soybeans in the United States now totals about 1.2 billion bushels a year.

A color photo shows two 3-shelf racks of American

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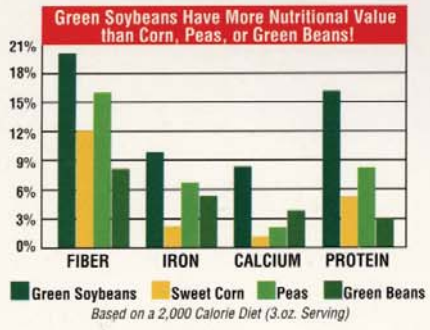
Natural Touch®

Organic Green Soybeans

Soy Isoflavones Without Tofu

Certified Organic

Everyone has heard about the benefits of eating soybean isoflavones. Now you can get a whopping 24 mg of isoflavones with each serving of Natural Touch Organic Green Soybeans. These soybeans are specially planted and harvested while tender green. The result is a fresh vegetable that has the delicious sweetness of a pea and the texture of a lima bean. Serve as a side dish or include in recipes.



INGREDIENTS: ORGANIC SOYBEANS

Nutrition Facts

Serving Size 2/3 cup (85g)
Serving Per Container about 5

Amount Per Serving	
Calories 110	Fat Calories 35
	% Daily Values
Total Fat 4g	6%
Saturated Fat 0.5g	3%
Cholesterol 0mg	0%
Sodium <5 mg	0%
Potassium 240mg	7%
Total Carbohydrate 9g	3%
Dietary Fiber 5g	20%
Sugars 2g	
Protein 9g	
Vitamin A <2% •	Vitamin C 8%
Calcium 8% •	Iron 10%

*Percent Daily Values are based on a 2,000 calorie diet.

UPC
0 28989 21500 0
Product Size
16 oz.
Case Dimension
7.75" x 8.25" x 5.25"
Cube
.42
Case Weight
13.5 lbs.
Pallet Tie & Tier
10 x 8
Cases/Pallet
80

Worthington Foods 900 Proprietors Road, Worthington, OH 43085

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foods. Those on the left rack already contain soy protein: Mori-Nu Tofu, Take Care, GeniSoy bars, Harvest Burgers, Galaxy Veggie Slices, SoNice soymilk, Edensoy, Morningstar Farms [Worthington Foods] meat alternatives, etc. Those on the right rack are foods with potential to have soy protein added: Cream of Wheat, Raisin Bran, puddings, Snackwell's cookies, etc.

3343. Soyfoods Association of North America. 1999. Soyfoods Once a Day for Life (Portfolio). Washington, DC. 21 inserts. Feb. 15. 28 cm.
• ***Summary:*** The following eight news releases are from the Soyfoods Association: (1) Soyfoods Association of North America celebrates April as Soyfoods Month (2 p.). (2) Soyfoods sales soar with increased consumer acceptance (2 p.). (3) Soyfoods Association of North America–Industry insiders (ask the experts, 1 p.). (4) Start young enjoying soy (ideas for kids, 1 p.). (5) 1999 Soyfoods Month sponsors (a half-page profile of 11 companies: Archer Daniels Midland, Galaxy Foods Co., Hain Food Group, Lightlife Foods, Inc., P.J. Lisac & Associates, Inc., SunRich, Inc., Tetra Pak, Vitasoy USA Inc., White Wave, Inc., Worthington Foods, Inc., Yves Veggie Cuisine; 6 p.) (6) Soyfoods Association of North America product list (lists soyfood products of 15 companies, many of whom are sponsors of "April is Soyfoods Month," 11 p.). (7) Soyfoods Association of North America member list (52 companies, 1 p.). (8) Dear member of the press, from Allan Routh, President, SANA (1 p.).

Product brochures from the following companies are also included: (9) Sweet Soybeans–Hearty & Natural Edamame, from SunRich. (10) Vitasoy soymilk, (11) Fresh, ready to heat entrées, from Yves Veggie Cuisine. (12) Go Veggie (dairy alternatives), from Galaxy Foods. (13) Lisanatti–The good health cheese alternative, from P.J. Lisac & Associates (Clackamas, Oregon). (14) Trust the protein authority, from ADM. (15) Fact sheet, from White Wave. (16) Nasoya tofu. (17) Veggie recipes, from Galaxy Foods. (18) Westsoy recipes, from Westbrae Natural. (19) Eating healthy can be soy easy, from Lightlife. (20) The change will do you good, from Morningstar Farms. (21) Sweet beans–Vegetable soybeans, from Sno Pac. Address: 1723 U Street, N.W., Washington, DC 20009. Phone: 202-986-5600.

3344. Worthington Foods, Inc. 1999. Used to be "hearty" and "healthy" was a contradiction in terms (Ad). *Vegetarian Times.* March. p. 3.
• ***Summary:*** This full-page color shows a dish on a plate (it looks like lasagna) prepared with Morningstar Farms Recipe Crumbles. At the lower left are two packages of low-fat Recipe Crumbles: Burger Style and Sausage Style. The slogan below the company logo is: "The change will do you good." Address: Worthington, Ohio 43085.

3345. Worthington Foods, Inc. 1999. Annual report 1998: Celebrating 60 years, 1939-1999. 900 Proprietors Rd., Worthington, OH 43085. 20 p. 28 cm.
• ***Summary:*** For the fifth consecutive year, Worthington Foods has achieved record earnings and record sales. Net sales rose to $139.5 million in 1998, up 18.2% from $117.9 million in 1997. Net income (profit) rose to $8.021 million in 1998, up 0.2% from $8.006 million in 1997. Earnings per share (diluted) fell to $0.66 in 1998, from $0.67 in 1997. Gross profit as a percentage of net sales increased to 43.2% in 1998 from 41.3% in 1997. Foodservice sales rose nearly 33% in 1998 compared with the prior year.

Contains a nice, full-page story honoring Allan R. Buller–visionary, leader, and friend, who steps down after 53 years of service to the company. When he arrived in Dec. 1945 "the company had sales of less than $250,000 and had only recently moved its manufacturing from a two-story white frame house to a newly-built plant. Distribution consisted largely of mailing its most popular product, gluten-based *Choplets,* to households across the country at a price of three cans for a dollar." In the 1950s he helped to make "Worthington the first company in the world to offer frozen vegetarian foods." The company reached its first million-dollar sales year in 1960. In 1982, at age 65, Buller withdrew his retirement savings and refinanced his house to further the pursuit of his lifelong dream. "To make healthful vegetarian foods readily available to mainstream consumers." He and a handful of other investors–including Dr. George Harding IV and James Hagle–raised $9.5 million to buy back the assets of Worthington Foods from Miles Laboratories. "The deal closed on Friday [in October]; and the reorganized company–with Buller as president–started production the next Monday without missing a single order or shipment." Buller retired as president of Worthington Foods in 1986, when Dale Twomley was named to the post. He became chairman of the board in 1989; now, a decade later, he steps down from that post, succeeded by Twomley. He joins other fellow Worthington visionaries, Jim Hagle and George Harding, in seeing a brilliant future for vegetarian foods. "'When I was growing up, vegetarianism was accepted largely on faith,' he recalls. 'But today, we have strong scientific evidence to support the benefits of this dietary approach. That can only mean a continually growing market for our products."

"Morningstar Farms (including *Harvest Burgers*) leads the meat alternative market category in supermarkets across the U.S., capturing a 52% market share. As the only brand with meat alternative products for every meal occasion, Morningstar Farms continues to provide customers with the largest variety of products and tastes.

"Shoppers can find the Morningstar Farms brand in more than 96% of the nation's supermarkets. The line now includes more than two dozen frozen and refrigerated food items to replace whole eggs and processed meats. Most of these meat alternatives are made from high quality soy protein,..."

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New products introduced during 1998 include MeatFree Corn Dogs (batter-dipped on a stick), MeatFree Buffalo Wings (a fun food, great for kids, spicy vegetarian drumettes), and Hard Rock Café Veggie Burgers (a partnership with Hard Rock Cafe restaurants worldwide), and Morningstar Farms Harvest Burgers (On 16 Oct. 1998 Worthington purchased the Harvest Burger product line from ADM; by agreement, ADM will continue to make the Harvest Burgers at its Illinois plant). Two new refrigerated products were introduced in "modified atmosphere packaging" (MAP): Chick Nuggets and Breakfast Patties. MAP products are sold in the grocer's meat case.

Color photos show: Dale E. Twomley. Allan R. Buller. Three new product labels. An aerial view of Worthington's manufacturing facility at Zanesville, Ohio.

Includes a 27-page "Notice of Annual Shareholders Meeting." Address: Worthington, Ohio. Phone: (614) 885-9511.

3346. Fischer, Bruno. 1999. Sale of his company, Bruno Fischer GmbH (in Aetorf, Germany), to DE-VAU-GE in Germany (Interview). *SoyaScan Notes.* April 2. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Bruno is a devout Seventh-day Adventist and DE-VAU-GE (DVG–Granovita) is a Seventh-day Adventist company. Many years ago DVG got out of the soymilk business; they sold their soymilk plant to Korea; it is now the third soymilk plant of Samyung Foods in Korea. Bruno is now interested in getting back into the soymilk manufacturing business in a different way. On 31 Dec. 1998 he sold all of his family-owned company, Bruno Fischer GmbH (in Aetorf, Germany) to DVG–for money. Bruno did not keep or exchange any stock. He now works as a consultant for DVG and no longer owns any part or shares of his former company. He sold the company largely because DVG contacted him at a very appropriate time and offered a very good price. The company had always been run as a triumvirate, his mother, his father, and Bruno. But during the summer of 1998, Bruno's mother had died very unexpectedly. Four weeks later, Bruno's father announced that he would like to get out of the business as soon as possible. This would mean major restructuring. Several months later, out of the blue, came the offer from DVG–like a gift from God. Bruno was not looking for a buyer. The timing was perfect. DVG was looking to buy a company that would allow them to penetrate the organic and natural foods food market better. They had a shopping list and Bruno's company was No. 1 on that list. DVG sells most of their products to the Reform Houses (the predecessor to the natural foods market and stores–*Naturkostlaeden*). DVG already owned a small company in the organic and natural foods market; they had tried for years, using this company, to penetrate the market, unsuccessfully. So they decided that they needed to buy one of the key players in that market.

DVG is owned by the Seventh-day Adventist Church. They contribute significant amounts of money to the church, but if they need money, they must go to non-church sources (mainly banks). Nevertheless DVG has grown at an astonishing rate. Fifteen years ago they had annual revenues (sales/turnover) of about 5 million Deutschmarks; today that figure has increased to about 200 million Deutschmarks. His experience in negotiating with DVG was that they were very ethical and fair. They offered attractive help in moving or severance pay (about one month's salary for each year they had worked for Fischer) to Bruno's former employees in Aetorf after his equipment was moved 400 km (250 miles) away northward to Lueneburg.

Bruno has a non-compete agreement with DVG, but they are interested in buying soymilk from him if should ever decide to make it. They now buy from Alpro.

Katrin [pronounced KAT-rin] Senger, who lives in Munich, is a colleague of Bruno's. She is doing her diploma thesis (something between a BA and an MA thesis) on his behalf on the soy market in Europe.

Bruno has started a new company named Natumi GmbH, located at the same address as his former company. Phone: +49 2243 850 162. Fax: +49 2243 850 172. The sale of his company to DVG is public knowledge. Address: Im Auel 88, 53783 Aetorf, Germany. Phone: 49-2243-4021.

3347. Messina, Mark J. 1999. Soy appeal. *Functional Foods* (*Kent, UK*) 2(7):20-23. April.

• ***Summary:*** The subtitle reads: "Soyfoods are viewed by many as the consummate functional food. Dr Mark Messina of the American Soybean Association reviews the latest nutritional research, and looks at product potential." Contents. Introduction. Defining isoflavones. Cancer. Heart disease. Osteoporosis. Product potential. A portrait photo shows Mark Messina, who is an adjunct associate professor of nutrition at Loma Linda University in California. He chairs the editorial advisory board of *The Soy Connection*, a quarterly newsletter sent to over 100,000 health professionals in North America. He has organized and chaired the first two international symposia on the role of soy in preventing and treating chronic disease. Address: PhD, 1543 Lincoln St., Port Townsend, Washington 98368. Phone: 360-379-9544.

3348. Sanitarium Health Food Co. 1999. Soy healthy: From the goodness of soy beans (Leaflet). Wahroonga, NSW, Australia. 2 p. April. Front and back.

• ***Summary:*** This attractive full-color leaflet is folded into 4 panels. The front shows the packages of 8 "Soy Healthy" brand vegetarian meat alternatives, nestled in a bed of lettuce and surrounded by green. Below the products: "Soy has never been so easy." The inside left panel discusses: Soy protein and phytoestrogens. Sunflower oil/Canola oil. Iron. Vitamin B-12. Fibre. The inside right panel gives detailed information on five frozen and five chilled Soy Healthy

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products. Frozen: Original soy burgers. Country-spiced soy burgers. Tender soy medallions. Tender soy schnitzels. Tender flaked soy fillets. Chilled: Original soy slice. Garlic & herb soy slice. Smoked soy slice. Soy sausages. Soy fillets.

The back panel lists suitability for specific diets: Reduced saturated fat / Cholesterol free. Vegetarian (lacto-ovo). No added preservatives. No added MSG. No artificial colours. For more information: www.sanitarium.com.au/Soy. Plus three toll-free numbers. From the company's "Nutrition Education Service." Address: 146 Fox Valley Rd., Wahroonga, NSW 2076, Australia.

3349. **Product Name:** Morningstar Farms Meat Free Buffalo Wings: Spicy Vegetarian Drumettes.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1999 April.
Ingredients: Textured vegetable protein (soy protein concentrate and isolate), egg whites, enriched wheat flour...
Wt/Vol., Packaging, Price: 17-18 Wings weigh 10.5 oz (298 gm). Paperboard box.
How Stored: Frozen.
New Product–Documentation: Label sent by Worthington Foods. 1999. April.

3350. **Product Name:** Morningstar Farms Meat-Free Mini Corn Dogs.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1999 April.
Ingredients: Wheat gluten, water, enriched wheat flour...
Wt/Vol., Packaging, Price: 14 Mini Dogs weigh 10.0 oz (284 gm). Paperboard box.
How Stored: Frozen.
New Product–Documentation: Label sent by Worthington Foods. 1999. April. With new banner headline.

3351. **Product Name:** Morningstar Farms Meat-Free Stuffed Sandwiches [Pepperoni Pizza Style, Ham & Cheese Style, Burger & Cheese Style].
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085. Phone: 614-885-9511.
Date of Introduction: 1999 April.
Ingredients: Burger & Cheese Style: Water, unbleached wheat flour, textured soy protein concentrate, cheddar cheese...
Wt/Vol., Packaging, Price: 2 Stuffed Sandwiches weigh 9.0 oz (255 gm). Paperboard box.
How Stored: Frozen.
New Product–Documentation: Labels sent by Worthington Foods. 1999. April. With new banner headline.

3352. Worthington Foods, Inc. 1999. Morningstar Farms is getting a lot of attention. Please plan accordingly (Brochure). Worthington, Ohio. 4 p. 28 cm. [2 ref]
• ***Summary:*** Compares Morningstar Farms (MSF) and Gardenburger (GB) products. Contents: (1) New packaging: New logo to create brand "umbrella." (2) Widest variety: A graph titled "Brands by unit volume" based on AC Nielsen data from 26 Dec. 1998 shows that Morningstar Farms has never lost its lead. Gardenburger peaked in July 1998 than fell sharply. Morningstar peaked at the same time but fell only slightly. (3) Great taste. A table (based on Nielsen data from 20 March 1999) shows unit volume of the top ten MSF and GB products. Eight of the top ten are MSF. The top four are MSF Breakfast Patties, MSF Breakfast Links, GB Original, and MSF Grillers. (4) Category Leader: "Morningstar Farms #1 in Meatless for the past 25 years." About 8% of U.S. households consume MSF products and 7.5% consume GB. But MSF households purchase at a 3-times higher rate.

The rear cover discusses MSF's "New advertising campaign." Targets 75% of women between ages 15-54. Created 1.5 billion impressions. Uses TV and magazine ads plus many types of coupons.

Four inserts show: Ad slicks of two national TV ads: "Surprise-a-guy." and "Surprise-a-gal." Three full-page color ads. Address: 900 Proprietors Rd., Worthington, Ohio 43085.

3353. Joe, Peter. 1999. Sunrise Soya Foods and the creation of SoyaWorld Inc. in Vancouver, Canada (Interview). *SoyaScan Notes.* May 26. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** First a bit of background: In late 1995 Peter Joe went to Dairyworld and began talking with them about doing a soy yogurt together. Dairyworld is a huge co-operative of dairy farmers in western Canada (not just British Columbia). Gradually the talk turned to soymilk. Dairyworld had powerful packaging and distribution capabilities, while Sunrise had manufacturing and a deep knowledge of the soy business. Dairyworld got more and more interested in soymilk. Initially Peter started talking with a person who is no longer there. As the talks grew more serious, Maheb Nathoo was added to the team that soon drew up a shareholders and joint-venture agreement. Maheb, who is very bright, seemed to have a personal interest in soy. His daughters were into soy. He realized that milk is a commodity, that soymilk is another form of liquid protein, and is part of the milk shelf. Now he has become a convert, and he feels very strongly about the future and potential of soy. Maheb was the person who convinced the board of Dairyworld Foods (which consisted mainly of dairy farmers) that the joint venture with Sunrise was the way to go. These farmers realized that Sunrise was getting more and more space on the dairy shelf (i.e., invading their territory) so,

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hey, why not get involved with this newcomer. Dairy people also remember what happened with margarine; if they had gotten into the margarine business at an early date, they would have been able to offer it as another product, rather than having to compete with margarine using butter. Finally, the top executives and management people at Dairyworld think beyond the dairy farm and dairy farmer mentality, and they have done a good job over the past 3-4 years in getting the approval of the dairy farmers to go ahead with this joint venture.

At the same time Peter met Sanitarium people at trade shows for a number of years. Sanitarium was trying to sell the product into Canada from Australia in an aseptic package. Finally Peter went to Sanitarium to ask for a license; they were looking to expand internationally, so the timing was good. The final agreement gave Peter exclusive rights to sell So Good in the USA and Canada.

SoyaWorld Inc. was incorporated in Aug. 1996 with Dairyworld Foods and Sunrise each putting in money and owning half the shares. The new SoyaWorld board of directors (4 people, two from each company) was formed at that time. Maheb moved from Dairyworld to SoyaWorld in late 1996. In mid-1997 SoyaWorld got the license to make So Good from Sanitarium Foods (Australia). Test marketing of So Good began in mid-1997 (with the name SoyaWorld Inc. on the package), then in Jan. 1998 the product was officially launched with a big TV advertising campaign. The humorous ad shows a cow confessing that she drinks So Good; it is even endorsed by cows! This may have been the first national mass market TV campaign for soymilk in North America. In late 1997 the Canadian government first allowed soymilk to be fortified with calcium and vitamins. This showed a weakening of their many laws designed to protect dairy products. Use of the word "milk" is still not allowed. Soyganic was launched in mid-1998.

Peter works closely with Dave Coe, who is the CEO and president of Dairyworld Foods and on the board of SoyaWorld. He is the one who is responsible for the joint venture with Sunrise and for what is happening with SoyaWorld–in a sense. Maheb is now working for SoyaWorld as general manager and CEO; he no longer works for Dairyworld.

If a taste panel consisting of typical Canadians was asked to taste So Good and SoNice Vanilla, Peter thinks So Good would win. SoyaWorld plans to target So Good and SoNice to different markets. SoNice in Tetra-Pak cartons still has a very strong following among natural foods customers, but SoyaWorld will try to sell SoNice in supermarkets as well as natural food stores in both fresh and UHT cartons. So supermarket consumers will have a choice. So Good is sold in both gable-top (fresh) and aseptic / UHT packages, but about 90% of the sales come from the fresh product. Peter would guess that the same would be true in the USA. Many Asian-Canadians love Soyganic, which has a beany flavor; they have grown accustomed to that taste. Address: General Manager, Sunrise Soya Foods, 729 Powell St., Vancouver, BC, V6A 1H5 Canada. Phone: 604-254-8888.

3354. Fuller Life, Inc., BetterThanMilk Div. 1999. Why Better than Milk (R) is also Better than Soy and Rice Beverages (Leaflet). Maryville, Tennessee. 1 p. Front and back. 28 x 22 cm.

• ***Summary:*** See next page. This attractive color leaflet (dated May 1999) was sent by Fuller Life in May 1999. A sticker shows that "Better Than Milk" had Booth #1255 in the Food Pavilion. The front states: "Better Than Milk is a mix instead of a liquid, so it: (1) Costs up to 30 percent per quart than liquid quarts. (2) Mixes to your preferred thickness and taste. (3) Makes as little or as much as you need at a time, so its always fresh." On the rear are nutrition facts and ingredients for eight SKUs, which come in either beverage mix cans or pre-mixed cartons.

Note: This product was originally introduced in 1987 by Sovex Natural Foods in Collegedale, Tennessee. In March 1999 the exact same poster (almost) was distributed at Natural Products Expo West (March 1999). Hearty Life, Box 2178, Collegedale, TN 37315. Phone: 1-800-227-2320. It was sent to Soyfoods Center by Patricia Smith. Address: 1628 Robert C. Jackson Dr., Maryville, Tennessee 37801. Phone: 1-800-227-2320.

3355. Gardenburger, Inc. 1999. Annual report 1998: Bullseye. 1411 Southwest Morrison St., Suite 400, Portland, OR 97205. 26 p. 43 cm.

• ***Summary:*** This is a strange-looking, unconventional tabloid size annual report, apparently designed to hide the company's huge losses. Net sales (in million dollars) have grown dramatically in recent years: $40.53 in 1996, $56.83 in 1997, and $100.12 in 1998 (up 76% over 1997). However the company lost $1.393 million (in net income) in 1997, increasing more than 7-fold to a loss of $10.042 million in 1998. Also in 1998 working capital, shareholders' equity, and gross margin all fell significantly, while current liabilities rose more than four-fold. The price of the common stock finished 1998 at 13.75, about the same level as in the first quarter.

But last year was a brand-building year. Gardenburger spent $146 million on media advertising and expanded consumer awareness of the brand from 22% to 42% in the process. Brand awareness before 1998 ad campaign: Gardenburger 22%, Harvest Burger 22%, Morningstar Farms 15%, Boca Burger 5%. Awareness after 1998 campaign: Gardenburger 42%, Harvest Burger 24%, Morningstar Farms 16%, Boca Burger 4%. Gardenburger is the number one veggie burger on grocery shelves and in restaurants. "Largely due to our advertising and product placements, the veggie burger category grew 57% in 1998 to $134 million in the grocery channel, and we captured 80% of that

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growth. Our January grocery channel market share stood at 51%, compared to 24% for our nearest rival" [Worthington Foods, plus Boca Burger 11% and Harvest Burger 7%]. Gardenburger is also the No. 1 brand in the natural foods channel. Address: Portland, Oregon.

3356. Thrash, Agatha. 1999. History of work with medicine–orthodox and alternative, and vegetarianism (Interview). *SoyaScan Notes.* June 4. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Both Agatha and her husband, grew up in Georgia, and are physicians with MD degrees. They both went to medical school at Medical College of Georgia (he started in 1950, she in 1951). They met in medical school and married after her second year. They did their internships at the University of Louisville (Kentucky), and began their residency in 1954 at Emory University in Atlanta, Georgia. Then in 1960 they started practicing medicine at a regular hospital in Columbus, Georgia; her husband had a private practice in internal medicine, and she was in pathology at St. Francis Hospital, Columbus, Georgia (she later became chief pathologist). They practiced medicine in this way for about ten years. During that time were not Seventh-day Adventists.

Then they began to study the Bible, and to recognize that the Bible doctrines as taught by Seventh-day Adventists are the same as what the Bible teaches. They started to go to an SDA church where A.C. Becker was the pastor; he was a lifelong vegetarian. Pastor Becker and his wife looked very healthy, as did their three children. Agatha and her husband were "amazed" that a person go live an entire lifetime without eating meat. Earl Prest succeeded A.C. Becker as pastor of this church. In 1964 she and her husband became Seventh-day Adventists. They continued their regular medical practice, but gradually they began to have a bit of unrest. "Surely, this is not all there is to the practice of medicine. You just give drugs, the patients come back again and again, and you usually give them more and more. But we as doctors have done nothing to change the basic course of their disease. We have merely made it tolerable." They got interested in alternative medicine through Seventh-day Adventists. They decided they could never practice such medicine in a hospital, so they started Yuchi Pines Institute in Seale, Alabama. They bought the land in 1968 or 1969, and in 1970 it was organized as a corporation. They have been operating as a "Lifestyle Center" ever since then. They are chartered in the state of Alabama as educational, benevolent, and charitable–a nonprofit, tax-exempt organization. "Now we try to train them to be in charge of their own health, using the eight natural laws of health: Nutrition, exercise, water, sunshine, temperance, air, rest, trust in Divine power. We have been positively amazed that many diseases–such as hypertension, high blood pressure, diabetes, allergies, asthma, and symptomatic heart disease–could be literally cured or greatly improved using these simple, natural methods. We have seen nothing short of miraculous results."

In 1975 she and her husband wrote their first book titled *"Blessed art thou, o land, when... thy princes eat... for strength, and not for drunkenness." Ecclesiastes 10:17.*

Why does our government, which is now so concerned with reducing medical costs, not consider using these methods when appropriate? Agatha thinks it is because of the powerful drug company lobby.

Dr. Thrash was deeply influenced in her medical work by Dr. Dunbar Smith, a Seventh-day Adventist, who ran the Bates Hospital (until the government took it over during World War II), and Adventist hospital in New York. He had been a missionary and a minister, but he had a problem with this voice from overstraining it. So he decided to become a physician. He came back to the USA, studied medicine, practiced medicine for many years, then became the head of the Bates Hospital.

She was also influenced by Earl Prest, the pastor of a local SDA church in Columbus, Georgia. He was from New York and he knew Dunbar Smith; it was from him that Dr. Thrash was introduced to Dunbar Smith. Madison College in Tennessee was a small inspiration.

Concerning powdered soymilks or so-called "tofu milks": She thinks some of them (such as "Better Than Milk") are unhealthful if used as a major food source. The first ingredients are fat and sugar. She knows and likes the major liquid soymilks such as Edensoy, Westsoy, Vitasoy, etc. Address: Yuchi Pines Institute, Route 1, Box 273, Seale, Alabama. Phone: 334-855-4709.

3357. *SoyaScan Notes.* 1999. The soy-based infant formula industry and market in the USA–Basics (Overview). June 25. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Definition: An infant formula serves as the sole source of nutrition for an infant before, and sometimes during weaning. It must supply all of the nutrients needed by an infant in precisely the right amounts, in a sanitary package. The baby's life depends on this. If the manufacturer makes a mistake, a product recall must be conducted; this is very expensive.

Because of the importance of this category of products in sustaining human life, manufacture of infant formulas is very carefully and strictly regulated by the U.S. Food and Drug Administration (FDA). The Infant Formula Act of 1980, which is the basis of that regulation, imposed new quality control and labeling requirements for infant formulas.

Of the many food and beverage categories, the manufacture of non-dairy (usually soy-based) infant formulas is the most technologically sophisticated. It is the food equivalent of building missile defense systems.

Because of the ever-present possibility of recalls, it also contains the most expensive risks of any sector of the food business. To protect themselves from these risks, all manufacturers buy product liability insurance, which is very

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expensive.

The only companies that have survived in this industry and those which are willing and able to take these risks. The players and competitors are some of the most powerful and experienced companies in America today, coming mainly from the pharmaceutical and food industries.

The future of soy-based infant formulas is–as of mid-1999–quite uncertain because of concern by pediatricians and toxicologists about the levels of isoflavones and phytoestrogens found in such infant formulas. On a body weight basis, the level is about the same as that contained in a birth control pill used by an adult woman.

Because of the complex and demanding nature of this industry, a number of companies have sold their businesses or simply stopped manufacturing soy-based infant formulas, as follows:

The first major U.S. company to get out of the non-dairy infant formula business was the Pharmaceutical Products Division of Borden Inc., a major American dairy company. Borden got into this industry in 1967 by purchasing Neo-Mull-Soy from Dr. Julius Muller M.D., who had launched the product in 1936. Borden had its headquarters at 350 Madison Ave., New York, New York, and its plant at Elgin, Illinois. Borden decided to get out four years later, when they sold their infant formula business to Syntex, a Palo Alto pharmaceutical company.

In 1940 International Nutrition Laboratories in Mt. Vernon, Ohio (owned and operated by Dr. Harry W. Miller, M.D.) introduced SoyaLac, a powdered infant formula based on soymilk. In 1951 he sold the company at book value to Loma Linda Foods (owned by the Seventh-day Adventist Church) of Riverside, California. In 1989 Loma Linda sold the infant formula part of its business to Nutricia, a Netherlands-based manufacturer of infant formulas, and the second largest manufacturer of such formulas in Europe after Nestle. In late 1990 Nutricia shut down the plant in Riverside and in 1994 sold all their infant formula operations Nestle/Carnation. The Soyalac brand disappeared from the market–forever. The full story of "The rise and fall of Soyalac" is told in a separate record.

Syntex Laboratories was started in 1944 by Russell Marker to make progesterone. In 1971 the company bought Neo-Mull-Soy, a soy-based infant formula, from Borden. For Syntex, a high-flying pharmaceutical company with headquarters in Palo Alto, their venture into the infant formula market was a disaster. In March-April 1978 Syntex ceased adding salt (sodium chloride) to the products out of concern that the sodium levels were too high and in the belief that adequate levels of essential nutrients were provided through other ingredients contained in the formulas. The company was mistaken. In July-August 1979 Syntex learned of an illness alleged to be related to the use of Neo-Mull-Soy and Cho-Free. Within days they notified pediatricians nationwide. The company determined that the products were low in chloride and promptly convened a panel of outstanding independent experts to review the reports and recommend corrective action. Within one week of discovering the chloride deficiency, Syntex initiated a voluntary recall of all Neo-Mull-Soy and Cho-Free products. The recall was a major effort involving first-class mailings to more than 100,000 physicians and pediatric nurses, mailgrams, nationally released media statements, and personal visits by Syntex representatives to more than 26,000 stores. In total, nearly 8.5 million cans of the formulas were recalled and destroyed by Syntex. In Dec. 1979 the formulas were reformulated to assure adequate chloride levels and approved for marketing by the U.S. Food and Drug Administration. In Jan. 1980 the reformulated products were returned to market. In Dec. 1980 Syntex ceased production of infant formulas due to lack of demand. The company no longer manufactures any infant formula products.

Wyeth Corp. (later Wyeth Laboratories Inc., then Wyeth-Ayerst) entered the non-dairy infant formula business in 1952 with Soyola, a dietary supplement to infant feeding made in Pennsylvania. In 1979 they launched Nursoy, an iron-fortified soy protein infant formula, also made in Pennsylvania. In 1984 they launched Wysoy in the United Kingdom. But in the mid-1990s, sales of Wyeth's products were first devastated in New Zealand, then in Australia, and finally in the UK by growing concerns about the safety of the isoflavones found in soy-based infant formulas. In Jan. 1996 Wyeth-Ayerst reported that it was phasing out its U.S. infant formula operations. They have probably done the same in New Zealand, Australia, and the UK.

3358. *SoyaScan Notes.* 1999. The rise and fall of Soyalac soy-based infant formulas (Overview). June 25. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** Dr. Harry W. Miller, M.D., a student of Dr. John Harvey Kellogg, went to China in 1903 (with his wife) as a Seventh-day Adventist medical missionary. In 1926 in Shanghai he began to focus his attention on developing a better soymilk. In January 1928 the Shanghai Sanitarium and Hospital opened, with Dr. Miller in charge. In 1932 he established the Vetose Nutritional Laboratory to further his research. For two years (1936-1937) he fed soymilk he had formulated to several hundred children (mostly infants) at the Shanghai Clinic, running control tests with fresh cow's milk and various American and European prepared baby foods. The study turned out well and he and C.J. Wen wrote an article which was published in the April 1936 issue of the English-language *Chinese Medical Journal.* "Our experimental work on infant feeding has been carried on over a period of more than two years, mostly in the Shanghai Sanitarium Clinic." In 1936 in Shanghai he started one of the first commercial soy dairies in China. One of its products was Vetose Soya Milk Powder with claims of nutritive value the equivalent of other prepared powdered milk food for

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infants.

In 1937, when the Japanese began bombing Shanghai, Dr. Miller returned to the United States. In Mt. Vernon, Ohio, he and his sons built a soymilk factory and established a new company named International Nutrition Laboratories. In 1940 this company introduced SoyaLac, a powdered infant formula based on soymilk. Several experiments on Soyalac were conducted by leading pediatricians and child specialists on large groups of babies over a long period of time in America, Japan, the Philippines, and China. Finally, by July 1951 Soyalac was accepted as a hypoallergenic food by the American Medical Association's Council on Foods. Soyalac then began to be prescribed by physicians for allergic infants, and soon started to sell quite well.

In early 1951 (following the death of his wife), Dr. Miller sold (at book value–a very low price) his factory, land, and various soymilk products to Loma Linda Foods (owned by the Seventh-day Adventist Church) of Riverside, California. Loma Linda renamed the product Loma Linda Soyalac Infant Powder and continued to make it at Dr. Miller's plant in Mt. Vernon, Ohio.

In Jan. 1951 Loma Linda Foods added a second soy-based infant formula product to its line, Loma Linda Soyalac Infant Concentrate. In about 1960 they added Loma Linda Soyagen Infant Powder, in 1977 Granolac Infant Soya Milk (sold by Granose Foods in the UK), and in 1979 i-Soyalac, a non-dairy infant formula based on soy protein isolates. In 1979 Loma Linda was making 2.24 million gallons of ready-to-use Soyalac infant formula.

In an interview in March 1990, Eric Fehlberg, director of the Seventh-day Adventist international food operations, said that the church wanted to sell off the infant formula part of Loma Linda Foods because of the high cost of liability insurance. The FDA are really down on infant formula foods. If anything goes wrong, there is no end to the strife. LLF had one small recall due to a small shortage of vitamin A–from dissipation. It was very expensive. In 1989 Loma Linda sold the infant formula part of its business to Nutricia, a Netherlands-based manufacturer of infant formulas, and the second largest manufacturer of such formulas in Europe after Nestle. In the Netherlands, Nutricia had 90% of the dairy-based infant formula market. They had never made soy-based infant formula before they acquired Loma Linda, nor had they ever made infant formula in the United States. Nutricia began making infant formula using new equipment in Riverside, California; they also kept the plant operating in Ohio. Just as they were getting the new plant running, disaster struck, and they had to do a recall. So in late 1990 Nutricia shut down the plant in Riverside, spent more than $12 million revamping the plant in Ohio, then used it to start making various forms of i-Soyalac (from soy protein isolates) and Soyalac (from whole soybeans). The plant in Riverside went up for sale although Nutricia's sales and marketing departments remained in the office. In mid-1993 Nutricia decided to close their offices at the Riverside and move the rest of the company's operations to Mt. Vernon, Ohio. But later in 1993 Nutricia had another recall–and another disaster, which even drove down the stock price of Nutricia in the Netherlands. Nutricia's management at headquarters in the Netherlands probably said "This American company is too dangerous for us. We'd better sell it"–which they did in 1994 to Nestle/Carnation. The Soyalac brand disappeared from the market–forever. Nutricia is a good company, but they quickly learned that regulation (by the FDA) is much stricter in the USA than in Europe.

3359. *Good Food News* (*Sanitarium Health Food Co., NSW, Australia*). 1999. So, what's new with soy? An interview with Prof. Ken Setchell. 11(2):2-3. June.
• ***Summary:*** Recommends 50 mg/day of soy isoflavones for many health benefits, but higher levels may be needed to protect against some conditions such as loss of bone.

3360. Worthington Foods, Inc. 1999. [Second quarter financial report]. 900 Proprietors Rd., Worthington, OH 43085. 1 p. 36 cm.
• ***Summary:*** This quarterly report appears in a cheap, condensed, disappointing format–with much less information and style than previous quarterly reports. It has no title, is in black and white (no color as before), and doesn't even say which quarter the figures are for. The company is trying to save money; what a shame. Has Worthington forgotten about the image it projects?

Net sales rose 17.6%, but net income (after tax profits) dropped 21.2%–compared to the same quarter one year ago. Address: Worthington, Ohio. Phone: (614) 885-9511.

3361. **Product Name:** Better than Ice Créme [Vanilla].
Manufacturer's Name: Fuller Life, Inc., Better Than Milk Div.
Manufacturer's Address: Maryville, Tennessee. Phone: 1-800-227-2320.
Date of Introduction: 1999 July.
New Product–Documentation: See next page. Leaflet (single sided, 8½ by 11 inch, color) sent Fuller Life. 1999. July. "Introducing Better than Ice Créme (TM)." "A soy-based dessert mix for use in home ice cream freezers, or soft-serve machines."

3362. **Product Name:** Natural Touch Tuno (Vegetarian Tuna).
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085.
Date of Introduction: 1999 July.
Ingredients: Textured soy protein concentrate, water, expeller canola oil, contains 2% or less of autolyzed yeast extract, natural flavors from non-meat sources, hydrolyzed

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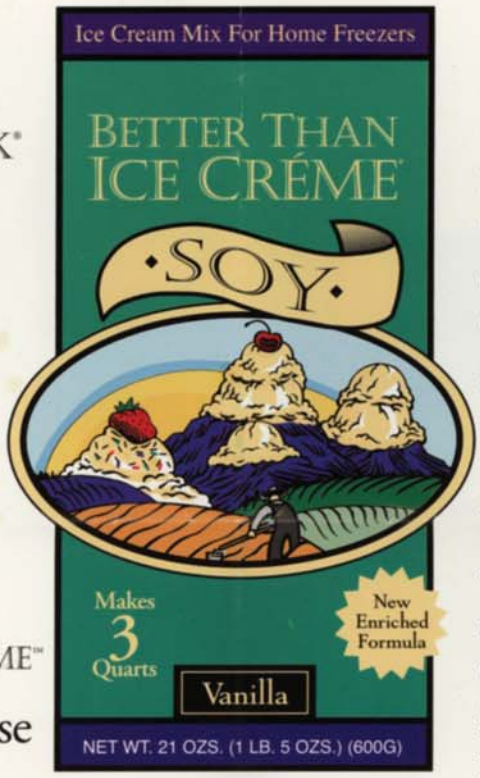
INTRODUCING BETTER THAN ICE CRÉME™

The makers of BETTER THAN MILK® introduce a new soy-based dessert mix for use in home ice cream freezers, or soft-serve machines.

BETTER THAN ICE CRÉME™ was created for those who want a creamy, delicious non-dairy ice cream.



Flavor Favorites

- Add strawberries, fresh, frozen or preserves, to mix
- Add flaked coconut and crushed pineapple to mix
- Blend toasted almonds, marachino cherries and carob chips with mix

Unfrozen Sweet Créme:

- Topping for strawberry shortcake and cobblers
- Milkshakes - blend with ice, frozen strawberries or bananas
- Sweet Creme for breakfast cereal and hot beverages

INGREDIENTS: SOYMILK (SOYBEANS, ISOLATED SOY PROTEIN, *FILTERED WATER), CANOLA OIL, MALTODEXTRIN (FROM CORN), EVAPORATED CANE JUICE, WHEAT PROTEIN, NATURAL FLAVORS (NO MSG, NO DAIRY), CALCIUM CARBONATE, SEA SALT, SOY LECITHIN, POTASSIUM CITRATE, FRUCTO-OLIGOSACHARIDES, **MAGNESIUM OXIDE, VITAMIN C (ASCORBIC ACID), VITAMIN E (D-ALPHA TOCOPHEROL ACETATE), VITAMIN A (ACETATE), VITAMIN D_3 (CHOLECALCIFEROL), VITAMIN B_{12} (CYANOCOBALAMIN)

Net Wt: 21 ozs. (1 lb. 5 ozs.) (600 G)
Case Ship Wt: 9.47 lbs.
Pack Out 6 cans per case
Case Dimensions: 12.625" x 8.5" x 7.5"
Case Cube (Ft.): .46
Tie-H: 16 x 7
Cases Per Pallet: 112
UPC 0 41648 07804 4
Also available in 25lb. bulk
UPC 0 41648 01115 7
LBL 11110 7/99

Nutrition Facts

Serving size 1/2 cup frozen (25g powder)
Servings per container 24

Amount Per Serving	
Calories 131	Calories from Fat 63
	% of Daily Value
Total Fat 7g	11%
Saturated Fat 0.2 g	0%
Polyunsaturated 0g	
Monounsaturated 7.5g	
Cholesterol 0mg	0%
Sodium 33mg	1%
Potassium 74mg	2%
Total Carbohydrate 15g	5%
Dietary Fiber 0g	0%
Sugars 12g	
Protein 2g	4%
Isoflavones 5mg	
Vitamin A 10 % *	Vitamin C 10 %
Calcium 30% *	Iron 1 %
Vitamin D_3 25%	Vitamin E 10%
Vitamin B_{12} 10%	Magnesium 10%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values might be higher or lower, depending on your calorie needs.

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat. Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Potassium		3,500mg	3,500mg
Total Carbohydrates		300g	375g
Fiber		25g	30g
Protein		50g	70g

Lactose Free
Cholesterol Free
Caseinate Free

BETTER THAN MILK
Division of Fuller Life, Inc.
1628 Robert C. Jackson Dr.
Maryville, TN 37801
1-800-227-2320
Product of U.S.A.

email: betterthanmilk@mindspring.com
www.betterthanmilk.com

FULLER LIFE INC

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corn protein, corn starch, sea salt, citric acid, wheat germ oil, onion powder.
Wt/Vol., Packaging, Price: 12 oz. can.
How Stored: Shelf stable; refrigerate after opening.
New Product–Documentation: Leaflet (8½ by 11 inch, color, single sided) sent by Patricia Smith from Natural Products Expo East. 1999. July. "Sorry Charlie, no tuna wanted." A photo shows the front of the can.

3363. Jacobi, Dana. 1999. Impressions after attending the Soy Symposium and the Global Soy Forum in Chicago (Interview). *SoyaScan Notes.* Aug. 10. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** These two conferences covered four days and were "so stupid! Really poorly organized–a waste of time." Soyfoods were served at only one meal.

The main issues Dana noted: (1) Companies will have to get ready to answer consumer questions after the FDA health claim ruling. (2) A man from DuPont's seed company gave a presentation to 400 people that was "dripping with disdain" for those irrational people who disapproved of genetic engineering of foods. Unfortunately, he said, they had reached a critical mass so that DuPont now had to deal with them. (3) When isoflavones are consumed with soy protein, they have the greatest health benefits. (4) Most soyfoods will probably not qualify for the FDA health claim because they contain too much fat–but they can still make a "structure-function claim." (4) The speaker from Worthington Foods was excellent. Address: New York City.

3364. Nordquist, Ted. 1999. Soymilk in America–past and future: The soymilk wars are heating up. Part I (Interview). *SoyaScan Notes.* Aug. 10. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** After SoyaWorld was created in Vancouver (BC, Canada), because ProSoya was developing soymilk in Vancouver, they needed a quick way to get soymilk on the market. So they started negotiating with Ted to see if he could start sending soybase up to Vancouver from California. Then Sanitarium Foods (from Australia) came into the picture and threw a lot of money towards SoyaWorld, encouraging them to purchase a license to make So Good using soy protein isolates. This would also be Sanitarium's entry into the USA and North America. SoyaWorld took this approach and because of Dairyworld Foods' excellent distribution system, So Good has done very well in Canada. Their aim is to work down into the United States; they have been trying to negotiate with Suiza Foods Corp., but Suiza has its own ideas. Ted has heard that Sanitarium is involved in a lawsuit over its So Good soymilk, perhaps with SoyaWorld, because they believe that SoNice is an infraction on the name of their So Good product–the names SoNice and So Good are too close.

Soy is really getting into the mainstream now. Ted's company has done a lot of market studies in supermarkets and the presence of soymilk is "essentially zero." The big change will take place over the next year as soymilk starts to enter the dairy case of supermarkets. Ted is aware that Horizon has its eyes on this market. SoyaWorld is powerful, but they are up against Dean Foods, Suiza, and others. Wait until November or December of this year to see what is going to happen. Ted may be part of the action or he may get squashed–like the bug under your carpet.

Ted learned a lesson when he was making Silk for White Wave; they came out with a different product, and it didn't seem to matter much to consumers that it wasn't as good, as long as it was approximately as good. Money, labeling, distribution, networking, etc. determine the success of a product. Ted designed Silk with a very low solids content (4% solids) for very specific reasons. The main reason was money–so the product could be sold at a competitive price. But with the FDA health claim anticipated, Imagine Foods now has 7 grams of protein per serving, and White Wave's Silk soymilk has 5-6 grams of protein. You cannot use the health claim if a product contains 6.25 grams of protein per serving, because that is rounded down to 6 grams on the label. So you must have a label that states 7 grams of protein. As the solids content of a soymilk rises, any beany flavor is harder to mask, so the flavor of the soybase becomes more important, and the formulation less important. And the flavor of the soybase becomes even more important with soy yogurt, and even more important with soy ice cream–because both have higher solids content. So, if one were rational and logical, the trend toward higher solids would give Ted an advantage. Ted disagrees strongly with Steve Demos who thinks that the soybase and the formulation are of about equal importance in determining the flavor of the final product. Ted believes that the soybase contributes about 80% of the final flavor and the formulation about 20%. Steve's Silk soymilk is now made by SunRich, in Minnesota. The only other companies that make what Ted considers an acceptable soybase are Pacific Foods of Oregon, and Imagine Foods.

If SunRich were using ProSoya's airless technology and if ProSoya took SunRich to court, Raj Gupta would argue that he patented his oxygen-free process in 1988. Alfa-Laval could go to ProSoya and say that they were selling a plant that made soymilk using an oxygen-free process before that patent was instigated, and they demonstrated that plant at an international conference in 1984. The process was not patented, but it was described in published literature and was well known. To get a patent, Raj Gupta had to prove that there was no prior art; thus Ted believes that the ProSoya patents are not valid. Ted and Raj planned to do a joint venture at one time, but they disagreed on many processing issues. His process is based on the *concept* of an oxygen-free grind, but it is not strictly so. Then he makes claims that you don't have to soak the beans, etc. So there are many things

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that the patent office has accepted in his patent that Ted believes would not stand closer scrutiny.

Ted has compared his soybase with that made by the ProSoya process; he believes that his is much better. Shurtleff says that he always assumed that the reason Ted used the ProSoya process in Vancouver to make Silk was because it was better than his own. Ted laughs and laughs. The real reason he didn't make the soybase himself was because he had no equipment or plant with which to make it.

Ted started to develop Silk using soymilk made by Pacific Foods of Oregon. Even when he was still in Sweden in the late 1980s, he began to cooperate with them in developing a soy ice cream. Ted bought soybase from all over the world to compare it with the soybase he was developing in Sweden. He ended up using Pacific Foods' aseptically packed soybase (containing only soybeans and water) as a control for his Tofu Line and Swedish Glass ice creams. So when he came to the California in the early 1990s, his goal was to make soy beverages, yogurt, and ice cream. When Ted started doing his work in Gustine, he was using Pacific Foods' soybase. They even had an agreement on the cost of the soybase, the fact that he would be buying it in tankers, etc. The first samples Ted sent to Steve Demos were made with Pacific Foods' soybase. But when the person who finally bought the product made from that soybase turned out to be Steve Demos, then Pacific Foods of Oregon backed off. They didn't want to make soybase for a competitor in the soymilk market. So Ted had to look for a new supplier, and he came into contact with ProSoya in Surrey, near Vancouver. At that time, they were just starting up their soymilk plant and they were really naive; they could make soymilk on a small restaurant scale, but they knew almost nothing about making soymilk on a large commercial scale in a continuous process. It was a nightmare for them at the beginning. Ted did not help them with their process; he just sent them orders, which forced them to get their act together because Ted needed to buy 6,000 gallons (one tanker full) at a time. As ProSoya was learning, Ted was starting to build his own plant, but he couldn't do that until he had money, and his money would have to come from sale of ProSoya soybase to Steve Demos. So Ted went to ProSoya, not because they made better soymilk but because he didn't have the money to do it any other way. Continued. Address: TAN Industries, Inc., 49 Stevenson St., Suite 1075, San Francisco, California 94105-2975; 660 Vischer Ct., Sonoma, CA 95476. Phone: 415-495-2870.

3365. Center for Science in the Public Interest. 1999. Good foods 2000 (Calendar). Washington, DC. 28 p. 28 cm.
• ***Summary:*** This wall calendar has for each month a full-page color photo of a fruit or vegetable (by photographer Robert Kaufman) and a facing full page box calendar. On each box calendar are several key dates in nutritional history. The introduction notes that CSPI was "founded in 1971 by three scientists who wanted to apply their academic training to solving social problems. Today, 29 years later, CSPI has become an influential international organization with more than 60 dedicated staff members in the U.S. and Canada and an annual budget in excess of $17 million. Our award-winning *Nutrition Action Healthletter* brings the latest nutrition news and advice to one million CSPI members and subscribers in North America... CSPI's prime focus is improving the safety and nutritional quality of our diets." Here is a chronology of the key dates on the box calendars:

1792 Aug. 4–Percy Bysshe Shelley born. Poet and author of *A Vindication of Natural Diet.* [Advocate of vegetarianism].

1794 July 5–Sylvester Graham born. Advocate of whole-wheat flour and vegetarianism.

1828 Aug. 28- Leo Tolstoy born. Writer and vegetarian.

1852 Feb. 26–John Harvey Kellogg, M.D. born. Inventor of flaked cereals.

1856 July 26–George Bernard Shaw born. Playwright and vegetarian.

1878 Sept. 20–Upton Sinclair born. Author of *The Jungle* [published 1906. Sinclair was a vegetarian, social activist, and muckraker. His book describes the injustices and deplorable conditions of the American meat packing industry in the early 20th century; Congress was forced to pass the nation's first meat-inspection laws].

1906 Dec. 9–Esther Peterson born. Consumer activist.

1907 May 27–Rachel Carson born. Environmentalist.

1911 Feb. 28–Denis Burkitt born. Dietary-fiber advocate and cancer researcher.

1915 Aug. 29–Nathan Pritikin born. Founder of Pritikin Longevity Center [and advocate of low-fat diets].

1920 Feb. 19–Jean Mayer born. President of Tufts University and hunger/nutrition advocate.

1934 Feb. 27–Ralph Nader born.

1953 July 16–Dean Ornish, M.D., born. Leader in promoting nutrition to prevent disease.

1962 March 15–John F. Kennedy's speech on consumer rights.

1971 Feb. 25–CSPI founded.

1971 Sept. 1–*Diet for a Small Planet* published.

1974 Jan. 1–*Nutrition Action* first published.

1977 Jan. 14–*Dietary Goals for the U.S.* published.

1980 Feb. 4–*Dietary Guidelines for Americans* published.

1988 July 27–*Surgeon General's Report on Nutrition and Health* published.

1988 Nov. 18–Warnings required on alcoholic beverages.

1990 Nov. 8–Nutrition Labeling and Education Act (NLEA) signed.

1990 Nov. 28–Federal law signed defining "organic."

1992 Jan. 23–Irradiation of food in the U.S. begins at the Vindicator plant, Mulberry, Florida.

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1994 May 8–New Nutrition labeling required on all food labels.

1997 June 1–*Nutrition Action Healthletter* circulation exceeds 1 million. Address: 1875 Connecticut Ave., N.W., Suite 300, Washington, DC 20009-5728.

3366. Packaged Facts. Subsidiary of FIND/SVP. 1999. The U.S. market for kosher foods. New York, NY: FIND/SVP. 130+ p. Aug. 28 cm. *
• ***Summary:*** This market study, No. LA502, retails for $2,500. In 1998 there were more than 41,000 kosher-certified products in the U.S. retail food market. Jewish consumers account for only 29% of those seeking our kosher products; Muslims, Seventh-day Adventists, vegetarians, the lactose-intolerant, and other consumers also buy these products. Ninety percent of all sales in the $4 billion overall retail kosher foods market are *not* marketed to specifically kosher-observant customers. A graph shows that U.S. retail sales in the core Kosher foods market rose from $2.3 billion in 1994 to $3 billion in 1996, and 4 billion in 1998. Address: 625 Ave. of the Americas, New York, NY 10011. Phone: 1-800-265-9836.

3367. Worthington Foods, Inc. 1999. Second quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. Front and back. 22 x 9 cm.
• ***Summary:*** Net sales for the second quarter of 1997 rose 27.5% over the same period in 1996, net income fell 13.6%, and earnings per share fell 16.7%. Morningstar Farms retail sales ("which include meat alternative products and frozen egg substitutes") rose 38.9%. Meat alternative product sales rose 44.5%. But, approximately one-half of the quarterly sales gain was from the recently acquired [from Pillsbury] Harvest Burger brand. The company is involved in the largest marketing campaign in its 60-year history; initial feedback from the TV campaign is very encouraging. The company is in the final stages of its nationwide search for a new president. Address: Worthington, Ohio. Phone: (614) 885-9511.

3368. Baldwin, D.; Naco, G.; Petersen, F.; Fraser, G.; Ruckle, H. 1999. Effect of nutritional and clinical factors on serum prostate specific antigen and prostate cancer in a population of elderly California men (Abstract). *American J. of Clinical Nutrition* 70(3S):623S. Supplement. Sept. Address: Loma Linda Univ., Loma Linda, California 92350.

3369. Blankenship, James; Crane, Milton; Mullen, Thomas; et al. 1999. Lipoprotein (A) concentrations increased on vegan-type diet with powdered milk (Abstract). *American J. of Clinical Nutrition* 70(3S):630S. Supplement. Sept. Address: 1. School of Public Health and School of Medicine, Loma Linda Univ., California.

3370. Blankenship, James; Crane, Milton; Mullen, Thomas; et al. 1999. Total vegetarian diet of unrefined food lowers lipoprotein(a) (Abstract). *American J. of Clinical Nutrition* 70(3S):630S-631S. Supplement. Sept.
Address: 1. School of Public Health and School of Medicine, Loma Linda Univ., California.

3371. *Consumer Reports.* 1999. Seeds of change: In the U.S. and elsewhere, the food supply is being genetically altered. Here's why you should care. Sept. p. 41-46.
• ***Summary:*** About genetically engineered foods in American, with focus on soybeans and corn. One of the most accurate, informative, and fair articles on the subject seen to date. Most Americans, even those who read food labels carefully, are unaware that many of the foods they now buy contain genetically engineered ingredients. By contrast, most Europeans are well aware of this. Today, only three years after the first large-scale commercial harvest of genetically engineered crops, they cover more than one-fourth of U.S. cropland–more than 90 million acres. That includes more than 55% of all soybeans, 35% of all corn, and nearly 50% of all cotton. The USDA has approved 50 genetically engineered crop plants, though some aren't yet being grown in large numbers.

Two of the biggest issues in the debate over genetically engineered foods are: (1) Should they be labeled–as is required several European countries. The U.S. government has opposed mandatory labeling, arguing that Americans aren't interested in the issue and that they don't have anything to worry about. Yet a *Time* magazine poll in Jan. 1999 found that 81% of respondents said genetically engineered food should be labeled as such. (2) What are the long-term environmental and health effects of genetically engineered crops? There is no evidence that genetically engineered foods are unsafe to eat but there are several studies that raise serious concerns about their environmental impact. One recent study showed that when the larvae of monarch butterflies eat the pollen from genetically engineered corn, they die.

In July Gerber and Heinz announced that they were planning to removed genetically engineered ingredients from all their baby foods. Now that European Union regulations prohibit imports of unapproved varieties of genetically engineered corn, U.S. corn exports to Europe have virtually stopped–a $200 million loss.

Basically, genetically engineered crops have been promoted to farmers, not to consumers. To date, they contain no consumer benefits. Do genetically engineered crops give higher yields? USDA data from 1996 to 1998 show significantly higher yields in some regions for some years, yet in other regions yields were lower. Do genetically engineered crops require less total use of pesticides? In some regions they do, in others they do not.

The magazine bought a variety of processed and fast

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foods that contain soybeans or corn, then had the DNA of these foods analyzed. They found genetically engineered ingredients in: (1) Three powdered infant formulas: Enfamil ProSobee Soy Formula, Similac Isomil Soy Formula, and Nestle Carnation Alsoy. (2) Several soy burgers, including Boca Burger Chef Max's Favorite, Morningstar Farms Better 'n Burgers, Morningstar Farms Harvest Burgers, and McDonald's McVeggie Burgers (sold in select stores in New York City).

A sidebar on the last page of the article is titled "Recommendations." (1) Labeling: "Consumers have a fundamental right to know what they eat, and federal officials should require that all foods containing genetically engineered ingredients be labeled as such, including milk with recombinant bovine growth hormone. Regulatory precedent favors labeling." For example, the FDA requires irradiated food and orange juice made from concentrate to be so labeled. (2) Safety testing: "Consumer Union believes that genetically engineered foods should be subject to a mandatory federal human-safety review before they hit the market. Today U.S. companies can choose whether or not they want federal review." (3) Organic standard: "The USDA should set a single, national standard for certified-organic food that excludes genetically engineered food from the definition." (4) Marker genes: "Industry should cease using antibiotic 'marker' genes in the manufacture of genetically modified crops."

3372. Duk, Andrew T.; Lee, Clovia L.; Sabaté, Joan. 1999. Published vegetarian literature: trends in The American Journal of Nutrition (Abstract). *American J. of Clinical Nutrition* 70(3S):633S-634S. Supplement. Sept.
Address: Dep. of Nutrition, Loma Linda Univ., California.

3373. Fraser, Gary E. 1999. Associations between diet and cancer, ischemic heart disease, and all-cause mortality in non-Hispanic white California Seventh-day Adventists. *American J. of Clinical Nutrition* 70(3S):532S-542S. Supplement. Sept. [17 ref]
Address: School of Public Health, Loma Linda Univ., Nichol Hall, Room 2008, Loma Linda, California 92350.

3374. Fraser, Gary E.; Beeson, W. Lawrence. 1999. The dietary habits of vegetarian and nonvegetarian California Adventists (Abstract). *American J. of Clinical Nutrition* 70(3S):633S. Supplement. Sept.
Address: Depts. of Biostatistics and Epidemiology and Center for Health Research, Loma Linda Univ., California.

3375. Haddad, Ella H.; Berk, Lee S.; Kettering, James D.; Hubbard, Richard W.; Peters, Warren R. 1999. Dietary intake and biochemical, hematologic, and immune status of vegans compared to nonvegetarians. *American J. of Clinical Nutrition* 70(3S):586S-593S. Supplement. Sept. [40 ref]
Address: 1. Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California 92350.

3376. Haddad, Ella H.; Sabaté, Joan; Whitten, Crystal G. 1999. Vegetarian food guide pyramid: a conceptual framework. *American J. of Clinical Nutrition* 70(3S):615S-619S. Supplement. Sept. [37 ref]
Address: 1. Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California 92350.

3377. Hokin, Bevan D.; Butler, Terry. 1999. Cyanocobalamin (vitamin B-12) status in Seventh-day Adventist ministers in Australia. *American J. of Clinical Nutrition* 70(3S):576S-578S. Supplement. Sept. [9 ref]
Address: 1. Sydney Adventist Hospital, 185 Fox Valley Rd., Wahroonga 2076, Australia.

3378. Hubbard, Richard. 1999. Dietary soy protein reduces 3-methyldopa in patients with Parkinson disease (Abstract). *American J. of Clinical Nutrition* 70(3S):630S. Supplement. Sept.
Address: School of Medicine, Loma Linda Univ., California.

3379. Jaceldo, Karen B; Sabaté, Joan; Knutsen, Synnove F. 1999. Plant-based α-linolenic acid in serum cholesterol esters: effect on n-3 eicosanoids (Abstract). *American J. of Clinical Nutrition* 70(3S):631S. Supplement. Sept.
Address: Departments of Nutrition and Epidemiology, Loma Linda Univ.

3380. Johnston, Patricia K.; Sabaté, Joan. eds. 1999. Third International Congress on Vegetarian Nutrition: Proceedings of a symposium held in Loma Linda, California, March 24-26, 1997. *American J. of Clinical Nutrition* 70(3S):429S-635S. Supplement. Sept.
• ***Summary:*** Patricia Johnston and Joan Sabaté are the guest scientific editors. Special "thanks to Loma Linda University for providing use of the Wong Kerlee International Conference Center and for the financial support that made this congress possible. Additional financial support was provided by–Patrons: International Nut Council, Loma Linda Univ. Medical Center, Worthington Foods, Inc. Supporters: Longalife Vegetarian Foods, United Soybean Board, Wellsource, Inc.

Contents: Program participants (directory, 3 p.). Keynote address, by W.C. Willett. Plant foods and human health: Legumes and cereals (4 papers). Fruit and vegetables (2 papers). Nuts and oils (3 papers). Epidemiologic studies of vegetarians (3 papers). Nutrition and health issues of vegetarians (6 papers). Descriptive and therapeutic intervention studies (4 papers). Trends, analysis, and options (2 papers). Applications (2 papers). Abstracts of short oral and poster presentations: I. Diet and chronic disease (12 abstracts). II. Nutritional status and life cycle issues

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(14 abstracts). III. Biochemical and clinical outcomes (10 abstracts). IV. Applied vegetarian nutrition (7 abstracts). Address: Dep. of Nutrition, Loma Linda Univ., Loma Linda, California.

3381. Johnston, Patricia K.; Sabaté, Joan. eds. 1999. Preface: Third International Congress on Vegetarian Nutrition. *American J. of Clinical Nutrition* 70(3S):429S. Supplement. Sept. [6 ref]
Address: Dep. of Nutrition, Loma Linda Univ., Loma Linda, California.

3382. Johnston, Patricia K. 1999. Appreciation–Recognition: Mervyn G. Hardinge. *American J. of Clinical Nutrition* 70(3S):430S-432S. Supplement. Sept. [11 ref]
• ***Summary:*** A biography and story of his pioneering work with vegetarian nutrition. A photo shows Mervyn G. Hardinge. Address: Dep. of Nutrition, Loma Linda Univ., Loma Linda, California.

3383. Johnston, Patricia K. 1999. Appreciation–Recognition: U.D. Register, 1920-1997. *American J. of Clinical Nutrition* 70(3S):430S, 433S. Supplement. Sept.
• ***Summary:*** A biography and story of Register's pioneering work with vegetarian nutrition. He was born on 4 Jan. 1920 in West Monroe, Louisiana, and in 1942 received a B.S. degree in chemistry from Madison College, Madison, Tennessee. He died in an accident at his home in 1997. These proceedings are dedicated to his memory. A photo shows U.D. Register. Address: Dep. of Nutrition, Loma Linda Univ., Loma Linda, California.

3384. Johnston, Patricia. 1999. Bone mineral status in vegan, lactoovovegetarian, and omnivorous premenopausal women (Abstract). *American J. of Clinical Nutrition* 70(3S):626S. Supplement. Sept.
Address: Center of Health Research, Adventist Health Studies, School of Public Health, Loma Linda Univ., California 92350.

3385. Key, Timothy J.; Fraser, G.E.; Thorogood, M.; et al. 1999. Mortality in vegetarians and nonvegetarians: detailed findings from a collaborative analysis of 5 prospective studies. *American J. of Clinical Nutrition* 70(3S):516S-24S. Supplement. Sept. [33 ref]
• ***Summary:*** This is the largest study ever conducted on vegetarians; it combined data from five studies in four different countries to compare a total of 27,808 vegetarians to approximately 48,000 non-vegetarians. This analysis found that the vegetarians had a 24% lower mortality from heart disease than did the non-vegetarians. Address: 1. Imperial Cancer Research Fund, Cancer Epidemiology Unit, Gibson Building, Radcliffe Infirmary, Oxford OX2 6HE, UK; Center for Health Research and Dep. of Biostatistics and Epidemiology, School of Health, Loma Linda Univ., Loma Linda, California 92350.

3386. Mejia, Alfredo; Hornings, Merritt C.; Sanchez, Albert. 1999. Plasma amino acids discriminate between total vegetarians and nonvegetarians (Abstract). *American J. of Clinical Nutrition* 70(3S):627S. Supplement. Sept.
Address: 1. Nutrition Dept., Loma Linda Univ., California 92350.

3387. Pribis, Peter; Fraser, Gary; Hodgkin, Georgia; Sabaté, Joan. 1999. Dietary vitamin E and risk of coronary heart disease in California Seventh-day Adventist (Abstract). *American J. of Clinical Nutrition* 70(3S):625S. Supplement. Sept.
Address: Center of Health Research, Adventist Health Studies, School of Public Health, Loma Linda Univ., California 92350.

3388. Pribis, Peter; Sabaté, Joan; Fraser, Gary E. 1999. Food consumption among vegetarian and nonvegetarian California Seventh-day Adventists, 1994-1996 (Abstract). *American J. of Clinical Nutrition* 70(3S):633S. Supplement. Sept.
Address: Center for Health Research, Adventist Health Studies, School of Public Health, Loma Linda Univ., California.

3389. Sabaté, Joan. 1999. Nut consumption, vegetarian diets, ischemic heart disease risk, and all-cause morality: evidence from epidemiologic studies. *American J. of Clinical Nutrition* 70(3S):500S-503S. Supplement. Sept. [30 ref]
Address: Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California, 92350.

3390. Sabaté, Joan; Duk, Andrew; Lee, Clovia L. 1999. Publication trends of vegetarian nutrition articles in biomedical literature, 1966-1995. *American J. of Clinical Nutrition* 70(3S):601S-607S. Supplement. Sept. [17 ref]
Address: 1. Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California 92350.

3391. Schouten USA Inc. 1999. What do these soy nutraceuticals have in common? Excellent taste! Guaranteed isoflavones! Great success! (Ad). *Soya Bluebook Plus* 2000. p. 92.
• ***Summary:*** In the center of this full-page color ad is the text. Surrounding it are color photos of 12 commercial products in which SoyLife isoflavones are an ingredient. From top right clockwise: Vogel's Soy & Linseed Soy-Tana (Bran Crunch breakfast cereal with Sultanas). Bakke Meijer loaf of bread. Shefa Sooki Bar. Gardenburger LifeBurger (in a box). A glass of chocolate soymilk. Soy granules (unpackaged). Solgar super concentrated isoflavones (supplement bottle). Vogel's Soy & Linseed (Wheat bran

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cereal). TwinLab MaxiLife Women's Progesterone Protector (supplement bottle). Granola bars (unpackaged). Ryvita Soy-Lin. Five types of pills for women (Menopause, breast health, fat burners, women's natural replacement). Sanitarium Weet-Bix Hi Bran. Address: 3300 Edinborough Way, Minneapolis, Minnesota 55435. Web: www.soylife.com. Phone: 217-235-1020.

3392. Singh, Pramil N.; Fraser, Gary E. 1999. Dietary risk factors for colon cancer in a low risk population: findings from the Adventist Health Study (Abstract). *American J. of Clinical Nutrition* 70(3S):624S. Supplement. Sept. Address: Loma Linda Univ., Loma Linda, California, 92350.

3393. Associated Press (AP). 1999. Company news: Kellogg set to purchase Worthington Foods. *New York Times.* Oct. 2. p. C3.
• ***Summary:*** The Kellogg Company announced yesterday that it would spend $24 a share, a total of $307 million, "to purchased the vegetarian food maker Worthington Foods Inc. Worthington's shares climbed 60 percent, gaining $8.6875, to $23.0625, in Nasdaq trading." Kellogg shares 31.25 cents on the New York Stock Exchange.

3394. Knox, Andrea. 1999. Kellogg, Heinz are buying their way into natural-foods trend: The corn flakes maker will pay $307 million for Worthington Foods. Earlier this week, Heinz bought a stake in Hain organic foods. *Philadelphia Inquirer.* Oct. 2.
• ***Summary:*** This long and very interesting article begins: "It used to be that buying organic and natural food was pretty much a lifestyle thing, done in dim, old-fashioned stores by earnest folks wearing all-cotton clothing and Birkenstock sandals."

But all that has changed. Yesterday the Kellogg Co. announced that it would buy Worthington Foods, a maker of vegetarian and health foods, for $307 million–"the clearest sign yet that counterculture eating is going mainstream."

Natural and organic foods are one of America's fastest growing food categories, with sales increases, on average, of nearly 20% a year, whereas the food industry as a whole averages only 1-2% a year.

Even the growth rate of junk-food lags behind that of organics. Address: Inquirer staff writer.

3395. Berner, Robert. 1999. Kellogg, going vegetarian, forges $307 million deal for Worthington. *Wall Street Journal.* Oct. 4. p. B-12.
• ***Summary:*** Kellogg Co. approached and offered to buy Worthington Foods Inc. for $307 million, or $24 a share–which sent Worthington's stock price soaring 60%. Last Thursday, the stock had closed at $14.375. Worthington, a "maker of meat-alternative products, such as veggie burgers," has 635 employees. Sales / revenues in 1998 were $138.5 million, up 18% from 1997. Net income / profit in 1998 was $8.02, or $0.66 per diluted share. Morningstar Farms, the company's leading brand, commands about a 50% share of meat alternative sales in U.S. supermarkets. Sales in the meat alternative category have grown 33% a year for the past five years in the USA. And there is room for more growth, since only 15% of U.S. households presently consume meat alternatives. Last week H.J. Heinz Co. agreed to buy a 19.5% stake in Hain Foods Group Inc., another natural-foods company.

The bold move by Kellogg's CEO, Carlos Gutierrez, shows that he isn't counting on the company's core, but stagnant, breakfast cereal business as an engine of growth. Gutierrez says he expects Worthington's sales to grow at 12-15% a year.

Note: This sale marks the end of a long era: Seventh-day Adventist food companies in the USA making cutting-edge meat alternatives and other soyfoods that greatly helped the expansion of vegetarian diets in America. However, SDA food companies are still making excellent meat and dairy alternatives in Europe and Australia. Address: Staff Reporter.

3396. Kilman, Scott. 1999. Biotech scare sweeps Europe, and companies wonder if U.S. is next: Hain labels its snacks as free of genetic engineering; other firms may follow. Veggie burgers feel the heat. *Wall Street Journal.* Oct. 7. p. A1, A15. Western ed.
• ***Summary:*** Executives of America's largest food and beverage companies are watching very carefully how U.S. consumers respond to the issue of genetically engineered foods–according to Andrew Jacobson, a senior executive of the Hain Food Group. Although most consumers aren't aware of it, genetically engineered ingredients are present in various products made by Coca-Cola Co., Kellogg Co., General Mills Inc., H.J. Heinz Co., Hershey Foods Corp., Quaker Oats Co., McDonald's Corp., and many more.

3397. Egan, Catherine. 1999. Soy, oh soy! Food Cos get protein power. *Dow Jones News Service* (*New York, NY*). Oct. 20. [Eng]
• ***Summary:*** "New York (Dow Jones)–A good-for-you food is fast becoming a good-for-you investment.

"Soy, the high-in protein, low-in-taste food, has become so popular among American consumers that companies and investment houses are lining up to take advantage of what many are calling the next big thing in eating."

Last week Kellogg Co. (king of breakfast cereals) announced plans to buy Worthington Foods Inc. (WFDS) one of America's largest makers of soy burgers. And in August, Dean Foods Co. (DF) bought a minority stake in the closely held White Wave Inc., which make soy milk and various other soy products.

Moreover, packaged food companies are also developing a wide array of new soy-based products. According the

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Marketing Intelligence Service (publisher of *Product Alert*), the number of new food and beverage products containing soy has more than doubled since 1995, to 172, from 79.

Peter Golbitz, president of Soyatech, an industry consultancy, says that the soy-food industry, now worth $1.75 billion, is expected to more than double in three years to $3.7 billion.

Fueling the soy mania is aging baby boomers searching for the elixir of life.

"Indeed in a matter of days the U.S. Food and Drug Administration is supposed to decide whether to allow products containing more than 6 grams of soy protein to be labeled as cholesterol-reducing. If approved, this heart-healthy claim could further increase demand for soy products, rendering current growth projections for the industry too low."

Gardenburger Inc. (GBUR), maker of a veggie burger and soy-based patties, points to the fact that some 120 million Americans have never even tried soy.

Scientific studies dating back 20 years showed clearly that soy protein helped lower cholesterol and decrease the risk of heart disease. Then in 1995 the respected *New England Journal of Medicine* published an article [James Anderson's meta-analysis] showing that soy protein lowered cholesterol; Americans began to take notice.

Then the soy category exploded. "Researchers have since found that soy reduces the risk of cancer, helps build bone density, reduces menopausal symptoms like hot flashes–and on and on.

"Now its soy, soy, soy, everywhere."

3398. Brasher, Philip. 1999. Soy becomes healthy option: Under new rules that allow health claims, the milk alternative is expected to find a wider audience despite its relative lack of flavor. *Contra Costa Times*. Oct. 27. p. C1, C4. Business/technology section. Wednesday.
• ***Summary:*** The U.S. government is now allowing food labels to tout soy's ability to lower cholesterol, so a new surge of interest is expected–and not just in traditional soy-based foods such as tofu and soy milk. To qualify for the label claim, a food must contain 6.25 gm of soy protein per serving; this is one-fourth of the 25 grams of soy protein daily that studies have shown is needed to have a significant cholesterol-lowering effect. Carlos Gutierrez, president of the Kellogg Co., says soy is a big food opportunity. Sales of soy-based foods are expected to reach $2.14 billion this year, up from $852 million in 1992, according to Soyatech. Address: Associated Press.

3399. Archer Daniels Midland Co. 1999. Annual report: Globalization for the 21st century. P.O. Box 1470, Decatur, IL 62525. 42 p. Oct.
• ***Summary:*** Net sales and other operating income for 1999 (year ended June 30) were $14,283 million, down 11.4% from 1998. Net earnings for 1999 were $265.9 million, down 34.2% from 1998, and far below the recent peak of $796 million in 1995. Shareholders' equity (net worth) is $6,240 million, down 4.1% from 1998. Net earnings per common share: $0.43, down 36.9% from 1998. Number of shareholders: 31,764.

On p. 16 are photos and brief discussions of Harvest Burgers (now marketed by Worthington Foods), NutriSoy (a new generation of soy protein), and NovaSoy (isoflavones). Page 17 discusses ADM's partnership with DuPont using the latter's STS soybeans. This year the annual report came in a slip cover with another report titled "Archer Daniels Midland: An overview."

Also accompanying the annual report is a "Notice of Annual Meeting." G. Allen Andreas, age 56, Chairman of the Board and CEO, had a 1999 salary of $2,437,698, up from $803,282 in 1997. John D. McNamara, President, had a 1999 salary of $625,243, up from $147,672 in 1997. Address: Decatur, Illinois.

3400. **Product Name:** Morningstar Farms Buffalo Wings.
Manufacturer's Name: Worthington Foods, Inc.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085.
Date of Introduction: 1999 October.
How Stored: Frozen.
New Product–Documentation: Ad (full page, color) in *Vegetarian Times.* 1999. Oct. Rear cover. "It's mother was a health nut. It's father a couch potato. Sound like a family you know?" Resembles chicken wings.

3401. Hack, Greg. 1999. Adding marketing muscle. *Kansas City Star* (*Missouri*). Nov. 2.
• ***Summary:*** A table titled "Selected soybean product sales" gives U.S. statistics (in millions of dollars for) for four years: 1996 / 1997 / 1998 / 1999.

Soy milk: 12.2 / 13.4 / 15.4 / 18.7.
Meat substitutes:
Gardenburger: 6.2 / 10.2 / 44.9 / 45.9.
Morningstar Farms: 30.6 / 33.0 / 37.1 / 40.4.
Boca Burger: 5.3 / 7.6 / 12.3 / 17.3.
Source: American Soybean Association and Information Resources Inc.

A photo shows the front panel of a Gardenburger Soy Burgers carton.

3402. McKelvey, Richard. 1999. New developments at Lightlife Foods in Greenfield, Massachusetts (Interview). *SoyaScan Notes.* Nov. 17. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Lightlife is now America's largest maker of non-frozen meat alternatives. This year, Lightlife is celebrating its 20th birthday. On the Internet, the Kellogg Co. just announced that it will introduce a soy-fortified cereal.

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Address: Sales Manager, Lightlife Foods Inc., P.O. Box 70, Greenfield MA 01302. Phone: 1-800-274-6001.

3403. *Natural Foods Merchandiser.* 1999. Cereal giant Kellogg to buy Worthington Foods. Nov. p. 9.
• ***Summary:*** Kellogg (the world's leading producer of breakfast cereals, with yearly sales of $6.8 billion) will buy Worthington Foods for $24 a share or more than $300 million. Worthington has been locked in a battle with Gardenburger for leadership of the meatless burger market. Both have spent so much money on advertising trying to establish their names, that it has significantly reduced their profits. The purchase came days after Kellogg sold its Lender Bagels line for $275 million, down from the $466 million it paid for the company 3 years ago.

3404. *Nutrition Business Journal* (*San Diego, California*). 1999. Soy protein is big news for suppliers. 4(10/11):5-6. Oct/Nov.
• ***Summary:*** The health claim for soy protein, approved Oct. 26, was granted under the Nutritional Labeling and Education Act (NLEA). The claim was submitted in 1998 by Protein Technologies International (PTI), a company of DuPont. On the day the claim was approved, PTI ran full-page ads in the *New York Times* and *Wall Street Journal*–a good idea since neither paper ran the story. Both Kellogg and General Mills are rumored to be developing a breakfast cereal containing soy protein.

In 1998 sales of soyfoods totaled an estimated $1.7 billion and should reach over $2 billion in 1999. During 1998 sales of soy milk grew to almost $200 million (up 20%), tofu to $200 million (up 15%), and tempeh $17 million (up 5%)–according to Peter Golbitz of Soyatech Inc. In 1999, with interest in soyfoods skyrocketing, Golbitz predicts overall growth of 20%, with soymilk up nearly 40%, and meat alternatives, tofu, and other prepared foods containing soy gaining between 20% and 50%, depending on the product.

3405. *Nutrition Business Journal* (*San Diego, California*). 1999. Oh soy! Four soy acquisitions by mainstream companies start to look like a trend. 4(10/11):27-29. Oct/Nov.
• ***Summary:*** This flurry of activity is almost surely related to the recent approval of a soy product health claim by the FDA.

H.J. Heinz invested $100 million in Hain on 27 Sept. 1999.

Kellogg Co. (famous maker of breakfast cereals) paid $342 million Worthington Foods on 1 Oct. 1999; Worthington makes and markets meat alternatives. "Purchased at a 66% premium to Worthington's closing stock price and a 9% premium to its all-time high, Kellogg justified the high valuation by pointing to Worthington's 17% growth rate in a market with strong growth prospects."

Dean Foods took a minority position (the dollar amount was not disclosed) in White Wave (Boulder, Colorado) on 23 Aug. 1999. White Wave, the maker of Silk soymilk, is reported to have annual sales of $21 million, whereas Dean Foods, America's leading maker and distributor of dairy products, has annual sales of nearly $4 billion.

Danone acquired a 15% equity stake in Lifeway Foods on Oct. 6. Lifeway is a maker and marketer of cultured, probiotic and functional food products.

3406. Pagenkemper, Joni. 1999. The use of soy products in treating renal disease. *Soy Connection* (*The*) (*Jefferson City, Missouri*) 7(4):2, 4. Fall. [15 ref]
• ***Summary:*** Biological value is no longer the standard for determining the protein quality of foods. "Since 1989 the international Food and Agriculture Organization (FAO) and World Health Organization (WHO), and the United States Department of Agriculture (USDA) and Food and Drug Administration (FDA) have adopted the Protein Digestibility-Corrected Amino Acid Score (PDCAAS) as the official assay for evaluation of protein quality. The PDCAAS takes into account a protein's essential amino acid composition, corrected for digestibility, and referenced to the two-to five-year-old human requirement pattern. All proteins with a PDCAAS of 1.0 are considered high-quality, complete proteins that fully meet the essential amino acid requirements of children and adults, even if consumed as the sole source of protein in the diet. Milk, egg, meat and soy protein all have a PDCAAS of 1." Address: M.S., R.D., Asst. Prof., Dep. of Nutrition and Dietetics, Loma Linda Univ., California.

3407. Worthington Foods, Inc. 1999. Notice of special meeting of shareholders. Proxy statement for special meeting of shareholders. 900 Proprietors Rd., Worthington, OH 43085. 2 + 60 + v + 41 + 12] p. 28 cm.
• ***Summary:*** A special meeting of shareholders of Worthington Foods, Inc. will be held on 29 Nov. 1999 at the Radisson Hotel in Columbus, Ohio, mainly to consider and vote upon a proposal to adopt the Agreement and Plan of Merger, dated 30 Sept. 1999, with WF Acquisition Inc., a wholly-owned subsidiary of the Kellogg Co. (the latter is a Delaware Corporation). If this passes, Worthington will become a wholly-owned subsidiary of Kellogg and each common share can be converted into $24 cash. Signed, Ronald L. McDermott, Secretary.

Worthington will cease to be a publicly traded company. "Offering more than 150 products, Worthington is one of the leading independent producers of healthier alternatives to meat, egg, and dairy products." These are made primarily from soy and wheat proteins. "Worthington was incorporated in Ohio in 1967 and became the successor to the original Worthington Foods business which was started in 1939... Kellogg was incorporated in Delaware in 1922 as the successor to Kellogg Toasted Corn Flake Company, which

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had been incorporated in Michigan in 1906."

The Merger–Background (p. 15-19) gives the history from 8 July 1999 when Stephen Benoit, Vice President of Kellogg, phoned Dale Twomley, Chairman, President, and CEO of Worthington to discuss a possible business relationship, including a merger. Kellogg now has a "Natural and Functional Foods Division." Twomley replied that Worthington was not looking for a buyer. The first meeting was held on 16 July 1999 at Worthington's offices. Numerous meetings followed. The merger agreement was finalized on 30 Sept. 1999. "On the morning of Friday, October 1, 1999, the parties issued a joint press release announcing that they had signed the merger agreement." The $24 per common share represents a premium of approximately 77% over the closing price on Sept. 29. Address: Worthington, Ohio. Phone: (614) 885-9511.

3408. Worthington Foods, Inc. 1999. Third quarter financial report. 900 Proprietors Rd., Worthington, OH 43085. 8 panels. 22 x 9 cm.

• ***Summary:*** Describes the agreement to merge with the Kellogg Company. "The merger price is $24 cash for each of the Company's 12.8 million shares outstanding or approximately $307 million."

States (incorrectly) that Dr. John Harvey Kellogg was the founder of Worthington Foods. Gross profit for the quarter ended 1 Oct. 1999 was $17,396,000, or 44.7% of net sales. This gross profit is up 13% compared with the same quarter one year ago.

"I expect this will be the last letter to the shareholders of Worthington Foods... I believe that the Kellogg Company is very committed to our brands and the meat alternative category. I am confident they will provide the resources and commitment to continue the vision for meat alternative products started by Dr. George Harding, III, James Hagle, Allan Buller, Warren (Kelly) Hartman and shared by many others that have worked hard to build upon the foundation they provided."

"Sincerely, Dale E. Twomley, Chairman, President, and Chief Executive Officer." Address: Worthington, Ohio. Phone: (614) 885-9511.

3409. *SoyaScan Notes.* 1999. Chronology of major soy-related events and trends during 1999 (Overview). Dec. 31. Compiled by William Shurtleff of Soyfoods Center.

• ***Summary:*** April–Kevin Cross sells Soy Power Co., Inc. in Santa Monica, California, to Nature's Best.

May 10–SoyaWorld Inc. of Burnaby, British Columbia, Canada, purchases the SoNice brand and two soymilk extraction plants from International ProSoya Corp. (IPC). SoyaWorld is jointly owned by Dairyworld Foods (the largest dairy and food company in western Canada) and Sunrise Soya Foods (Canada's largest tofu manufacturer). SoyaWorld plans to (and has the ability to–because of Dairyworld Foods) put fresh and Aseptic soymilk in every supermarket and grocery store in Canada. Then they will move into the USA. This is a very big story!

July 12–Deutsche Bank, one of its strongest advocates of ag biotechnology, issues a report in which it reverses its previous "buy signals" on many of the companies commercializing ag biotech (such as Monsanto and Pioneer Hi-Bred). It now urges caution, and signals the beginning of trouble for the ag biotech industry.

Aug. 18–White Wave (Boulder, Colorado) and Dean Foods (Franklin Park, Illinois) jointly announce that Dean Foods has created an alliance with White Wave by becoming a minority shareholder in White Wave. The two companies will work together to place Silk soymilk into the refrigerated dairy case of supermarkets across America–and try to get there before SoyaWorld of Canada. A very big story for soymilk in the USA.

Sept. 1–Stake Technology Ltd. (Norval, Ontario, Canada) acquires SunRich Inc. (Hope, Minnesota) in a stock-for-stock deal.

Sept.–In this month's issue of *Consumer Reports,* a 6-page article on genetically engineered (transgenic) foods titled "Seeds of Change" recommends that "federal officials should require that all foods containing genetically engineered ingredients be labeled as such, including milk with recombinant bovine growth hormone."

Oct. 1–DuPont (a large chemical company) buys the 80% share of Pioneer Hi-Bred International Inc. that it doesn't already own–a major move into biotechnology.

Oct. 4–The Kellogg Co., maker of breakfast cereals in Battle Creek, Michigan, agrees to buy Worthington Foods for $307 million. Worthington makes vegetarian meat alternatives.

Oct. 7–The *Wall Street Journal* runs a major front-page story on concern about and opposition to genetically engineered foods in the USA and Europe. Runs two more such stories on Nov. 30 and Dec. 14. Dec.–During the last 6 months of 1999 consumer awareness of and concern about genetically engineered food issues in the United States has increased dramatically. It has moved from a counter-culture to a mainstream concern, and fairly large amounts of money are now flowing into antibiotech organizations. GMO was a widely discussed issue in the breakdown of and mass demonstrations against the World Trade Organization talks in Seattle, Washington.

Oct. 20–The U.S. Food and Drug Administration (FDA) announces its approval of a health claim for soy protein and coronary heart disease. The claim, which goes into effect Oct. 26, can be used on food labels in either of two formats, the first of which is: "25 grams of soy protein a day, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease. A serving of (name of food) supplies ___ grams of soy protein." This promises to have a huge, positive impact on the soyfoods market.

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Dec.–General Mills acquires Small Planet Foods (Cascadian, Muir Glen) for $60 million.

Dec.–Kellogg Co. purchases Worthington Foods.

In 1999, for the first time in history, more acres were planted to soybeans in the USA than to any other crop. U.S. soybean acreage exceeded that of corn by 3% and that of wheat by 34%. Worldwide, the acreage planted to soybeans has increased fivefold since 1950.

3410. *Bluebook Update* (*Bar Harbor, Maine*). 1999. Major companies dive into soyfoods. 6(4):1, 7. Oct/Dec.
• ***Summary:*** These include Dean Foods, H.J. Heinz, and The Kellogg Co.

3411. Sanitarium Health Food Company. 1999. Sanitarium (Portfolio). Berkeley Vale, NSW, Australia. 27 inserts. 30 cm.
• ***Summary:*** This is simply a collection of colorful documents (each in full color) without a portfolio cover, sent with a cover letter by Melissa Harris, Nutritionist. The documents include: (1) Eight nutrition fact sheets. Subjects include wholegrains, fibre, heart health, etc. (2) Seven product sell-sheets, incl. SoyHealthy, So Good Now, Soyaccino, etc. (3) Three small recipe booklets. (4) 10 tips for healthy eating for the family. (5) Now there's an easy way to lower your cholesterol. (6) Six food cards with recipes. (7) Two booklets in "A taste for health" series. (8) List of available publications and videos.

(9) Sanitarium product range–Australia: Cereals (19 products, incl. Soy Tasty, Weet-Bix Hi Bran Soy & Linseed, Up & Go). Beverages (6 products, all based on So Good, incl. yoghurts and ice cream). Meals (19 products, incl. 5 types of Soy Healthy Frozen, 9 types of Soy Healthy Chilled, Soya Beans in Tomato Sauce, Sanitarium Soya Mince/TVP, BBQ Soya Sausages). Spreads (4 products incl. Marmite and many types of peanut butter). Specialty Foods (incl. many nuts & seeds, dried fruits, legumes, pulses & seeds, fruit snacks, and juices). (10) Leaflet (1999; color, front and back) titled "Soya beans, good health & you." Contents: Introduction. What are phytoestrogens. Protecting hearts. Combating cancer. Managing menopause. Promoting healthy bones. Soy foods for children. Putting the good news into practice. Address: 1 Sanitarium Drive, Berkeley Vale, NSW 2261, Australia. Phone: (02) 4348 7777.

3412. *SoyaScan Notes.* 1999. Major soy-related company acquisitions and mergers worldwide 1990-1999 (Overview). Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** 1990 Jan.–Worthington Foods acquires La Loma Foods of Riverside, California (formerly Loma Linda Foods, owned by the Seventh-day Adventist Church).

1990 (early)–Daniel Gevaert purchases the Lima Andiran site at Andiran (near Mezin) in southern France from Lima Foods–but not the Lima trademark. In June 1990 Daniel and his wife, Valerie, established Danival.

1990 Aug. 3–Hong Kong Soya Bean Products Co. Ltd. (makers of Vitasoy soymilk) acquires Nasoya Foods of Leominster, Massachusetts.

1990 Dec. 21–The Haldane Foods Group (a subsidiary of British Arkady Ltd., which is in turn owned by ADM) acquires Unisoy Milk 'n' By-Products Ltd. of Cheshire, England.

1991 Jan. 1–The Haldane Foods Group acquires Granose Foods Ltd. of Watford, Hertfordshire, England (formerly owned by the Seventh-day Adventist Church).

1991 Jan. 28–Tetra Pak International acquires Alfa-Laval AB.

1991 April–Huegli Naehrmittel A.G. acquires Soyastern Naturkost GmbH / Dorstener Tofu Produktions GmbH.

1991 Dec.–Specialty Food Ingredients (SFI) Europe BV acquires Solnuts BV (Netherlands) and Solnuts Inc. (Hudson, Iowa).

1992 Oct.–Central Soya Co. acquires the Protein Division of Aarhus Oliefabrik in Denmark.

1993 June–Vitasoy purchases Azumaya Inc. (America's largest tofu manufacturer, and the low-price leader) in California, for an estimated $4-$5 million. Vitasoy is now in the tofu business.

1993 June–21st Century Foods acquires Farm Foods from Barricini Foods.

1993–House Foods of Japan purchases the remaining 50% of House Foods & Yamauchi, Inc. from Mr. Shoan Yamauchi. The new company is named House Foods American Corporation.

1993 July–Nutrition et Santé (part of the Sandoz Group) acquires Société Soy of Saint-Chamond, France. The latter company was renamed Nutrition et Soja, and on 15 Oct. 1994 it moved into a new factory at Revel (near Toulouse), France.

1993 (mid)–B & K Holdings of Switzerland acquires Sojinal of Issenheim, France.

1993?–Kineret (pronounced kuh-NAIR-et) Acquisition Group acquires Farm Foods from 21st Century Foods, then in Nov. 1993 the Hain Food Group acquires Kineret plus some assets of Barricini Foods Inc.

1996 April 22–Alpro (Belgium) purchases Sojinal (France).

1995 April 21–Irene and Len Stuttman buy back control of their company, INARI Ltd. (dba. Sycamore Creek) from J. Charles Follett (former CEO) and Peter L. Pairitz (accountant).

1995 April–Quest International, a unit of Unilever, acquires A.E. Staley's Gunther Products Division.

1997 Feb. 3–Monsanto purchases Asgrow Seed Co. from Seminis Inc., a subsidiary of Empresas La Moderna, S.A. (ELM).

1997 Aug. 24–DuPont signs a letter of intent to acquire Protein Technologies International, a wholly-owned

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subsidiary of Ralston Purina Co.

1997 Oct. 14–The Hain Food Group acquires Westbrae Natural, Inc., makers of soymilk. Westbrae's new name becomes Hain Food Group–Westbrae. 1997 Dec. 3–DuPont finalizes its purchase of Protein Technologies International (PTI–the world's leading manufacturer of soy protein isolates).

1998 Oct. 16–Worthington Foods purchases the Harvest Burger product line from ADM; by agreement, ADM will continue to make the Harvest Burgers at its Illinois plant.

1998 Dec. 31–DE-VAU-GE acquires Bruno Fischer GmbH, which sells bottled soymilk; both companies are located in Germany.

1999 Jan. 4–W.G. Thompson & Sons Ltd. of Blenheim, Ontario, Canada, purchases Sycamore Creek Co., a maker of soynuts and soynut butter (located in Mason, Michigan).

1999 Oct. 4–The Kellogg Co. (famous maker of breakfast cereals, Battle Creek, Michigan) buys Worthington Foods Inc., America's leading maker of meat alternatives.

3413. *Foodservice Director* (*New York, NY*). 2000. East L.A. medical ctr. adds soy, veggie sushi. Jan. 15.
• ***Summary:*** White Memorial Medical Center in East Los Angeles, with 350 beds, is part of the Seventh-day Adventist Health System. It provides cafeteria customers with healthy eating choices. "Edamame–boiled and salted soybeans which are popular at sushi restaurants–are fast becoming a sellout item since being added to the menu." Vegetarian sushi is another fast moving item.

3414. Barrett, Rick. 2000. Veggie-burger firm's new home will be Madison: Kraft Foods buys growing Boca Burger and will move its headquarters to Oscar Meyer plant. *Wisconsin State Journal* (*Madison*). Jan. 19.
• ***Summary:*** The acquisition of Boca Burger gives Kraft an excellent position in the rapidly growing "meat alternatives" category, which has posted double-digit increases for the past five years. Greg Stahl, Boca Burger president, said the timing was right to sell since the Kellogg Co. had recently purchased Boca's biggest competitor–Worthington Foods. Boca makes frozen soy-based products, including two sizes of Boca Burgers, Boca Breakfast Patties and Links, Ground Boca Burger Recipe Basics, and Boca Tenders and Nuggets (chicken alternatives).

In February, Boca Burger will be relocated from Chicago (Illinois) to Kraft's Oscar Mayer Foods headquarters at 910 Oscar Mayer Ave. in Madison, Wisconsin. This will enable Boca Burger to use Oscar Mayer and Kraft resources, including R&D, equipment, distribution channels, marketing and sales. Rick Searer, president of Kraft's Oscar Mayer and pizza divisions, sees new potential and broader applications for soy-based products within Kraft.

A table compares the two Kraft divisions. Oscar Mayer has $2.2 billion annual sales, with 3,000 employees in Madison. Address: Business reporter.

3415. Burros, Marian. 2000. Eating well: Doubts cloud rosy news about soy. *New York Times.* Jan. 26. p. F1, F11.
• ***Summary:*** Sales of soyfoods have been skyrocketing recently because preliminary research suggests that soy has many health benefits, from reducing loss of bone density to easing some menopausal symptoms. In October the FDA "put its imprimatur on soy" when it granted food companies the right to claim that soy protein reduces cholesterol and the risk of heart disease. Although other claims are unproven, soy is strongly promoted by its marketers as a panacea, and the U.S. media has been "almost unanimous in praising its safety and efficacy."

"Against the backdrop of widespread praise, however, there is growing suspicion that soy–despite its undisputed benefits, may pose some health hazards. The scientific world is still divided over many of the claims for efficacy [is it really effective] and over some safety issues." There is agreement on two points: (1) Soy can reduce cholesterol, and (2) There may be an increased risk of cancer when consuming soy isoflavones in pill form–especially for post-menopausal women; and for these women there may also be hazards in adding soyfoods to their diets. The two main isoflavones, genistein and daidzein, are phytoestrogens, or weak plant estrogens. They act in much the same way as regular estrogens in that they can both inhibit and stimulate the growth of certain cells.

"Not one of the 18 scientists interviewed for this column was willing to say that taking isoflavones was risk free." There is a big difference between consuming soyfoods and components of the soybeans, like isoflavone supplements.

During the 12 months ending October 1999, sales of soyfoods in supermarket chains were $420 million, up 45% from the previous year, according to SPINS scanner data. The biggest increase was in soy isoflavone pills, whose sales were up 246% during the same 12-month period. These supplements, which can contain more than 85 mg of isoflavones in a single pill, have much higher levels of isoflavones than occur naturally in foods. And some makers advise taking two pills a day. Some soy protein concentrate powders have up to 160 mg of isoflavones per serving. Scientists are concerned that typical consumers don't distinguish isoflavones from soy protein, and that they will overdose on the isoflavones. For this reason, Dr. Daniel Sheehan of the FDA's National Center for Toxicological Research (in Jefferson, Arkansas) opposed the FDA's soy health claim. No one knows what the maximum safe dosage of isoflavones is, because no human studies have been conducted. However, if people consume soyfoods instead of supplements, they will not overdose on isoflavones. In Japan, for example [where women's breast cancer rates are one-forth to one-sixth of those in the USA] the typical daily consumption of isoflavones is 25-50 mg, and most people

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consume soyfoods throughout their lives.

Dr. William Helfreich, associate professor of nutrition at the University of Illinois who specializes in diet and breast cancer, is concerned about the risk of soy isoflavones for post-menopausal women with estrogen-dependent breast cancer. Given early in life, he notes, they will prevent, but given late they may promote. Unfortunately the research in this area is very limited and the results are unclear and far from definitive. Fortunately, a number of studies that answer these questions are now being underwritten by the National Cancer Institute.

Many large companies are developing new soy products in response to the growing soy demand: Kellogg's, General Mills, Campbell's Soup, and ConAgra.

This article was reprinted, under the title "Rush to embrace soy products raises warnings about downside," in the *Oregonian* (Portland, Oregon; Feb. 8, p. FD10). On the same page was a recipe for a "creamy, dreamy" Tofu Cheesecake.

3416. Branson, Roy. 2000. Harry Miller: Adventist hero of social reform. A dedicated doctor changed the way the world eats. *Adventist Review* (*Hagerstown, Maryland*). Feb. 10. p. 13-15 (p. 213-15).

• ***Summary:*** A very well-written story of Dr. Miller's life and work with soybean foods. This article begins: "He had a résumé that turned heads. Trained at Battle Creek Sanitarium by internationally renowned surgeon John Harvey Kellogg, he had gone on to Chicago to study under some of the finest surgeons in the country. By 1903 he was already, at 24, an instructor at Rush Medical College in Chicago. That year he and another researcher, who would later become one of the nation's foremost dermatologists, had written an article that took up nearly the entire May l903 issue of the *Journal of Dermatology.* John Harvey Kellogg had every reason to expect that his Adventist protégé would become a nationally acclaimed professor of medicine.

"But Harry Miller was about to drop his bright career in academic medicine and go to China. He would take with him his wife, Maude, another of Adventism's top physicians–she had surprised Harry by outscoring him on the Illinois state medical examination. When Kellogg heard what Harry and Maude were planning to do, he jumped on a train to Chicago. He would talk some sense into his prize pupils. A lot had gone into producing such fine physicians. The effort shouldn't be wasted.

"Kellogg had taken students like Harry Miller, born in a log cabin north of Dayton, Ohio, instructed them at the Adventist medical school in Battle Creek, then plunged them not only into academic medicine but into the disease and poverty of downtown Chicago. Working in some of the six health and social reform institutions Kellogg had established at the turn of the century, Miller knew there was a great work of reform to accomplish in America's cities. The Seventh-day Adventist Medical Missionary Benevolent Association had already established health reform institutions in 17 American cities. The *Life Boat*, edited by Dr. David Paulson, one of Miller's Adventist teachers, was the Adventist voice of urban mission, publishing articles on such social reform topics as juvenile delinquency, child labor, and prison reform. At its peak, the *Life Boat* reached an astonishing 200,000 subscribers.

"When Kellogg arrived in Chicago, he told his protégés that he wanted Harry to achieve his full potential, to become a professor at a top medical school, an emissary for Adventism to America's university life. But in the face of their strong-willed teacher's advice, Harry and Maude Miller held firm. They insisted on expanding Adventism's encompassing vision of reform across the Pacific. Harry Miller plunged on with his commitment to service and became the 'China Doctor.'

"In refusing Kellogg's entreaties, Miller nonetheless honored his mentor. Just as Kellogg had established a national reputation as an abdominal surgeon, Harry Miller would became a world-renowned thyroid surgeon. Kellogg had erected a half-dozen social reform institutions in Chicago–one of which would become the Chicago campus of the University of Illinois Medical School. Miller would found clinics, hospitals, and food laboratories throughout East Asia. Kellogg transformed America's breakfasts with corn-flakes; Miller would introduce commercially successful soy milk to the world. Kellogg would live to be 91, Miller to 97..." Address: Senior research fellow, Kennedy Inst. of Ethics, Georgetown Univ. [Washington, DC].

3417. **Product Name:** Smart Start Soy Protein (breakfast cereal).
Manufacturer's Name: Kellogg Company.
Manufacturer's Address: One Kellogg Square, P.O. Box 3599, Battle Creek, Michigan 49016-3599. Phone: (616) 961-2000.
Date of Introduction: 2000 February.
Ingredients: Rice, whole grain wheat, sugar, soy granola clusters (sugar, toasted pieces, toasted oats, soy protein concentrate,, corn syrup, rice flour, malt extract, salt, honey, cinnamon, artificial flavor, BHT for freshness), toasted defatted milled soy, texturized soybean protein, salt, honey, high fructose corn syrup, malt flavoring, cinnamon, alpha tocopherol... plus many vitamins and minerals.
Wt/Vol., Packaging, Price: 15.3 oz (434 gm) paperboard box. Retails for $4.39 (2000/07, Lafayette, California)..
How Stored: Shelf stable.
New Product–Documentation: Article in *Milling and Baking News.* 2000. Jan. 25. "Kellogg hops on the soy train, adds new cereal to Smart Start line."

Nutrition Business Journal (San Diego, California). 2000. "Kellogg undeterred by demise of Ensemble; Soy cereal launched: Company blames merchandizing, not

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pricing or promotions, for failure of Ensemble." May. p. 17. Fortified with soy protein, the cereal contains rice, wheat, and soy granola clusters. The products is stocked in supermarket cereal aisles next to the company's Special K, Product 19, etc. The other cereals are simply fortified, and Kellogg has been a leader in fortification for decades. The new soy cereal is different, in that it should deliver a "physiological benefit that goes beyond basic nutrition." Moreover the results should be seen quite quickly, even if its only that the consumer feels better. Talk with Kellogg Consumer Service. 2000. June 29. The product is still in the test-market stage, and only in supermarkets on the West Coast. They do not know what supermarkets carry the product.

Product with Label purchased at Safeway supermarket in Lafayette, California. 2000. July 2. Retail price: $4.39 for 15.3 oz box. 6.25 by 10.75 by 2.25 inches. Red and black on white. Paperboard box. A photo shows a clear glass bowl of the cereal and milk, with a spoon lifting out a spoonful. "New. A soy protein cereal made of lightly sweetened rice and whole wheat flakes with cinnamon flavored soy granola clusters. 100% daily value of 10 vitamins and minerals." FDA diet-heart health claim on pack panel. For more information: www.smartstart.com. Soyfoods Center evaluation. 2000. July 2. The rice/corn flakes are very crunchy and very sweet with 14 gm of sugars per 1 cup serving. The price is very expensive.

3418. *SoyaScan Notes.* 2000. Chronology of soy sprouts worldwide. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** 100 A.D.–Soy sprouts are first mentioned in China in the *Shen-nung Pen-tsao Ching* [Classical pharmacopoeia of Shen Nung, the Heavenly Husbandman]. Four Chinese characters [yellow + curls + big + bean] are used to refer to soy sprouts, whose use is mentioned only as a medicine, not as a food. The use of soy sprouts as a food in China did not become popular until the Sung dynasty (A.D. 960-1127). This pharmacopoeia was compiled starting in the Early/Western Han Dynasty [206 B.C. to A.D. 8] from material that had existed long before. Today it is considered by Chinese authorities as a genuine work.

1767–Soy sprouts are first mentioned in an English-language publication or in the American colonies by Henry Yonge of Savannah, Georgia. Yonge got his information from Samuel Bowen, for whom he grew the first soybeans [called Chinese vetches] ever cultivated in North America in 1765. Bowen got his soybeans while traveling in China. Yonge writes:

"They put about two quarts of the vetches into a coarse bag, or hair-cloth bag, that will hold about a peck [2 gallons], and after keeping them in it a little time in warm water, they lay the bag on [a] flat grating, or a wooden lattice, placed about half way down a tub; then every four hours they pour water on them, and in about 36 or 40 hours they will have sprouted about three inches in length; they are then taken out and dressed with oil and vinegar, or boiled as other vegetables..." Mr. *Flint* and Mr. *Bowen* having found them an excellent antiscorbutic prepared in this manner, was a principal reason for his introducing them in *America,* as it would be a most valuable remedy to prevent or cure the scurvy amongst the seamen on board his majesty's ships." Note that in America, as in China, soy sprouts are first recommended for use as a medicine; It is their vitamin C that prevents or cures scurvy.

1830–Soy sprouts are first mentioned in Europe by Philipp Franz von Siebold, an early traveler in Japan, in his book on the economic plants of Japan. In a large fold-out table, he states that soybeans (*Sooja Japonica,* Sieb.) can be artificially germinated to make "Mogasi" [sic, Moyashi]. He includes the word *moyashi* written in both katakana and Chinese characters.

1871–Frederick Porter Smith, a medical missionary from England living in China, states in his book *Contributions toward the Materia Medica and Natural History of China,* that soy bean sprouts (*Tau-ya*) are "artificially raised in large quantities for food in the winter" when green vegetables are scarce in China. This is the second earliest English-language publication that mentions soy sprouts.

1905-06–Soy sprouts are first produced commercially in the United States by two Chinese food companies in California: Wing Chung Long in Los Angeles, and Quong Hop & Co. in San Francisco.

1911–Soy sprouts are first produced commercially in Europe by Li Yu-ying, a Chinese scholar and soybean expert, at his plant *Usine de la Caseo-Sojaine* at Valles, Colombes, northwest of Paris, France.

1914–D. Bois in France publishes the earliest illustration seen of a soy bean sprout.

1917-1918–During World War I, interest in soy sprouts in the United States grows. Yamei Kin, a Chinese-American woman with an M.D. degree from an American college, is sent to China in June 1917 to study and report back on soyfoods–including soy sprouts, which she says can be used in a nutritious salad with fermented tofu.

Writing in *Country Gentleman* (28 Sept. 1918), Sam Jordan of Missouri states: "Another dish which tastes as good as it looks or sounds is soy-bean sprouts. The smaller beans, of some yellow or green variety, are usually used." They are excellent because of "their use in the winter, acting as a green vegetable, and the fact that the vegetable can be had whenever wanted."

William Morse, the USDA's soybean expert, writes in the *Yearbook of the U.S. Department of Agriculture* (1918) in a special section titled "Soy-bean sprouts" that in China soy beans are widely used for sprouting. "Bean sprouts can be used as a home winter vegetable, for the dried beans are sprouted easily in a short time under proper conditions of

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heat and moisture. It is quite possible that sprouted soy beans utilized in various vegetable dishes would appeal to the American taste." A full-page photo shows a large basket of sprouted soy beans. Taken by Frank N. Meyer, it is the first photo of soy sprouts ever published.

1921–Dr. John Harvey Kellogg, in his book *The New Dietetics*, has a special section titled "Soy bean sprouts" in which he is the first to use the word "vitamins" in describing the nutritional benefits of soy sprouts, and the first to note that "Sprouted soy beans is one of the constituents of the famous chop suey."

1941-45–During World War II, awareness of soy sprouts again increases. Their champion is Prof. Clive McCay of Cornell University. His first brochure on the subject (April 1943) begins: "Our daily paper would surprise us if it carried an ad: 'WANTED: a vegetable that will grow in any climate, rivals meat in nutritive value, matures in 3 to 5 days, may be planted any day in the year, requires neither soil nor sunshine, rivals in vitamin C, has no waste (in preparation), can be cooked with as little fuel and as quickly as pork chop.' The Chinese discovered this vegetable centuries ago in sprouted soy beans."

Prof. McCay and his wife, Jeanette, worked closely with the New York State Emergency Food Commission, to publicize soy sprouts and other soyfoods during the war years. Governor Thomas E. Dewey hosted a famous "soy bean lunch" at the governor's mansion in Albany, New York, to demonstrate the value of mean substitutes. Soy sprouts were in two of the dishes served to the 67 media representatives.

1960s-2000–Soy sprouts benefit from the rapid growth of interest in all kinds of sprouts in the USA and Europe, and from the growing number of Asian-Americans.

3419. Fulmer, Melinda. 2000. Food firms eat up health trend. *Los Angeles Times.* March 1. p. C1, C5. Business section.
• ***Summary:*** A sidebar at the beginning of the article is titled "Food and function: Soy, organic foods, and 'functional foods' are hot sellers and have attracted the interest of many big food companies." One column, titled "What's hot" lists eight foods including "soy" with a photo of edamame (one pod is open) and the caption "Soybeans."

The main story is about how big food companies (such as Kellogg Co., General Mills, Kraft Foods, H.J. Heinz, and Nestle) are rushing to buying up natural- and health foods companies–especially those offering functional foods. A table shows sales of eight categories of functional foods in the USA at two types of stores: mainstream and health food. The two big categories in terms of sales are meal replacements, and energy bars and gels. Mainstream stores sold $267 million worth of energy bars and gels in 1999, up 62.7% from 1998. Health foods stores sold $109 million worth of energy bars and gels in 1999, up 13.9% from 1998. Address: Times Staff Writer.

3420. Essoyan, Susan. 2000. Trouble for titan tofu: A study in Hawaii finds that the health food favorite may accelerate aging of the brain. But critics note that the research creates more questions than answers, and no causal connection has been made. *Los Angeles Times.* March 23. p. B2. Metro section.
• ***Summary:*** Results from the Honolulu-Asia Aging Study, some of which were presented by chief investigator Dr. Lon White (of the Pacific Health Research Inst.) at a symposium in Washington, DC, in Nov. 1999, are scheduled for publication in the April issue of the *Journal of the American College of Nutrition.*

The vice president of medical and scientific affairs for the National Alzheimer's Assn. in Chicago (Illinois), Bill Theis, "considers the findings too preliminary to support any conclusions."

A clinical trial is underway to examine the connection between estrogen and Alzheimer's; it follows a survey which showed that women who took hormone replacement therapy after menopause were at lower risk for getting Alzheimer's. Dr. Kenneth Setchell, prof. of pediatrics at the Univ. of Cincinnati's Children's Hospital Medical Center (Ohio), disputed White's conclusions. His research shows that isoflavones have a positive effect on the brain. He asked: If soy is so bad, why are there not high rates of Alzheimer's disease in Japan and China? And why is there no association with any other soyfood? And why don't vegetarians, who typically consume plenty of tofu, get Alzheimer's?

"In stark contrast to White's findings, a 1993 study of 272 Californians enrolled in the Adventist Health Study, matched for age, sex and ZIP Code, found that those who ate meat were more than twice as likely to become demented as their vegetarian counterparts."

This article concludes with some market statistics from a study titled "The U.S. Soyfoods Industry," by Soyatech Inc. and Senechal, Jorgensen & Hale Co. U.S. tofu sales have grown from $108 million in 1992 to $238 million (forecast) in 1999. U.S. sales of all types of soyfoods have grown from $852 million in 1992 to $2,140 million (forecast) in 1999. Address: Special to Times.

3421. Hays, Constance L. 2000. Selling natural foods to the crowd. *New York Times.* April 9. p. BU2.
• ***Summary:*** The story and history of Irwin D. Simon and the Hain Food Group. He spent his formative years in Glace Bay, Nova Scotia, Canada, in a family that worked hard and wasn't affluent. In 1985, several years out of college, he went to work for Haagen-Dazs, the ice cream brand. In 1990 he joined Slim-Fast, the diet-shake company as a brand manager. In 1992 he left to be his own boss, and bought the Kineret line of Kosher foods, which he took public in 1993. Shortly thereafter he acquired Hain, a line of vegetable oils, condiments, and other products.

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In Dec. 1999, the Kellogg Co., bothered by flat cereal sales, purchased Worthington Foods for about $80 million.

3422. Cole, Franklin. 2000. Got milk substitute? *Times* (*Maryville-Alcoa, Tennessee*). May 6.
• ***Summary:*** Maryville-based Better than Milk is a division of Fuller Life, Inc. William Bynum, sales manager for Better Than Milk, says the soy milk industry is basically a $4 billion a year industry; his company has about half of one percent of that total. "Now, with assistance from the Tennessee Department of Agriculture's market development division, Bynum said Fuller Life is among six Tennessee specialty food companies going to the 2000 U.S. Food Export Showcase, to be held in Chicago from May 7 through 9."

Fuller Life sells powdered mixes (made in Indiana), not liquid soy milk. These are "shipped to Fuller Life's corporate headquarters in the Blount County Industrial Park where they are packaged, labeled, and shipped to 24 distributors nationwide."

A large photo shows William Bynum standing next to a display of Better Than Milk products.

3423. *Nutrition Business Journal* (*San Diego, California*). 2000. Kellogg undeterred by demise of Ensemble; Soy cereal launched: Company blames merchandizing, not pricing or promotions, for failure of Ensemble. 5(5):17. May.
• ***Summary:*** Last year Kellogg (with approximately $6.8 billion in worldwide food sales last year) became one of the first big American food makers to test market a branded line of 22 functional foods–psyllium-enriched Ensemble products spread out in supermarkets over seven categories including bread, pasta, etc. The test market in southwestern Michigan failed.

In Feb. 2000 Kellogg launched Smart Start Soy Protein, a breakfast cereal fortified with soy protein, and containing rice, wheat, and soy granola clusters.

3424. Barboza, David. 2000. Modified foods put companies in a quandary: Science is called sound but public is not sure. *New York Times.* June 4. p. 1.
• ***Summary:*** Chicago, June 3–In January Frito-Lay announced that it would stop using biotechnology-based [genetically engineered] corn in its chips. Gerber Products has banned genetically modified ingredients from its baby food. And McDonald's has stopped using genetically altered potatoes in its french fries.

Yet despite these announcements, all made in response to public concern over genetically altered [genetically engineered] foods, none of these companies is actually abandoning biotechnology. What a contradiction!

"At the same time, some food giants are investing in organic or natural food units. Last year, Kellogg bought Worthington Foods, which makes vegetarian dishes."

3425. *Greenpeace Magazine* (*Washington, DC*). 2000. Food fight: The truth about genetically modified organisms. 5(1):14-15. Spring.
• ***Summary:*** Gives six myths about genetic engineering then states what it believes to be the truth about each. The myths (each accompanied by a logo) are: (1) "Natural? Genetic engineering is merely an extension of traditional breeding." (2) "Food quality: GMOs can make foods better, more nutritious, longer-lasting and better-tasting." (3) "Pesticides: GMO crops will reduce chemical use and are necessary for environmentally sustainable farming." (4) "Food safety: The Government ensures that genetic engineering is safe for the environment and human health." (5) "Evidence: There is no scientific evidence that GMOs harm people or the environment." (6) "Hunger: GMOs are necessary to feed the developing world's growing population."

A color photo shows a field of soybeans being harvested by a large combine, from which a conveyor transfers the harvested soybeans to a "grain truck" driving near and parallel to the combine. On the inside front cover is a full-page color photo of Kellogg's "Cereal City," a company museum in Battle Creek, Michigan. On the all-glass front of the building, Greenpeace activists have hoisted a huge flag which reads: "Kellogg's. Stop feeding Frankenfoods to America's kids. Greenpeace. www. greenpeaceusa.org." At the top of the building, where Tony the tiger is licking his chops, is another large sign that reads: "They're gross!" A tear-off postcard invites the reader to send a postcard to Carlos Gutierrez, President and CEO of the Kellogg Company, stating: "I was distressed to learn that Kellogg's products in the U.S. may contain genetically modified (GMO) ingredients, even though Kellogg's has pledged not to use GMO ingredients in Europe... I therefore ask you to stop using GMO ingredients..."

3426. Broncaccio, Diane. 2000. Lightlife sold to food giant: 150 employees and company heads to keep their jobs here. *Recorder* (*Greenfield, Massachusetts*). July 17. p. 1.
• ***Summary:*** ConAgra Inc. (of Omaha, Nebraska), has purchased Lightlife Foods Inc. (of Turners Falls, Massachusetts) for an undisclosed amount. ConAgra Inc. has about $25 billion in annual sales, while Lightlife has about $25 million–only one-thousandth as much. Lightlife, which was founded 21 years ago and has 150 employees at its plant in Turners Falls, began to look for a strategic partner after the Kellogg Co. purchased one competitor [Worthington Foods] and Kraft purchased another [Boca Burger]. They chose ConAgra because ConAgra likes to keep companies completely intact, respects the Lightlife brand and what it stands for, and will help Lightlife accomplish its mission. No one will be fired, salaries, benefits packages, and profit-sharing agreements will remain unchanged, and the plant will stay in Turners Falls, Franklin County, Massachusetts.

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Lightlife's CEO Michael Cohen and President Chia Collins emphasize that they will remain as leaders and the entire management team will stay in place.

Lightlife's manufacturing plant, now only two years old, occupies less than 6 acres of its 13-acre lot at the Montague Airport Industrial Park–so there is room for plenty of growth. The 70,000-square-foot food processing facility has a Tax Incremental Financing (TIF) plan with Montague and with the state; this gives Lightlife a 63% tax exemption on its $9.9 million plant investment from July 1999 to July 2009. Lightlife, in return, has agreed to add 5-10 employees each year to its 1998 work force of 82 full-time workers.

In a news release, Bruce Rohde, ConAgra's CEO and Chairman, said his company bought Lightlife because of the growing demand for vegetarian alternatives to meat and for more healthful foods. Rohde said the market is being "driven by awareness of the benefits of soy." He then quoted the FDA heart health claim. More than 70% of Lightlife's 45 products meet the requirements of that claim. These products, now marketed to at least 12,000 stores nationwide, include meatless franks, Smart Dogs, Tofu Pups, Smart Deli Slices, Gimme Lean (sausage alternatives), and Lightburgers. Other brands produced by ConAgra include Healthy Choice, Peter Pan, Hunt's, and Wesson. Address: Recorder staff.

3427. *Ontario Soybean Growers Newsletter.* 2000. Pepsi to market soymilk. July. p. 8.
• ***Summary:*** "Coming soon to U.S. theatres: A cold soymilk-and-fruit drink to wash down that hot buttered popcorn. The drink is a product of PepsiCo Inc's Tropicana brand, one of several big food and beverage companies trying to get in on the growing market for soy. Kellogg, Kraft and H.J. Heinz have also recently acquired soyfood companies.

"Known as 'Tropicana Smoothie made with veggie milk', this icy drink is a joint venture with Galaxy Foods in Florida. In addition to some theatres in Florida, the drink is going to be tested in selected restaurants and Kroger supermarkets.

"Galaxy Foods hopes to soon market the Tropicana Smoothie, as well as other soy products, in Canada." Address: Box 1199, Chatham, ONT, Canada N7M 5L8.

3428. Wolf, Walter. 2000. Soy-related documents–Business records (Archival collection). Peoria, Illinois.
• ***Summary:*** In July 2000 Dr. Walter Wolf, as he was preparing to retire from the Northern Center for Agricultural Utilization Research in Peoria, Illinois, sent to Soyfoods Center many file folders of soy-related documents that he had collected between about 1968 and the present. Most are in the field of soy protein, and none are confidential / proprietary. Each one is neatly dated, and the documents are in reverse chronological order in each manila file folder.

Dr. Wolf earned his PhD degree at the University of Minnesota, where he studied soy proteins. He began work at NCAUR in 1956; at that time it was named the Northern Regional Research Center. He worked as a chemist in the Meal Products Research Group. He did mostly pure research, rather than applied. At the time there was little interest in food uses of soy protein. One of his main contributions was collecting and publishing statistics on the annual production and price of soy flour, soy protein isolates, soy protein concentrates, and textured soy protein products.

The following files (listed alphabetically) were received by Soyfoods Center. Unless otherwise stated, only one file on each company or subject was received. A thin file contains less than about 20 sheets of paper; a thick one contains more than 20 sheets: ADM (Archer Daniels Midland Co.; 2 thick files 1970-2000). Anderson Clayton (thin, 1971-81). Cargill (thin, 1970-2000). Central Soya (4 thick files, 1959-1999). Dawson Mills (thick, 1974-1983). Edible Soy Products, Inc. (Hudson, Iowa; Maker of Pronuts; thin, 1971-78). EMI Corp. (Des Plaines, Illinois, thin, 1971-74). Erie Casein Co. (thin, 1966-73). Fuji Oil Co. Ltd. and Fuji Purina Protein Ltd. (of Japan, thick, 1972-1993). Farmland Industries and Far-Mar-Co (thin, 1970-1993). Food Ingredients–Dale Johnson (thick, 1964-1998). Garrison Products (extrusion, thin, 1977-78). General Foods (thin, 1974-1981). General Mills (thick, 1965-1976). Gerber Products (thin, 1969). Grain Processing Corp. (1968-1976). Griffith Laboratories (thick, 1968-1986). Gunther Products (purchased by A.E. Staley, thick, 1963-1975). Honeymead Products (Mankato, Minnesota, thin, 1978-1986). Industrial Grain Products (Montreal, Canada, thin, 1973-1975). Kikkoman (thick, 1972-1997). Kraft, Inc. (1965-1984). Lauhoff Grain (1 thin, 1973-86). Loma Linda Foods (thin, 1969-1986). Miles Laboratories (thick, 1970-83). Nabisco (1974-81). Meals for Millions Foundation (1 thin file, 1976). Protein Advisory Group of the United Nations, PAG Guidelines (thin, 1969-1978). Quaker Oats (thin, 1970-97). Joe Rakosky, consultant (1979-83). Ralston Purina Co. (4 files, very thick, 1962-1999). Soy protein products (2 files, thick, 1970-1986). Soy protein production statistics and estimates (two thick files, 1970-1996). Staley (A.E., 1 thick, 1969-1986). Swift & Co. (thin, 1961-1971). Takeda Chemical Industries (thin, 1970-1984). Textured soy proteins (1 thin, 1969-71). Tofu equipment (thin, 1970s). Tokuji Watanabe tofu studies at Peoria, Illinois (thick, 1960-61). United Nations Industrial Development Organization (UNIDO, thick, proceedings of Nov. 1969 meeting at Peoria, Illinois), Unilever (thin, 1974-79). Wenger Manufacturing Co. (thin, 1975-76). Worthington Foods (thick, 1965-1998). Address: NCAUR, Peoria, Illinois.

3429. White, Heater. 2000. Kellogg acquires Kashi Co. *Natural Business.* Aug. p. 1, 4.
• ***Summary:*** Seven months ago, Kellogg Co. acquired Worthington Foods. On June 29 it acquired Kashi Co. of La Jolla, California, a maker of natural cereals. The deal closed July 1.

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Kashi, which was founded by Philip Tauber and his wife, Gayle, will continue to operate from its headquarters in southern California as a wholly owned subsidiary, "but will fall under Kellogg's Natural and Functional Foods umbrella."

Tauber was approached earlier this year by Post and Kraft (a unit of Philip Morris), but he and his wife decided that Kellogg would be able to further enhance Kashi's mission–which is to have as many people as possible educated about the benefits of minimally processed foods.

3430. **Product Name:** Natural Touch Veggie Corn Dogs and Veggie Dogs–from Morningstar Farms.
Manufacturer's Name: Kellogg Co. (Specialty Foods Investment Company).
Manufacturer's Address: Battle Creek, Michigan
Date of Introduction: 2000 September.
How Stored: Frozen.
New Product–Documentation: See next page. Ad (8½ by 11 inches, color) in Natural Foods Merchandiser. 2000. Sept. p. 24. "Nature's symphony." Note: The most striking thing about this ad is the merger of the Natural Touch brand with the Morningstar Farms brand. Worthington Foods had kept them carefully apart, with Natural Touch targeted to the natural / health foods market. The Kellogg Co. (famous maker of breakfast cereals) purchased Worthington Foods, Inc. on 1 Oct. 1999.

In the Jan. 2001 issue of Natural Foods Merchandiser is a corporate profile of "Natural Touch by Morningstar Farms." The company address is: "Natural Touch, Natural and Functional Foods Division, P.O. Box 3599, One Kellogg Square, Battle Creek, Michigan." Web site: www.naturaltouch.com. Key executives: Steve Benoit, Vice President and General Manager. Ron McDermott, Vice President, Research and Technology.

Note: By 2013 the Natural Touch brand has disappeared, replaced by the Morningstar Farms brand.

3431. Oetman, Michelle L. 2000. Trinity Island overjoyed about soy. *ADRAWorks* (*Silver Spring, Maryland*). Autumn. p. 1, 3.
• ***Summary:*** ADRA is the [Seventh-day] Adventist Development and Relief Agency. Trinity Island is a small town located outside of Guayaquil, Ecuador. ADRA's presence in Ecuador began in 1999. It was soon noted that too many children were dying before their fifth birthday, often because of poverty.

"Further into the program, the ADRA nurses realized that the meat products available to the community were expensive and contributed to sickness because of its poor quality. Soy products were then introduced. Women have now learned to make soymilk and other soy recipes.

"Although originally introduced for health reasons, a side-benefit surprisingly surfaced–economic development. Two women in the community opened a soy store and now provide healthful soy products to their community. Norma Orosco, one of the community leaders said, 'Thank you ADRA for working with my community. Now that we eat soy, we're healthier and I can also sell it to earn an income.'" Address: Asst, for Marketing & Development, ADRA International Headquarters.

3432. Little, Janice. 2000. Re: Looking for information about the Van Gundy family in Southern California. Letter to William Shurtleff at Soyfoods Center, Nov. 2. 2 p. Typed, with signature on letterhead.
• ***Summary:*** 1. On the business address for La Sierra Industries. Suggest that we call the Riverside Public Library, which has a local history section that contains city directories. Talk to William Swafford, local history librarian. Phone: (909) 826-5736.

2. Seventh-day Adventist (SDA) church records. The La Sierra University Church (Phone: 909-354-7095) was very helpful. The membership secretary told Janice that Dorothea Van Gundy joined the La Sierra College Church (now La Sierra University Church) in 1927. She married Norval Jones and in 1986 her membership was transferred to the Fletcher, South Carolina, SDA Church. Janice was unable to locate any church record for Theodore Van Gundy. She was told that he and his family might have attended the Loma Linda Hill Church of the La Sierra College Church, but no records of membership could be found. Note: Edna Gallington says the SDA Southeastern California Conference has no records back as far as the 1920s or 1930s.

3. Other sources: Beth McCalla is living in the old Van Gundy home at 11678 Val Verde, La Sierra, Riverside. Phone: (909) 785-4976.

Betty Minton of the La Sierra University Church in Riverside, California (Phone: 909-354-7093) reports that one Theodore Van Gundy transferred his membership from the Arlington Church to the La Sierra church in 1949; he died in 1950. His wife's name was Lulu. This is confusing, since Theodore Van Gundy (the father) married Lulu Pond in 1898 and he died on 1 June 1935. They had a son named Theodore. The Arlington SDA Church has no records earlier than 1967. At the Conference office, talk with Dorris Morris about early church records. Address: Library Asst., Del E. Webb Memorial Library, Loma Linda Univ., Loma Linda, California 92350. Phone: 909-824-4942.

3433. Schwarz, Richard W. 2000. From Battle Creek to Battle Creek: A tale of vegetarian meat analogs. *Adventist Review.* Dec. 7. p. 12-16. [68 ref]
• ***Summary:*** Discusses Dr. John Harvey Kellogg, meat alternatives, Madison Foods, Loma Linda Foods, Worthington Foods, Robert Boyer, spun soy protein fiber, Miles Laboratories, Morningstar Farms, the Kellogg Co. Contains many excellent photos of early meat alternatives,

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many made by Worthington Foods.

3434. *SoyaScan Notes.* 2000. Chronology of major soy-related events and trends during 2000 (Overview). Dec. 31. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** Jan. 8–The Kerry Group (of Wisconsin and Iowa) purchases Solnuts, a pioneer manufacturer of dry-roasted soynuts, in Hudson, Iowa.

Jan.–Kraft Foods Inc. (Illinois) purchases Boca Burger Inc., America's third largest maker of veggie burgers, after Worthington Foods and Gardenburger.

March 6–The Hain Food Group announces that it will acquire the Celestial Seasonings tea company to become the largest natural foods company in the USA.

March 9–The USDA formally approves a rule change allowing soy protein products to completely replace meat products in the Federal School Lunch Program.

March 31–Monsanto, the world's leading agricultural biotech company, merges with Pharmacia & Upjohn (a large pharmaceutical company), and the new company is renamed Pharmacia Corporation.

April–An article by Lon White on tofu and brain aging is published in *J. of the American College of Nutrition.*

June 9–20/20 (ABC) television program, titled "Soy–The untold story," airs on Friday at 10:00 p.m. discusses many of the shortcomings of soyfoods, but in a very fair way.

June 13–Martha Stewart, on her popular nationwide TV program *Living,* has a very positive segment on edamamé.

July 14–Lightlife Foods Inc. (of Turners Falls, Massachusetts) is purchased by ConAgra, Inc., a $25 billion food company based in Omaha, Nebraska–for an undisclosed amount. Lightlife's plant, employees, and management team will stay in place. Lightlife is a leading maker of vegetarian meat alternatives, with 150 employees and about $25 million in annual sales.

July–At a joint meeting of ASA and USB, the International Soy Protein Program (ISPP) was born as ASA and the Illinois Soybean Program Operating Board (ISPOB) formalized their joint commitment to "Increase the international consumption of soy protein by humans in new markets–developing countries–and thereby create new opportunities for disappearance of soybeans and provide higher economic returns to U.S. soybean producers." ISPOB and its Executive Director Lyle Roberts were instrumental in conceiving the program and raising its initial funding. This program was later renamed WISHH.

Sept.–Monsanto's patent on glyphosate expires. Glyphosate is the active ingredient in *Roundup,* the world's best-selling herbicide.

Dec.–Sanitarium Foods of Australia acquires the 47% of SoyaWorld owned by Sunrise Soya Foods (Vancouver, BC, Canada).

Trends: 1. This year, the momentum created by the FDA health claim in Oct. 1999 has propelled the soyfoods industry to new heights. Existing companies are growing rapidly, and many new companies (including some of America's biggest food companies) are entering the market with new products.

2. This year, for the first time, soymilk has become a mainstream American beverage. As of May, White Wave Silk soymilk is sold in 24,000 supermarkets nationwide. Edamamé (green vegetable soybeans) have gone mainstream in California, and are rapidly becoming popular on both coasts of the USA.

3. In the United States and Europe, the tide seems to be flowing increasingly against genetic engineering of foods and food plants. More and more companies in the natural foods industry are labeling their products as "non-GMO" or "GMO-free" or "No GMOs." Monsanto has stopped its efforts to develop genetically engineered soybeans for food use and focused its attention instead on livestock feeds. It now seems likely the genetic engineering of plants has a future, but not in the area of foods–at least in developed countries.

4. Interest in "food-grade soybeans" continues to grow in the USA and has increased substantially this year. Canada began focusing on identity-preserved food-grade soybeans 10-15 years before the USA. U.S. interest began to grow in about 1995 with the introduction of genetically engineered soybeans and with the accelerating interest in food uses of soybeans.

5. While pro-soy articles (mostly about health benefits) continue to increase, so do anti-soy articles and Internet sites. The loudest anti-soy voices are those of Sally Fallon and Mary Enig of the USA (they believe traditional fermented soyfoods–such as miso, shoyu, natto, and tempeh–are good, traditional non-fermented soyfoods–such as tofu, soymilk, and edamamé–are not very good, and modern soy protein products–such as soy protein isolates, concentrates, and textured soy flour–are the worst of all, being highly processed with chemicals such as hexane solvent). Also: Richard and Valerie James of New Zealand, and Lon White of Hawaii. Some of the concerns they raise are legitimate and deserve further research, but the majority (we believe) are not. Nevertheless, many of the health claims made for soy in popular articles are exaggerated or somewhat sensational, and not firmly supported by scientific evidence.

6. As we are about to enter a new century and a new millennium on 1 Jan. 2001, soyfoods appear to have a bright future, worldwide. This past year has seen more activity and interest in, and media coverage of, soyfoods than at any time in the history of the United States.

3435. Cottrell, Stanley W. 2000. The Dr. J.H. Kellogg Discovery Center moves to Historic Adventist Village. *Adventist Heritage Ministry Bulletin* (*Silver Spring, Maryland*) 13(4):3. Dec. (Holiday issue).
• ***Summary:*** "Following two years of successful operations

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in the former Michigan Bank building located just across the parking lot from the Battle Creek Tabernacle, the Dr. J.H. Kellogg Discovery Center has moved to its new home in the Welcome Center of Historic Adventist Village." The Center is a sort of museum, which includes Dr. Kellogg's bicycle. "A new video room, with seating for 40 people, has been designed across the front section of the auditorium." Four photos show parts of the Center and the move to its new home. Address: Director, Historic Adventist Village.

3436. Shurtleff, William; Aoyagi, Akiko. 2000. Tofu & soymilk production. 3rd ed. Lafayette, California: Soyfoods Center. 336 p. Illust. by Akiko Aoyagi Shurtleff. Index. Dec. 28 cm. [223 ref]
• ***Summary:*** Contains many new advertisements, plus changes on the title page, copyright page, and rear cover of both paperback and hardcover editions (new ISBN for each). Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

3437. Antrobus, Derek. 2000. Salford's influence on U.S. vegetarianism: Transatlantic origins of Vegetarian Society. Paper presented to the 2000 annual meeting of the UK Vegetarian Society. 3 p.
• ***Summary:*** This talk (the full text of which is available on the Web at www.zyworld.com/dantrobus/) discusses the role members of the Bible Christian Church (Salford, England) in establishing the first vegetarian society in the United States. "The crucial moment was the establishment in Salford in 1809 a new denomination–the Bible Christians. Their autocratic leader was the Rev. William Cowherd who imposed a vegetarian diet on his flock. This church was the first institution to promote vegetarianism in the contemporary western world and its followers effectively set up the Vegetarian Society" [in the United Kingdom].

Another influence on the birth of the Society was the Alcott House Concordium, a utopian socialist community founded in 1838. William Oldham was head of the community, founded on the principles of American writer Bronson Alcott. Oldham had already been connected with a short-lived forerunner of the Vegetarian Society called the British and Foreign Society for the Promotion of Humanity and Abstinence from Animal Food, founded in 1843.

Actually these two influences were not as separate as one might think. Indirectly the Concordium was influenced by the Bible Christians–in the United States.

"The group of migrants was led by two ordained ministers of the Bible Christian Church–James Clark and William Metcalfe (1788-1862). Clarke was unsuccessful in trying to organise a church and died a farmer in 1826. Metcalfe was more successful. Eventually 41 pilgrims from Manchester and Salford left Liverpool on 29 March 1817 for the United States, attracted by the new civil and religious freedom. Their voyage took 79 days. After arriving in Philadelphia [Pennsylvania], the Bible Christians prospered and in 1823 were able to build themselves a church.

"How does Metcalf's American ministry relate to a utopian socialist society in Surrey? In 1830, the Bible Christians had two influential recruits, Dr. Sylvester Graham (1794-1851) and the aforementioned William Alcott, editor of the *Moral Reformer* and the *Library of Health.* Both became presidents of the American Vegetarian Society. Metcalfe converted Graham, inventor of graham bread and graham crackers, to vegetarianism. Graham was an enormous influence on John Harvey Kellogg. Kellogg was already a vegetarian but Graham's views on diet turned Kellogg's mind to food reform. And the result of that is on most breakfast tables every day. Alcott converted his cousin, Bronson Alcott, to vegetarianism in 1835 and it was Bronson Alcott whose ideas inspired the Concordium community in Richmond. Influential in his day, Alcott's fame was superseded by that of his daughter, Louisa May, who wrote *Little Women."* Address: Salford, England.

3438. Davis, Brenda; Melina, Vesanto. 2000. Becoming vegan: The complete guide to adopting a healthy plant-based diet. Summertown, Tennessee: The Book Publishing Co. v + 281 p. Index. 25 cm. [153 ref]
• ***Summary:*** An excellent vegan sourcebook (not a cookbook) by two registered dietitians. Contains perhaps the most up-to-date, accurate, and concise yet complete information in vegan nutrition.

Contents: Acknowledgements. From the authors. 1. Vegan roots. 2. Perspectives on vegan health. 3. Plant protein. 4. Big fat lies. 5. The two faces of carbohydrates. 6. Prospecting for minerals. 7. Vitamins for vegan vigor. 8. Phytochemicals. 9. The vegan food guide. 10. Building vegan dynamos. 11. Growing vegans. 12. The prime of life. 13. Overweight. 14. Eating disorders. 15. Underweight. 16. The vegan athlete. 17. Vegan diplomacy.

This book begins with a good history of veganism and contains (throughout the book) a wealth of accurate, positive information about many different types of soyfoods (especially tofu) and related subjects, including tofu, soymilk, tempeh, soy yogurt, soy cheese, soy sauce, tamari, and soy oil (incl. omega-3 fatty acids). Plus Adventist Health Studies, dietary fiber, phytochemicals and sea vegetables. Address: 1. Kelowna, British Columbia; 2. Langley, British Columbia. Both: Canada.

3439. Evers, Marco. 2001. Steaks vom Weizenacker [Steaks from the wheat field]. *Spiegel* (*Der*) (*Germany*). March 12. p. 200-03. [3 ref. Ger]
• ***Summary:*** To deal with the world food crisis, people must get more of their protein from the plant kingdom. But actually they are making plant-based foods that imitate meats–one might say pseudo-meats.

Mentions De-Vau-Ge of Lüneburg, Klaus Gaiser of

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Topas, and "Life Food Taifun-Produkte," in Freiburg, Germany's largest tofu manufacturer. Last year Life Food made 15 metric tons (tonnes) a week of tasteless tofu. Now they are making 25 tonnes a week, but are hoping to make 45 tones a week.

3440. Gupta, Rajendra ("Raj") P. 2001. Changes in ownership of SoyaWorld, Inc. (Interview). *SoyaScan Notes.* March 17. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** In Dec. 2000, Saputo, a large American cheese company, acquired Dairyworld Foods (Burnaby, British Columbia, Canada) and thereby also acquired Dairyworld's 50% ownership of SoyaWorld, Inc.

Then in Jan. 2001 Sanitarium Foods of Australia bought Peter Joe's 50% ownership of SoyaWorld. Maheb Nathoo is still the managing director of SoyaWorld, and the company is doing well. Maheb is basically a financial man. So SoyaWorld, Inc. is a separate company owned by Sanitarium Foods.

The soymilk company in Scotland, which used ProSoya technology and which Dusty Cunningham helped to start, has declared bankruptcy. Raj is now negotiating with another company to take over the plant and equipment.

Raj has heard that Dean Foods is for sale, and that White Wave's Silk is not yet profitable. Address: President and CEO, ProSoya Inc., 2-5350 Canotek Road, Ottawa, ONT, K1J 9N5, Canada. Phone: 613-745-9115.

3441. Smith, Patricia. 2001. The Natural Products Expo at Anaheim and the natural foods industry (Interview). *SoyaScan Notes.* March 23. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The Expo at Anaheim this year was the biggest ever, attracting more than 30,000 people. She walked past every booth and almost every one was offering some kind of soy product. The interest in soyfoods just keeps growing.

At the show there was talk about illegal genetically-engineered StarLink corn in Kellogg's Morningstar Farms products such as Corn Dogs, Mini Dogs, and maybe other products. Some company are pulling these products from their shelves.

Before the first Natural Foods Merchandiser (NFM) trade show was held in 1981, at Anaheim, California, the pioneering natural foods companies such as Erewhon, Eden, Westbrae, Sunburst, and Chico-San all (reluctantly) attended the annual NNFA show in Las Vegas, Nevada. There would always be a big party one evening in someone's hotel suite–with lots of fun. But from 1981 on, these and other natural foods companies found their real home at the NFM trade shows.

Patricia saw Yuko Okada at this year's show. His Macrobiotic Company of American now sells only Muso Shokuhin products. Norio Kushi is running the company. Yuko kicked out Bruce Macdonald over alleged financial improprieties. A lawsuit that Bruce filed has apparently been settled.

Michael Potter bought the Herb-T Company from Cecile Levin in southern California. Mr. Muramoto started the company many years ago.

Patricia has now worked for Trader Joe's for 16 years. Address: Radical Food, P.O. Box 952, Mill Valley, California 94942-0952.

3442. **Product Name:** Natural Touch Thai Burger–from Morningstar Farms.
Manufacturer's Name: Kellogg Co. (Specialty Foods Investment Company).
Manufacturer's Address: Battle Creek, Michigan
Date of Introduction: 2001 March.
Ingredients: Vegetable protein (textured soy protein, textured wheat gluten, water), bok choy, bean sprouts, water, green onions, egg whites, corn oil, celery, potato starch...
Wt/Vol., Packaging, Price: 9.5 oz.
How Stored: Frozen.
New Product–Documentation: See next page. Leaflet (color, front and back, 8½ by 11 inches) sent by Patricia Smith from Natural Products Expo West at Anaheim. 2001. March.

3443. Shurtleff, William; Aoyagi, Akiko. 2001. The book of tofu. 2nd ed. Revised. Berkeley, California: Ten Speed Press. 336 p. May. Illust. by Akiko Aoyagi Shurtleff. Index. 28 cm. [321 ref]
• ***Summary:*** The spine has a new look, with dark brown letters on a beige background. At the base of the spine is the Ten Speed Press logo in orange.

This edition contains an updated "Appendix B–Directory of Tofu Makers" (p. 313-316, updated to 22 Feb. 2001). The copyright page and inside rear cover have also been updated; the SoyaScan database now contains 62,000 records. The preface has been expanded. Numerous other small changes have been made throughout the book. Address: Soyfoods Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

3444. *SoyaScan Notes.* 2001. On the English-language etymology of "green vegetable soybeans," "edamamé," "vegetable-type soybeans," and "food-grade soybeans": A chronology of terminology (Overview). July 6. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** No other soyfood has had so much difficulty in finding a single, standardized name. To this day, soybeans picked when still fresh and green in the pods, boiled or steamed, and served like a vegetable, are called by a bewildering variety of names: *edamamé* (pronounced ay-duh-MAH-may, the Japanese name), fresh green soybeans, vegetable soybeans, green soybeans, edible green soybeans,

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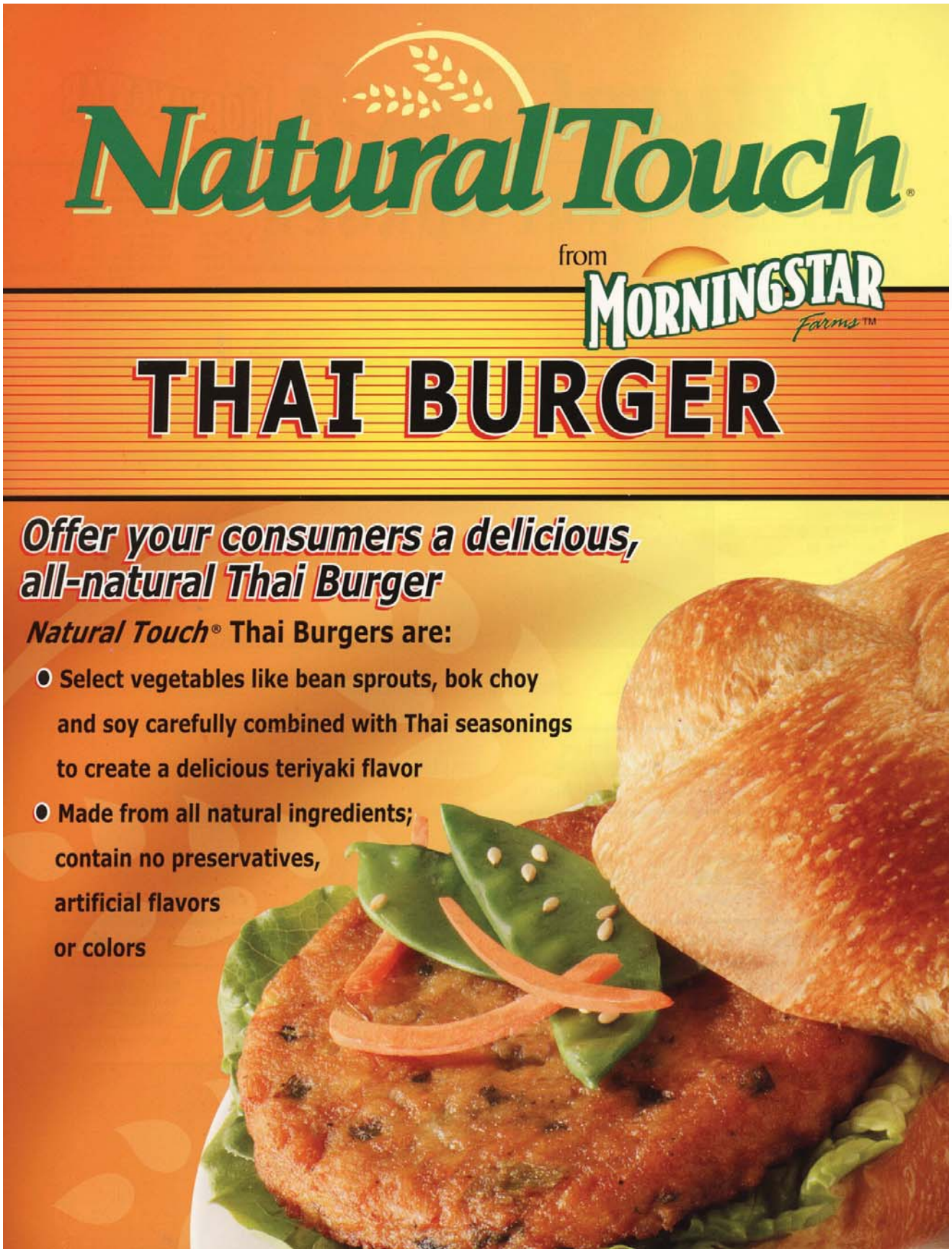

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green vegetable soybeans, immature green soybeans, green immature soybeans, immature soybeans, garden soybeans, garden-type soybeans, garden soys, branch-beans, etc. The short names are all ambiguous and the precise names are all too long. Fortunately, since the late 1990s, the media have increasingly used one name: edamamé.

The first attempt to describe green vegetable soybeans appeared on 12 April 1855 when T.V.P. [T.V. Peticolas] of Mount Carmel, Ohio, writing in the *Country Gentleman* said: "They are inconvenient to use green, being so difficult to hull." For the next few decades other writers followed this pattern of describing rather than naming the tender green beans.

In Dec. 1890 C.C. Georgeson, writing in the *Kansas Agric. Exp. Station Bulletin* first used the term "Edamamé" in an English-language publication to describe his seeds imported from Japan; but he was using the word as the name of a soybean variety, rather than as the name of a food type.

It wasn't until Jan. 1915 that a real name for these tender fresh beans first appeared–in the *USDA Bureau of Plant Industry, Inventory* No. 33. Referring to Plant Introduction No. 34702, from Shantung Province, China, Dr. William R. Faries of Coachella, California, wrote that he had received the seeds in December 1912. They "grow well here. They are fine for green shelled beans."

On 19 May 1917 Anna R. Van Meter, writing in the *Ohio Farmer,* called them "Green Soybeans." The only problem was that dry soybeans with green seed-coats are called by the same name.

In July 1918 William J. Morse, wrote in the *USDA Farmers' Bulletin* No. 973 about this "green-vegetable bean."

The name we prefer was coined by William Morse while studying soybeans in Japan. In July 1929 he first called them "Vegetable soybeans," then in Jan. 1931 he started using the term "Green vegetable soybean," and finally in March 1932 "green vegetable soybeans" (our preference). Morse made a major effort to introduce both the new varieties and the new way of eating them to America.

During the 1930s, six new terms were introduced: "green shelled soybeans" (USDA Bureau of Home Economics, 1933), "fresh green soybeans" (Carey Miller of Hawaii, 1933), "green immature soybeans" (Carey Miller and Ruth Robbins, 1934), "shell soy beans" (Dr. John Harvey Kellogg, letter of 9 Dec. 1935 to William Morse), "immature green soybeans" (Dr. A.A. Horvath 1938), and "immature garden soy beans" (Helen Parsons, Abby Marlatt, and George M. Briggs, 1939).

The name "Green vegetable soybeans" first appeared in the title of a publication in 1935; it was an article by Morse in the *Proceedings of the American Soybean Association* (p. 44-45). In the same article he began to search for terms to describe the new *type* of large-seeded Japanese soybeans from which the best edamamé are grown: Being unaware of the word edamamé, he coined the terms "vegetable types" and "green vegetable types." In 1938 he began to call them "edible soybeans."

But the name that stuck was first appeared in March 1939 in a famous bulletin titled "Eighteen varieties of edible soybeans," by J.W. Lloyd and W.L. Burlison of the Illinois Agricultural Experiment Station. They called them "vegetable-type soybeans" and distinguished then from typical "field-type soybeans."

Other terms used to refer to regular soybeans include "grain type" (Deodhar et al., 1973), "oil beans" (Liu et al., 1995), and "commodity soybeans" (Poysa, 1999).

During the 1930s and 1940s William Morse did more than any other person to try to introduce green vegetable soybeans and "edible- or vegetable-type" soybeans to America as a new food and to popularize their use. He wrote and lectured widely about them, and therefore he thought a great deal about what name would best describe them. He was in a unique position to see the big picture in terms of soybean terminology, and by the 1940s he had clearly settled on the terms "green vegetable soybeans" and "edible types" as those he preferred.

After 1940 only a few new names appeared: "Garden soys" (Edward Dies, 1942), "garden-type soybeans" (Allan K. Smith, 1959), and "branch-beans" (a literal English translation of the Japanese name *edamamé*) (*Organic Gardening and Farming*, July 1977).

Then in the late 1990s a new name burst upon the scene: "edamamé," the Japanese word for green vegetable soybeans cooked and served in the pods. This name was first used in an English-language document, as far as we can tell, in 1991, by the Jameson-Williams Co. of Fairmont, Michigan. The company issued a 2-page leaflet titled "What is edamamé?" By the late 1990s and early 21st century, food writers and manufacturers were using the word "edamamé" for all kinds of green vegetable soybeans, including shelled ones that would never be called "edamamé" in Japan.

Today, most people using the term "edamamé" don't realize that they are using it to mean "green vegetable soybeans" and that the word "edamamé" has long been used to refer to a subcategory of green vegetable soybeans–namely those that are cooked and served in the pods. Moreover, many do not understand the important connection between "vegetable-type soybeans" and "green vegetable soybeans." This is unfortunate.

After studying these terminology questions for more than 25 years, Soyfoods Center would like to see the following terms adopted: (1) Green vegetable soybeans: Vegetable-type soybeans picked green and cooked until tender. They may be served either in the pods (as edamamé) or shelled. This term has a 50-year history of use in the professional literature. (2) Edamamé: Green vegetable soybeans sold, cooked, and served in the pods. For shelled green vegetable soybeans we favor the term "shelled

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edamamé." In Japan, the latter are just starting to become available in the produce section of grocery stores, sold refrigerated (not frozen), typically in rigid containers with clear plastic tops and called either *mukimi edamamé* or *edamamé no mukimi* or *mukimamé. Mukimi* means "shelled" and *mukimamé* means "shelled beans." (3) Vegetable-type soybeans: Certain varieties of large-seeded soybeans (most with Japanese pedigrees and clear hilums) recognized for their good flavor and texture when used as food–either as green vegetable soybeans or tofu, soymilk, etc. This term has a 50-year history of use in the professional literature. In Japan, such seeds are called *edamamé no tane* ("edamamé seeds"). They are widely available in Japan in the spring in typical paper seed packets at grocery stores next to the produce department or the cut-flower department.

An alternative, simpler approach (now used by the American media) would be to call both (1) and (2) above "edamamé" then to call the shelled ones "shelled edamamé."

Unfortunately each of these three approaches and terms has its disadvantages. (1) Green vegetable soybeans is a very descriptive term, but it is quite long and unfamiliar to most Americans. Since "shelled green vegetable soybeans" is much too long, "shelled edamamé" (a term now starting to be used in Japan) or "green shelled soybeans" might be better. (2) Edamamé is nice and short, and widely used in the American press since the late 1990s. But it is difficult for English speakers pronounce correctly if there is no accent on the last letter, yet no English words have accents, and the keyboard character (é) only exists in special foreign-language character sets, which are a nuisance to use frequently. (3) The term "vegetable-type soybeans" is easy to confuse with "green vegetable soybeans." Moreover, the term sounds strange when used to describe large-seeded (often clear hilum) soybean varieties preferred for making tofu or soymilk. In addition, most American's have never heard of "vegetable-type soybeans." The term "food-grade soybeans," widely used in Canada since the 1980s, has its own problems. First, it is often used to refer to all soybean varieties utilized to make foods, including small-seed varieties used to make natto and soy sprouts. Second, all soybeans can be considered "food grade."

3445. Eig, Jonathan. 2001. Snap, crackle, plop; Cereal is a sore subject in Battle Creek, Michigan. The birthplace of the corn flake has lost plants, jobs, sales; Breakfast without Kellogg's. *Wall Street Journal.* Aug. 27. p. A1, A2.
• ***Summary:*** Nowadays people eat many other things for breakfast besides cereals made in Battle Creek–such as bagels, croissants, muffins, Egg McMuffins, yogurt and energy bars. Now there is a big trend to no breakfast at all–just a cup of coffee at Starbucks. "One in five Americans skips breakfast or has just a drink." Of those who do eat breakfast, only about 35% have cereal.

"Early in the 20th century, cereal did for Battle Creek what the microchip has done for Silicon Valley.

In 1999 Kellogg shut down one of its cereal plants–a 93-year-old facility–in Battle Creek, laid off 550 workers, and shipped some of its equipment use to make cereals to Mexico. The town's fondness for cereal seems to have declined.

"Few American cities have ever been so closely linked with one product"–breakfast cereal. In fact Battle Creek has long been known as "Cereal City."

Note: In recent years Kellogg has become saddled with the reputation for making unhealthy yet popular sugary cereals such as Sugar Frosted Flakes (since 1951), Honey Smacks (since 1953; 56% sugar by weight, leads one list of the "10 worst children's cereals"), Fruit Loops (since 1962), and Pop-Tarts (since 1964)..

Garth "Duff" Stoltz, a maintenance manager at Cereal City USA and the museum's unofficial historian, says he oughta eat more cereal, but is often too busy. Address: Staff reporter.

3446. Soy Happy! 2001. SoyHappy.org. Let's get veggie dogs in major league ball parks (Website printout–part). www.soyhappy.org Printed Sept. 17.
• ***Summary:*** Contents: Home page. 1. About the campaign (5 p.). 2. Veggie dog info. 3. Ballpark reference guide. 4. Soy Happy news. 5. Caps and patches. 6. Founder bio. 7. Links. 8. Contact us.

Dates when ballparks started selling veggie dogs: Norfolk Tides (before April 2000). Chicago White Sox (April 2001). Seattle Mariners (April 2001). Florida Marlins (April 2001). Montreal Expos (April 2001). Oakland A's (May 2001). Los Angeles Dodgers (June 2001). Toronto Blue Jays (June 2001). Most ballparks are selling Morningstar (Kellogg's) Veggie Dogs–which are vegetarian but not vegan. The Los Angeles Dodgers and a few others are selling Yves Veggie Cuisine's The Good Dog–which are vegan, kosher, and non-GMO, or Lightlife Foods' veggie dogs.

On page 1 of the home page is a color photo of Johanna McCloy, the campaign's founder. Address: P.O. Box 42152, Los Angeles, California 90042. Phone: 323-363-7226.

3447. *Nutrition Business Journal* (*San Diego, California*). 2001. Functional Foods V. 6(10):1, 3-8. Oct.
• ***Summary:*** The U.S. retail food market in the year 2000, worth $495 billion dollars, is divided into the following eight categories, listed in descending order of size: Meat, fish and poultry $108.7 billion. Beverages $88.9 (not incl. milk or liquor). Fruit and vegetables $84.9. Bread and grains $59.7. Dairy $53.4. Packaged/prepared foods $51.7. Snack foods $30.0. Condiments (incl. oils, dressings, spreads, sauces, spices, sweeteners) $17.6.

The top five U.S. functional food companies in terms of U.S. functional food sales ($ million) are Pepsico U.S. $3,530, General Mills $1,400, Kellogg $1,370, Kraft $780,

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and Coca-Cola $650. Smaller top companies include: Clif Bar $130, Stonyfield Farms $100, Imagine Foods $90, and White Wave $90. 90% of Imagine Foods' total sales come from functional foods, compared with 100% for White Wave. Imagine Foods launched a big campaign in 2001 to market Organic Power Dream Soy Energy drinks to athletes and fitness enthusiasts.

"Soy is the functional food star of the last two years with an estimated 300 soy products introduced in 2000 alone." Ingredient suppliers in the field of soy are now bearing heavy responsibility for functional food research. ADM, Cargill, Central Soya, and Protein Technologies International (PTI, owned by DuPont) are all investing in research, education, and consumer outreach–plus innovation in processing and new ingredients. One of the largest uses of soy protein is SlimFast, but the health benefits of soy are not the shopper's first consideration.

3448. *Nutrition Business Journal* (*San Diego, California*). 2001. Kellogg debuts heart-healthy cereal: Kellogg extends Kashi into functional area, adds organic breakfast patties, and tests healthy snack bar. 6(10):12. Oct.
• ***Summary:*** In mid-October the Kellogg Co. announced its deepened commitment to offering healthful food alternatives by a major change to its Worthington Foods' Natural Touch line of vegetarian entrees. The company says that all of its "top products" in the Natural Touch line just went organic.

Kellogg's Garden Veggie Pattie, Okara Pattie, Spicy Black Bean Burger, and new Breakfast Pattie will all be made with organic ingredients and will be in stores starting in January 2002.

Another big announcement by Kellogg is its formation of a multi-year alliance with the Walt Disney Corporation. "The deal gives Kellogg exclusive rights to develop and market co-branded Disney / Kellogg breakfast foods centered around Disney characters." Moreover, Kellogg has been named "official sponsor of breakfast" at Walt Disney World.

3449. White (Ellen G.) Estate. 2001. Abbreviations of EGW publications. Silver Spring, Maryland. 2 p. Unpublished typescript. Dec.
Address: Silver Spring, Maryland.

3450. Blix, Glen. 2001. Religion, spirituality, and a vegetarian dietary. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 507-532. CRC Series in Modern Nutrition. [67 ref]
• ***Summary:*** Contents: Introduction. The responsibility for and care taking of nature: Zoroaster–c. 628-551 BCE, Ahimsa, Christian and Jewish ecological responsibility (loving one's neighbor, dominion over nature, the enhancement of mental and physical faculties, Daniel–c. 623-537 BCE, vegetarian Christians and health). The sacredness of life: Mahavira, Buddhist thought, Hindu philosophy, Christian thought, Jewish thinking. The food of the gods and the diet of paradise: Pythagoras–c. 582-507 BCE. The denial of the flesh: Buddha–c. 563-483 BCE, Jewish asceticism, Christian asceticism (modern Christian vegetarianism). Summary. Address: Dr.P.H., Health Promotion and Education, School of Public Health, Loma Linda Univ., Loma Linda, California.

3451. Carr, Mark F.; Winslow, Gerald R. 2001. Meatless diets, a moral imperative? In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 463-82. CRC Series in Modern Nutrition. [78 ref]*
• ***Summary:*** Contents: Introduction–advocating vegetarianism: The health argument, animal rights, environmental concerns, social evolution, stewardship. Moving beyond "Yeah, But...": Philosophical argument, personal conviction and practical actions, David Hume and the movements of human sentiment, a brief personal interlude. On the virtues of vegetarianism: Sympathy, compassion. Conclusion: Morally praiseworthy vegetarianism. Address: Ph.D., Asst. Prof. of Ethics, Faculty of Religion, Loma Linda Univ., Loma Linda, California.

3452. Eden Foods, Inc. 2001. The history of Eden Foods. Clinton, Michigan. 3 p. Unpublished typescript. Undated.
• ***Summary:*** This chronology (1967-2001) begins as follows: "1967–Michael Potter and a small group of students on the Univ. of Michigan campus, begin making collective, small orders of natural foods from two of the largest wholesalers at the time.

"1968–Eden Foods Co-op is established in Ann Arbor, Michigan.

"1970–Eden Foods begins food processing, opening a bakery, cafeteria, and the 'Turtle Island' restaurant in Ann Arbor."

Note 1. The early entries in this chronology are deceptive and inaccurate. They make it appear as though Michael Potter founded Eden Foods since his is the only name mentioned in the chronology and since his name is mentioned just before the business was established. In fact, Potter did not join Eden Foods until Oct. 1971–a fact that is omitted in the chronology.

Note 2. Eden Foods was established in Nov. 1969–not in 1968. All of the founders (Bill Bolduc, Tim Redmond, etc.) and early publications agree on that date.

Note 3. The names of the founders of Eden Foods are, unfortunately, omitted from this chronology.

Note 4. One entry states: "1983–North America's 1st soymilk Edensoy is introduced." In fact, Miller's Soyalac Soya Milk had been made since 1940 in Mt. Vernon, Ohio, by International Nutrition Laboratory, founded by Dr. Harry Miller. It was on the market and sold well for more than 40 years.

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The later entries are interesting and probably accurate: "1986–Eden opens a warehouse in San Francisco, California. 1987–Eden partners with the Hirzel family of Ohio to grow organic tomatoes, chilies & cabbage for Eden sauerkraut. 1989–Eden Organic Pasta Company becomes the first third party certified organic pasta facility in America.

"1991–The first Eden organic beans are canned in Eaton, Indiana. 1993–Eden expands its facilities in Clinton, Michigan. Eden first questions organic integrity under USDA/NOSB. Eden adopts a policy requiring affidavits from growers and suppliers guaranteeing that their food is GEO-free. 1994–Eden contracts with a cooperative of family orchards to secure organic tree fruit. 1997–Eden sponsors the first whole foods cooking show, 'Christina Cooks' nationally, on PBS. 1998–Eden introduces its first Biodynamic food, Whole Grain Rye Spirals and celebrates its 30th anniversary. 1999–Eden expands its warehouse facility for the eighth time.

"2000–AIB Certification, New Eden web site is launched and Edensoy Light is introduced. 2001–Eden purchases Sobaya, the Canadian producer of Eden Organic Traditional Japanese Pasta. Eden receives the prestigious 'Socially Responsible Business Award' for exemplary business practices. Over 400 vegetarian recipes are posted to Eden's renewed web site, along with detailed historical information, nutritional information and manufacturing descriptions for all of Eden's products." Address: 701 Tecumseh Rd., Clinton, Michigan 49236. Phone: 517-456-7424.

3453. Haddad, Ella H. 2001. Vegetarian diets and dietary guidelines for chronic disease prevention: How meatless diets conform to current recommendations for health eating. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 371-410. CRC Series in Modern Nutrition. [127 ref]
• ***Summary:*** Contents: Introduction. Dietary guidelines: Overview (U.S. guidelines, international guidelines), is the vegetarian diet consistent with the dietary guidelines? (what do vegetarians eat?, vegetarian diets, plant foods, and the guidelines, the year 2000 guidelines {aim for fitness, build a healthy base, choose sensibly}). Disease specific guidelines: Heart disease guidelines (risk reduction strategies, low-fat and very-low-fat diets, monounsaturated fat {Mediterranean} diet, vegetarian diets {vegetarian diets and heart disease, the vegetarian diet as intervention}), obesity guidelines (risk reduction strategies, vegetarian diets), hypertension guidelines (risk reduction strategies, the DASH diet, vegetarian diets), diabetes guidelines (insulin resistance, risk reduction strategies, vegetarian and plant rich diets), cancer guidelines (risk reduction strategies {carcinogens in food, meat and heterocyclic amines, dietary modulators, protective substances}, vegetarian diets {vegetarian diets and the cancer guidelines}). Conclusion. Address: Dr.P.H., R.D., Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

3454. Hardinge, Mervyn. 2001. Prologue. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. CRC Series in Modern Nutrition.
• ***Summary:*** Tells the story of his professional life and work. Address: M.D., Dr.P.H., Ph.D., Prof. Emeritus, School of Public Health, Loma Linda Univ.

3455. Hebbelinck, Marcel; Clarys, Peter. 2001. Physical growth and development of vegetarian children and adolescents. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 173-194. CRC Series in Modern Nutrition. [49 ref]*
• ***Summary:*** Contents: Introduction. Definitions: Categories of vegetarian diets, types of growth studies, developmental age vs. chronological age. Review of the studies of growth and development of vegetarian infants, children, and adolescents: Case studies, group studies (vegetarian categories, age groups, type of study, anthropometry, sample), overview of the studies by dietary category (lacto-ovo-vegetarian {LOV} children and adolescents {SDA studies, Flemish vegetarian children, adolescents, and young adults study, longitudinal growth study in northwest England, Indian vegetarian children in Britain, Indian vegetarian children in Madras}, vegan children {the farm studies, the U.K. vegan studies, macrobiotic children, the Boston studies–vegetarian and macrobiotic, Dutch children on alternative diets}). Summary and conclusions. Address: Ph.D., Prof. Emeritus, Lab. of Human Biometry and Biomechanics, Faculty of Physical Education and Physical Therapy, Vrije Universiteit Brussel, Brussels, Belgium.

3456. Hubbard, Richard W.; Fleming, Elaine. 2001. A vegetarian diet: Health advantages for the elderly. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 251-276. CRC Series in Modern Nutrition. [120 ref]
• ***Summary:*** Contents: Introduction. Protein differences between omnivores and vegetarians or vegans. Lipid differences between omnivores and vegetarians or vegans. Trans fatty acids. Carbohydrate differences between omnivores and vegetarians or vegans. Accessory growth factors. Minerals and the elderly vegetarian or vegan. Summary. Address: Ph.D., School of Medicine, Loma Linda Univ., Loma Linda, California.

3457. Johnston, Patricia K. 2001. Vegetarian diets in pregnancy and lactation. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 195-220. CRC Series in Modern Nutrition. [100 ref]
• ***Summary:*** Contents: Introduction. Dietary pattern and

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pregnancy outcome. Energy intake. Nutrient issues: Protein, essential fatty acids (fatty acids in vegetarian diets, essential fatty acids in pregnant vegetarians and their infants, breast-fed infants and essential fatty acids in human milk, implications for vegetarians), iron (iron intake in vegetarian females, iron status in vegetarian females, iron status in pregnant vegetarians, recommendations for iron intake in pregnancy), zinc, calcium (calcium intake in vegetarians, calcium intake and vitamin D status in lactation, calcium and bone status in vegetarians, calcium and blood pressure in pregnancy, recommendations), vitamin D, vitamin B-12 (dietary vitamin B-12 deficiency in infants, sources of vitamin B-12), other nutrient issues. Counseling the vegetarian mother. Conclusion. Address: Dr.P.H., R.D., School of Public Health, Loma Linda Univ., Loma Linda, California.

3458. Mills, Paul K. 2001. Vegetarian diets and cancer risk. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 55-90. CRC Series in Modern Nutrition. [73 ref]
• ***Summary:*** Contents: Introduction: Epidemiologic studies of cancer in vegetarian societies, studies in Seventh-Day Adventists, new Adventist health study, SDA studies outside the U.S.–Denmark, Netherlands, and Norway, analysis / interpretation. Components of vegetarian diets that may be associated with altered cancer risk: Soy, isoflavones and breast / prostate cancer risk, dietary fiber and cancer risk, whole grains and cancer, fruits and vegetables, alternative explanation for low cancer risk in vegetarians. Public health implications. References. Address: Ph.D, Cancer Registry of Central California and Univ. of California, Fresno Medical Education Program, Fresno, California.

3459. Neumeyer, Elizabeth. 2001. “Mother”: Ella Eaton Kellogg. Battle Creek, Michigan: Heritage Battle Creek. 95 p. Illust. Index. 23 cm. [6 ref]
• ***Summary:*** Contents: The monograph series. Introduction. “Mother.” Autobiography. Diary. Work in progress. The Kellogg children. “Regulations adopted by members of our family in 1906.” “The cricket.” Baby Newell. The Haskell home. “Good Health” magazine. Publications. *Science in the Kitchen.* “Union Signal.” Fashion petition. Seventh Day Baptist Church. “In Memoriam.” Women’s Hall of Fame. Timeline of events during the lifetime of Ella Eaton Kellogg. Bibliography. Index. About the author. Acknowledgements.

“Introduction: According to Battle Creek historian Berenice Bryant Lowe, in her *Tales of Battle Creek,* when dietitian and author, Lenna Frances Cooper, was asked if she was the ‘mother’ of home economics, she replied ‘I’m sometimes called the Dean but the “Mother” of Home Economics is without doubt Ella Eaton Kellogg.’ While Ella Eaton Kellogg’s students like Lenna Frances Cooper acknowledged their debt to her, Lowe points out that ‘Ella Eaton Kellogg’s contributions to the growth of awareness of nutrition in America... are immeasurable and unfortunately nearly forgotten.’” Address: Teacher of American, Michigan, and local history, Kellogg Community College.

3460. Rajaram, Sujatha; Wien, Michelle. 2001. Vegetarian diets in the prevention of osteoporosis, diabetes, and neurological disorders. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 109-134. CRC Series in Modern Nutrition. [114 ref]
• ***Summary:*** Contents: Introduction. Osteoporosis: Epidemiological studies of vegetarians, intake of selected foods and risk of osteoporosis (meat, dairy products, soy, fruits and vegetables), public health implications. Type 2 diabetes: Vegetarian diets in the prevention of type 2 diabetes (proposed mechanisms of action), summary. Neurological disorders: Dementia, multiple sclerosis. Address: Ph.D., Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

3461. Sabaté, Joan; Ratzin-Turner, Rosemary. ed. 2001. Vegetarian nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. Index. 24 cm. CRC Series in Modern Nutrition. [1732 ref]
• ***Summary:*** The best scholarly book seen to date on this subject. Consists of a Prologue (by Mervyn Hardinge) plus 21 chapters, in five sections, by various authors.

This book contains extensive information on soyfoods as follows: Vitamin B-12, homocysteine, meat analogues and soya milks (p. 47). Summary of epidemiologic studies of soy / tofu intake and breast cancer risk (p. 80-81). Vegetarian diets and soy in the prevention of osteoporosis, diabetes, and neurological disorders (p. 120-21, 125). Iron and soy (p. 202-03). Guidelines to achieve an optimal ratio of essential fatty acids in the diet (p. 203; soy is rich in α-linolenic acid). Zinc, calcium and soy (p. 206). Women's reproductive function, menopausal symptoms, phytoestrogens and soy (p. 232-34, 244). Health advantages of a vegetarian diet for the elderly–and soy (p. 254-55). Vegan children, protein and soy (p. 302). Iron and soy (p. 304; "While the percentage of iron absorbed from soy may be low, the total amount of iron absorbed is adequate, because soy beans naturally contain relatively large amounts of iron" (p. 304-05)). Phytoestrogens and soy (p. 312-13). Macrobiotic diets (p. 313-15). Calcium and soy (p. 316). Vitamin B-12, miso and tempeh (p. 319-22). Iodine and soy (p. 323). Health-promoting phytochemicals beyond the traditional nutrients–soyfoods and isoflavones (p. 342-45; One table shows the isoflavone content (genistein, daidzein, and glycitein) of soybeans, roasted soyflour, roasted soynuts, TVP, tofu, tempeh, miso, and soy milk). Another shows the isoflavone content of commercial soy products by the weight of a typical serving, in descending order of isoflavone content (cooked soybeans, dry TVP, dry roasted soy nuts, tofu, soy

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flour, soy protein isolate, soymilk, SoyBoy Breakfast Links, soybean chips, tempeh, miso, soy cheese, Ice Bean [soy ice cream], Green Giant Harvest Burger, soy noodles, Tofutti [soy ice cream], soy sauce, soy oil). Protection against cancer and soy (p. 346-47). Help for menopause and bone loss (p. 347-48). Protective substances and soy foods (p. 397-98). Calcium fortified products such as soy (p. 421). Consuming a wide range of vegetable oils from intact plants–soy (p. 421). Developing a vegetarian food guide–Legumes, lentils and peas (p. 428-29; "Among legumes, the soybean possesses unique nutrient characteristics." Many food guides place soy beverages in the milk-dairy category). Table: Comparison criteria for evaluating soy and grain-based beverages (p. 430). The water efficiency of food production–and soy (p. 449; "The water intensity of animal production is much larger than the water intensity of crops. For instance, per gram dry weight, soybeans require about 0.75 liters of water" compared with about 20 liters for cattle). Note: Joan Sabaté is a man. The series editor is Ira Wolinsky, PhD, Univ. of Houston, Texas. Address: 1. Prof. of Chair, Dep. of Nutrition, and Prof. of Epidemiology, Loma Linda Univ., Loma Linda, California.

3462. Sabaté, Joan; Ratzin-Turner, Rosemary A.; Brown, Jack E. 2001. Vegetarian diets: Descriptions and trends. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 3-18. CRC Series in Modern Nutrition. [23 ref]*
• ***Summary:*** Contents: Introduction. Definition of terms. Types of vegetarian diets. Historical and sociological perspectives. Demographics and trends. Publication trends in the scientific literature. Conclusion. Address: 1. M.D., Dr.P.H., Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

3463. Sabaté, Joan. 2001. The public health risk-to-benefit ratio of vegetarian diets–Changing paradigms. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 19-32. CRC Series in Modern Nutrition. [33 ref]*
• ***Summary:*** Contents: Introduction. An overestimation of the health risks of vegetarian diets? Early model on vegetarian diets. Health benefits of vegetarian diets. Public health risk-to-benefit ratio of vegetarian and meat-based diets. A proposed new model. Conclusion. Address: 1. M.D., Dr.P.H., Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

3464. Sabaté, Joan; Blix, Glen. 2001. Vegetarian diets and obesity prevention. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 91-108. CRC Series in Modern Nutrition. [47 ref]*
• ***Summary:*** Contents: Obesity as a public health problem. Anthropometrics of vegetarians: Meta-analysis of nutritional studies on vegetarians, epidemiological studies of vegetarians, vegetarian children and obesity. Weight loss and vegetarian diets. Potential explanations for the anti-obesity effect of a vegetarian diet: Dietary fiber and total energy intake, carbohydrate intake, protein intake, dietary fat intake. Conclusion. Address: 1. M.D., Dr.P.H., Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

3465. Singh, Pramil N. 2001. Does low meat consumption contribute to greater longevity? In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 135-172. CRC Series in Modern Nutrition. [113 ref]
• ***Summary:*** Contents: Introduction. Meat and the pathology of human disease: Nutrient components of meat (fat, protein, energy, iron, phosphorus, components of meat formed or added during processing, storage, and preparation {exogenous hormones, antibiotics, and feed composition among livestock, preservatives and bacterial toxins, by-products of cooking}). Studies relating very low meat intake to longevity: Selection of studies, summary of the studies (design {Oxford vegetarian study–U.K., health food shoppers study–U.K., health and lifestyle survey study–U.K., OXCHECK study–U.K., German vegetarians, California Seventh-Day Adventists, Dutch civil servants, populations with a high prevalence of subjects following a Mediterranean diet pattern}, findings, limitations {confounding of the associations for very low meat intake by patterns of intake, confounding by non-dietary factors, methodological limitations}). Summary and conclusions. Address: Dr.P.H., Dep. of Epidemiology and Biostatistics, School of Public Health, Loma Linda Univ., Loma Linda, California.

3466. Whitten, Crystal. 2001. Developing a vegetarian food guide. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 411-440. CRC Series in Modern Nutrition. [78 ref]
• ***Summary:*** Contents: Introduction. A perspective on U.S. food guides. Promoting a science based vegetarian food guide. The process of developing the Loma Linda University vegetarian food guide: Principles for planning healthy vegetarian diets, graphic format of the vegetarian guide, number of servings and frequency of food groups. Conclusions. Address: M.S., R.D., Dep. of Nutrition and Dietetics, School of Allied Health, Loma Linda Univ., Loma Linda, California.

3467. Whorton, James C. 2001. The historical context of vegetarianism. In: Joan Sabaté, ed. 2001. Vegetarian Nutrition. Boca Raton, Florida: CRC Press. [xxiv] + 551 p. See p. 483-506. CRC Series in Modern Nutrition. [61 ref]
• ***Summary:*** Contents: Introduction: The fusion of science and morality in vegetarianism. Vegetarianism in antiquity.

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Vegetarianism and the medieval church. 17th- and 18th-century vegetarianism: Thomas Tryon, the 18th century, evangelicalism. The 19th century: Introduction of physical arguments for a vegetable diet, Sylvester Graham and vegetarianism in America, vegetarianism in Europe. The 20th century: Henry Salt, John Harvey Kellogg, "The Newer Nutrition," the revival of animal rights, environmentalism and vegetarianism, Asian influences on vegetarianism.

As usual, while appearing to treat the subject fairly and objectively, Whorton actually mocks and ridicules it. Why does he continue to be fascinated with this subject he also disparages? The next chapter contains a more accurate and balanced history of vegetarianism. Address: Ph.D., Dep. of Medical History and Ethics, School of Medicine, Univ. of Washington, Seattle, Washington.

3468. The Mail Order Catalog for healthy eating. Winter 2002. 2002. P.O. Box 180, Summertown, TN 38483. 36 p.
• ***Summary:*** The book section of this mail order catalog contains listings for an excellent selection of vegetarian and vegan cookbooks, vegetarian soyfood cookbooks, plus books on food nutrition & health, alternative healthcare, women's healthcare, native Americans and their cultures, animal rights, and sustainability.

The vegetarian food products section offers TVP granules and chunks, Response textured soy protein concentrates (misleadingly called "Response TVP flakes"), miso soup mixes, wheat free soy pasta, soy & rice pudding mixes, soy & nondairy beverages and beverage mixes, soy protein powders & shake mixes, soynut butters, sea vegetables, vegetarian jerky, soynuts, plus foods from Worthington and Loma Linda, Jyoti India Cuisine, and Dr. John McDougall. Address: Summertown, Tennessee. Phone: 800-695-2241.

3469. Praskin, Laurie Sythe. 2002. How tofu came to The Farm in Tennessee, and how Laurie got interested in tofu and vegetarianism (Interview). *SoyaScan Notes.* Feb. 27. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** When The Farm was first settled in 1971, one of the really popular books was *Ten Talents,* by Frank and Rosalie Hurd (1968). They were Seventh-day Adventists and the book was a vegan cookbook that contained two recipes for homemade soybean curd (tofu, p. 195-96). The first used whole soybeans, with Epsom salt as a coagulant; the second used soy flour, with lemon juice as a coagulant. During the first 2-3 years of The Farm, before any tofu was made at a central location, people at home in their buses were using soy flour, with vinegar as a coagulant. The soymilk was never filtered so the okara remained in the tofu.

Alexander Lyon, because he had a PhD degree, was put in charge of learning more about soyfoods and developing soyfoods production at a central facility. In 1972 he started The Farm Soy Dairy.

In 1974 when Laurie arrived at The Farm, quite a bit of this tofu was being made by individuals. She recalls: "It was actually quite tasty. I liked it. It was a nice relief from eating whole soybeans all the time." However the Soy Dairy was making mostly soymilk; occasionally they made "soy cheese" by allowing soymilk to stand until it fermented; the resulting acid caused the separation of curds and whey. The curds were then hung in a sack until firm; the resulting product was quite similar to tofu, even though it was made without use of a coagulant or forming box.

In 1974 Laurie wrote Bill Shurtleff in Japan requesting information on making tofu, and sent him the book *Hey beatnik! This is The Farm book,* published in 1974. Bill sent Laurie pre-publication information on homemade tofu from *The Book of Tofu,* which was published in Dec. 1975. Laurie recalls: "That book was a great help, and a key turning point in The Farm's starting to manufacture tofu on a large scale. I remember just eatin' that book up, and saying 'We've got to do this. You don't need a lot to make it work.'" In early 1975, Alexander Left the soy dairy and Laurie took over managing production.

Laurie (whose maiden name was Sythe) grew up in Los Gatos, California, during the 1960s. She became a vegetarian when she was a teenager (age 15-16), living at home with her parents. The main influence came from her elder brother, Dan Sythe, who was living on Haight Street in San Francisco and was a vegetarian–in fact a fruitarian. She did a lot of vegetarian cooking while in high school, and eventually had her whole family eating vegetarian before she went to The Farm. She recalls buying and cooking with tofu several times during this time–perhaps directly from small tofu makers in nearby San Jose. Dan had a bus, which he drove to Tennessee, arriving on The Farm in 1971 or 1972, shortly after the main caravan of buses arrived in May 1971 on the Martin Farm. He lived on that first Martin Farm. He started "Solar Electronics" on The Farm. Address: 17969 Oak Dr., Los Gatos, California 95030.

3470. *Soybean Digest.* 2002. Healthy growth in soyfoods. Mid-Feb. p. 34-35.
• ***Summary:*** This article is part of a special pull-out insert on "New Uses." Notes that soyfoods have reached a new level of acceptance during the past year with the purchase of Kashi Co. (a natural cereal manufacturer) by the Kellogg Co. Kashi already made lines of soy-enriched cereal and the company recently expanded its line to include GoLean soy-based diet drinks and cereals. Founded in 1984 by Philip and Gayle Tauber, Kashi grew by more than 100% during the fiscal year before Kellogg's purchase–for an estimated $30 to $50 million. In the year 2000 Kashi had sales of about $25 million, compared with $7 billion for Kellogg. But Kellogg sees a continuing trend toward healthier eating.

Color photos show: (1) Packages of Kashi GoLean and Westsoy Soy Smoothie. (2) Various unpackaged soy

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products including textured soy protein, soymilk, silken tofu, edamamé, soy cheese, soy hot dogs, breaded soy cutlets, and soy powder. (3) Tortillas filled with cooked whole soybeans and trimmings, a package of Soy Fusion (Berry), and a soy burger between buns. (4) Cover of the 2001 Soyfoods Guide.

3471. Denny, Darrell. 2002. Jack's still jumping: LaLanne looks back at a healthy life. Natural legacy: The people who founded an industry. *Natural Foods Merchandiser.* March. p. 52, 54, 56, 58, 60.
• ***Summary:*** An excellent biography of Jack LaLanne, now age 87. He continues his daily regimen of exercise and vegetarian diet. For breakfast every morning, he has a blended soymilk and protein powder shake, multi-grain organic cereal with soymilk, and a host of vitamins and supplements. He was the first to: Open a modern health spa. Have a nationally syndicated TV show on exercise and nutrition. Introduce yogurt to America. Have athletes work out with weights. Have women work out with weights. Encourage the elderly to work out with weights. Have a combination health foods bar and gym. Develop a weight-loss instant-breakfast meal-replacement drink. Open a coed health club. Combine weight training with nutrition. Make an edible, nutritious snack bar. Sell vitamins and exercise equipment on TV. Encourage the physically challenged to exercise and work around their disabilities. Perform feats of strength and endurance to emphasize the benefits of exercise and good nutrition. For example: In 1954 (at age 40): Swam the length of the San Francisco Golden Gate bridge underwater with 140 pounds of equipment (incl. two air tanks)–an undisputed world record. Age 41: Swam handcuffed from Alcatraz to Fisherman's Wharf in San Francisco.

He was born in 1914 to French immigrants. When he was 15 the family lived in Berkeley, California, and his mother, a devout Christian, had become a Seventh-day Adventist years before. Jack was unhealthy and unruly. A lecture in Berkeley by health food pioneer Paul C. Bragg changed his life. Bragg told him that if he obeyed nature's laws he could be born again. Contains many good photos of LaLanne, and one cartoon illustration. Address: Executive VP/president Penton Lifestyle Media.

3472. Specialty Foods Investment Co. 2002. Natural Touch: Nourish your body and spirit (Ad). *Natural Foods Merchandiser.* March. p. 81.
• ***Summary:*** The top half of this full page color ad shows an Okara Patty on a sesame bun with lettuce and sliced onions. At the top: "Now made with organic soy!" Below that are the front panels of four packages of Natural Touch products: Breakfast Patties (New), Okara Pattie, Veggie Medely, and Tex Mex Burger. At the bottom left: "from Morningstar Farms." At the bottom right: "A proud supporter of: Global Re-Leaf, www.Americanforests.org."

Note: This company is owned by the Kellogg Co., which also owns Worthington Foods. Natural Touch is their natural food line.

3473. Soyatech; FBX / IQPC. 2002. SoyFoods 2002: June 25 & 26 2002, The Hyatt Regency O'Hare, Rosemont/Chicago, IL. www.foodbevx.com (Brochure). Bar Harbor, Maine. 3 p. 28 cm.
• ***Summary:*** This fax brochure begins: "Soyatech is pleased to announce its participation in a very important landmark conference for the soyfoods industry." The U.S. soyfoods market has been growing at double digit rates for the past 10 years and the future looks promising. But the market is maturing quickly as big food companies enter: Kellogg, Kraft, General Mills, Dean Foods, ConAgra, Unilever, and Heinz. Soyfoods 2002, is produced by IQPC in association with Soyatech, Inc. Those who register by April 16th will receive a $300 discount. The price is very expensive: $2,799 for the conference plus two workshops or $1,799 for the conference only. This brochure gives the conference's "agenda highlights" but none of the names of the speakers or presenters.

2002 April 20. A second printed glossy brochure (green and yellow on white) arrives from the Food & Beverage Exchange (FBX), giving much more detail and the names of the speakers. The headline is: "IQPC & Soyatech are teaming up to bring you the most compelling technology and market driven two-day conference specifically for the soy industry." Two additional prices have been added: $3,199 for the conference plus three workshops. $3,299 Gold Package: Conference plus ALL workshops. Address: Bar Harbor, Maine. Phone: 1-800-882-8684.

3474. *SoyaScan Notes.* 2002. The American Tasting Institute (ATI/AOTA) and their Gold Taste Awards (Overview). May. 18. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** The following information comes mostly from the company's website: www.awardsamericas.com. The American Tasting Institute is a private organization, founded in 1985, comprised of about 35,000 professional chefs. They are headquartered at 211 Sutter St., 5th Floor, San Francisco, California 94108. Phone: 415-982-0781. The organization is also called AOTA = Awards of the Americas.

In awarding gold medals, at least six leading chefs conduct a double-blind test on products in a specific category. The highest scoring product in each category is offered the Institute's Commercial Gold Medal Endorsement Program. It is offered to only one company in each category. Acceptance requires payment of an annual fee.

The following companies have accepted gold medal awards in soy-related categories (mostly in the natural-foods category): Soybean milk–Vitasoy. Soy chips/crisps–Snackie Jack. Soy protein drink: Next Nutrition, Inc. Yogurt, soy–Silk Cultured Soy (White Wave). Tofu–Nasoya. Veggie

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Burgers–Worthington Foods / Morningstar Farms.

3475. Demos, Steve. 2002. White Wave's 25th anniversary: How Steve sold White Wave to Dean Foods for $189 million (Interview). *SoyaScan Notes*. June 2. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Steve is at the farm. White Wave's 25th anniversary is coming up in September. At Goldman-Sachs Steve has given his presentation on Jack and the Beanstalk: A modern day fairy tale. "Depending on who I'm talking to, I bring 'Right Livelihood' into it. 'Right Livelihood,' to me, is at the root if it, but we don't always talk about it because we're not going to use that as the reason for the success in the business model. The business model has to be successful because it is a good business model, its based in Right Livelihood, but I don't want to become the Right Livelihood company, I want to become the business model that was very successful because it was based on Right Livelihood."

"Dean Foods is making a commitment to entering the branded foods business. And they've also chosen the healthy benefits foods to be part of that. This was somewhat of the introduction of the investment they had made, by me just giving the 'street' (Wall Street), so to speak, an update on the soy industry and White Wave." Dean Foods has owned brands before, but they have all been relatively small and No. 2 or 3 in their category. Dean Foods has about $250 million a year in cash flow. This money is looking for a home. They need to invest their stockholder's money or give it back to them. Dean Foods is saying, hey, the way to use the money here is to invest in these value-added, branded foods. Where is the most growth coming from? The legitimate, natural, nutraceutical, healthy benefits, organic type of foods. We ring every one of those bells.

"Our business model is a series of very conscious choices going all the way back to the product itself. It's good for me, good for you, good for everybody who touches it. Right Livelihood is values-based business, or principal-based business.

"We ultimately gave away 10% of the company back to the employees. But we did it in two different ways. Round one came a few months ago; when we saw that this was very likely to occur, we awarded stock options (at the lowest possible price) back to the employees based on job responsibility and contribution to growth. That was 5% of the company. Everybody made 3-5 times what the price was of the option was. Nobody turned it down because it was absolutely free money. The option was something like $10 and the stock sold for $130; who is going to turn that down? The second round came from the five largest stock holders based only a years one had worked for the company. We have talked about this before so there is no need to go over it again."

Looking back over the past 25 years, what are the things that have been most important to White Wave success? "One is innovation. The willingness to constantly try until you find something that works. If you look at the number of attempts versus the number of successes, clearly we are in our own one in a hundred, or even five hundred. We've introduce a lot more failures over the years than we have Silks. In the process, by innovation, we taught ourselves key things. Now, I could tell you how to make a soy product in any factory, virtually for any type of soyfood, from burgers to ice creams, from fermented to curdled. That gives us a different perspective, and it gives us insights into how soy is going to get into the mainstream diet. All that experience and all that time we have come to understand how it is accepted, what is accepted, what they are looking for. In this industry, I think this is somewhat unparalleled. We've tried everything but miso.

Second, we made a business model that was highly profitable and we proved it by investing in all the right stuff. We made all the right decisions for this business model so that we could prove that we could finance growth on our own, without a bank. And over the past several years, since we initially took on Dean's money, we haven't received anything else, and yet we've probably tripled in size–and the numbers were quite large."

When do you think that business model was first clear in your head? "It was at least 5 years ago I saw the three levels of profit that are associated with the soymilk business: Extraction, packaging, and distribution. All are money-makers but two of those are owned by the dairies. So my whole business model was: Use the infrastructure that existed, because the dairies had it all in place, and basically tell them you'd pay them more than they were currently making from their normal cow juice stuff. Once we sat that that was, in fact, true, then we started getting more and more interest on our side in going to a vertical business model, because the profits that were present with packaging and distribution were so much bigger than manufacturing the extract. We're about to start that with Dean Foods; the next step is proving this business model. In the past, White Wave has not been packaging; we have only been extracting. But we got control of how we distributed the extract by where we located the extract. It's funny. You can pay Mother Nature to distribute for you–in other words use the water where you find it and need it–or you can pay truckers to distribute if you happen to ship a heavy water product all over the U.S. So we located our extraction systems located in different parts of the U.S.–more efficient for where Silk was being packaged. And then we bought our own extraction. We have not put in our own processing / formulation, which is one more profit level that we haven't even seen yet, and we're already a very handsome business model. White Wave presently has two different extraction locations, but the company draws off of four. We have an arrangement with another company [such as Sunrich] to supply us. White Wave makes about 50% of the Silk sold and the other company also makes 50%. White

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Wave does not necessarily want control of 100%; there are headaches that come with that. It is expensive to build a soymilk extraction facility. We are focusing our money on ramping up sales.

Anything else? "Over the past 25 years White Wave has stayed true to our principals–but those are things I take for granted. Some people seem to think that those are great achievements. I think they are normal, which is why I don't mention them. How else would I do it? But it's apparent that there are not a lot of people who walk their talk–at all; it's unfortunate. So, even through some very difficult times, we did not compromise our morals or ethics in running the business. We probably compromised our personal well beings [overwork, stress], which is not all that good. But hopefully, we'll be making up for that.

What was it like when White Wave began operations in 1977? Natural foods were bulk only. Organic was known, but there was no differentiation between organic and natural because nobody had yet deceived the public with a fake product. I had started a natural foods store in Pennsylvania based on no packaging, all bulk. So natural foods was a lifestyle but had not been compromised by business yet. There were not a lot of natural foods stores in the U.S. in 1977 and they were mostly co-ops. The big natural foods stores came a few years later. The chains and supermarkets (such as Whole Foods and Wild Oats) came 10-15 years later."

Organically grown? "We used to go to Walnut Acres, one of the original organic meccas, to buy all our flours and grains for my natural food store named Touch the Earth in Pennsylvania. I have a clear memory of the bottom third of the bag being dirt. It was organic all-right. We always knew that we had to watch for stones and dirt in anything sold as organic. God knows why!

Soyfoods? "I don't think the word had been invented or was well known. 'Tofu' as a word was starting to be known, partly because of what you were doing at that time. My first experience of making tofu came through the Seventh-day Adventists–through the Bible we used to carry around–*Ten Talents*. It had a recipe for making bean curd. Of course soy sauce was well known. In 1977 there was no category of foods called 'soyfoods' and there were no companies that were soyfoods companies" (Continued). Address: President, White Wave Inc., 1990 North 57th Court, Boulder, Colorado 80301.

3476. Demos, Steve. 2002. White Wave's 25th anniversary: How Steve sold White Wave to Dean Foods for $189 million (Interview). *SoyaScan Notes*. June 2. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Continued: Vegetarian? "You were either Indian (from India) or you could have been a left-over hippy from the 1960s, and then there were the Seventh-day Adventists. My father often talked about a couple of people that he was in business with that were into yoga and were vegetarians. I didn't know anybody who was not eating any animal products.

Non-dairy? "Rich Products and whipped toppings or coffee creamers were starting to come about, and maybe infant formula. I think that would be about it for non-dairy.

In the 1960s, Steve bought tofu from a store named Seeds of Life on Telegraph Avenue in Berkeley; it sold foods only in bulk–no packaging. "You weighed your food and priced it yourself. It was Utopian food shopping."

Meat alternatives? "That would have to be Worthington Foods with fake sausage. And they certainly weren't called 'meat alternatives.' They were called 'meat analogs.'"

The diet-health connection? "That idea came in in 1984 with a *Time* magazine cover story–'And now the bad news.' There were two fried eggs for eyes and a piece of bacon doing a downward grin. I use that in a lot of my talks. That was the beginning of the mainstream diet-health consciousness. Up until that point it was calories and calories only–which had to do with gaining weight; it was not yet about disease and diet and well being. Up until that time the cholesterol hypothesis–the theory that cholesterol caused heart disease–had not been proved. Francis Moore Lappe and *Diet for a Small Planet* arrived in the early 1970s–diet and the planet. Now we had diet and consciousness, and environment and consciousness. This whole idea that diet and health were related did not reach most Americans until the 1980s." When Steve started making tofu he saw it as a complete food low on the food chain. It seemed to him inevitable that such foods had a bright future. "To me, it was the environmental and the moral animal-rights issues that I was focusing on, far more than I was on diet and health issues. Yet we were looking at tofu as a healthier food–no question. But it was only in the mid-1980s that Americans started to get into the disease-related part of that. Remember, our generation organized the first Earth Day in April 1970, so there was already the realization 'Aren't we living a little too high on the hog?' From there people began asking 'How are we going to save the planet?' Many of us tried to apply ourselves to this question in some individual way. Lots of us ended up working with food."

Health benefits of soy in 1977? "Complete protein is the only thing I can think of. And most people didn't even think that soy was a complete protein. Many people still don't know that.

"The key thing about founding White Wave in 1977 was we had no experience, no money and no access to any. And those translate to no confidence. You don't need both experience and money, just one or the other–in order to have confidence. Now, we know this market. We helped to create it. So we have a high degree of confidence in what we think about it and where we're going with it. That's a big difference. I have all the faith in the world that I know how to think; the question was what I wanted to think about.

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Making tofu looked like a pretty good thing to think about. So I just paid attention and learned as I went along. I also know that I had some genetic tendencies that way because of my father, Anthony.

"He was a successful entrepreneur–and still is. He started his own company semi-processing minerals and alloys when he was in his 30s. He would crush and size, and then sell that material to the welding-rod or steel industry. His company now has sales of a few hundred million dollars and has a few hundred employees. When we sold White Wave to Dean Foods he was ecstatic. He was an investor in White Wave to boot. He made double digit millions on the deal. He didn't have much faith in his son when I started in 1977, but he does now! He first invested in about 1983-84 when White Wave was in deep financial trouble. Steve's mom, Lorraine, is still alive and her support for Steve has always been strong and positive. She always believed I was an OK person, and she let me know that–like any good mother. My actions had to be honorable; it didn't matter much what they were. My father, likewise, is a man of very high integrity–he just didn't believe in what I was doing. But he started relating to me in a completely different way after we sold White Wave.

"I grew up outside of Philadelphia near Villanova and Bryn Mawr. One brother was a surgeon, the other an attorney. In the 1970s my family basically gave up on me. The joke was: Where's Steve? Oh, he's off in India, up some tree somewhere. We paid for his education; what a waste. But he who laughs last laughs hardest. There is a certain vindication when everybody in your family is capable of retiring because of what you've done.

"I remember going to visit Azumaya (I don't recall what year), and I was very impressed at how big it was–so industrial. It looked like such big equipment. And I remember that they were hand curding and hand ladling. I thought: It will take me decades to get near the money to buy equipment like this. I tried to get money many times, but no bank would lend money to a small tofu manufacturer. White Wave got almost all its money from my family–and Pat Calhoun's folks, but to a much smaller extent. White Wave's five major shareholders are: (1) My elder brother, Jack, who is a surgeon and who carried the investment for the company. (2) My father, Anthony. (3) Myself. (4) Pat Calhoun. (5) A man by the name of Michael Sutton–an attorney friend of ours, early in the game, who ended up investing a lot. He's the luckiest person on the planet right now. That was the only way White Wave was able to finance its growth over the years.

"The first bank loan came in about the mid- to late 1980s, and it was for equipment. At one point White Wave got an SBA (Small Business Administration) loan for several hundred thousand dollars; it ended up being a nightmare. That helped finance the expansion into two production facilities. Within the last 3 years White Wave issued industrial revenue bonds through a state & federal program and raised $13 million. We used the money to build two Silk extraction facilities and to rebuild the tofu factory.

"When Dean Foods made its first investment of $5 million in White Wave in Aug. 1999, all of the money was used for product placement and marketing of Silk. Half of that money went specifically to slotting allowances / fees to supermarkets. We almost never lost a slot, but in some cases we actually went back and paid twice. The rest the money was used for samples, PR (public relations) and advertising. In May 2000 we got a new PR agency that is still with us: Carmichael Lynch Spong, of Minneapolis, Minnesota. They have done a great job for us. We had already put in place all of the financing of the equipment for the capacity expansion. It's not too hard to raise money for equipment; the risk-takers can always take back the equipment and sell it."

Nine months later, having spent the initial $5 million, White Wave went back to Dean Foods. But things had changed for the better. Sales had now risen to $28 million. This time Dean invested $10 million.

Did White Wave have any important firsts? "(1) We took a deep look at foods and challenged how they were being presented. We didn't stop challenging until we found a way that worked and was accepted. We put Silk soymilk in gable-top cartons like milk and put it in the dairy case. When Silk took off, it was everything we could do just to hold on. Silk now has sales of $170 million a year; all of White Wave's other products might be $10-15 million. (2) We flavored tempeh and tofu, and basically created the 'flavored tofu' category. (3) We were the first to do shelf sets with soyfoods. We put up 'Vegetarian Cuisine' centers in Whole Foods markets in the San Francisco area. Ultimately we ended up organizing the entire case around vegetarian foods. (4) Use of the word 'vegetarian' boldly with our product line. It was just one more extension of our lifestyle. The Farm in Tennessee did much the same thing but on a much smaller scale. We need to get back to that idea" (Continued). Address: President, White Wave Inc., 1990 North 57th Court, Boulder, Colorado 80301.

3477. *Nutrition Business Journal* (*San Diego, California*). 2002. U.S. consumers gain appetite for meat alternatives: Boca, Gardenburger and Sunrich expand market with new meat alternative products. 7(7):4-6. July.
• ***Summary:*** A pie chart shows the $395 million meat alternative market (wholesale figures, 2001) divided as follows: Kellogg (Morningstar Farms) 45%. Kraft (Boca Burger) 15%, Gardenburger 14%, ConAgra (Lightlife) 11%, Hain Celestial (Yves Veggie Cuisine) 8%. This converts to about $550 million in consumer sales, with about 60% via the mass market channel, 30% through natural / health food stores, and 10% through other channels. Soy-based meat alternatives accounted for about 85% of those sold in mass market outlets and 80% of those sold in natural /

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helath food stores. Growth during the previous year (2000) was estimated at 14.5% (16.4% in mainstream and 10.1% in natural / health).

In mainstream supermarkets and grocery stores, frozen products account for 68% of meat alternatives, while the remaining 32% are refrigerated. In natural food stores, 59% are sold refrigerated and 41% frozen. In the refrigerated category, Lightlife claims to have 50% of the market in natural food stores, followed by Yves (34.5%) and Veggie Patch (3%).

A new major player is Quorn, a European company making products from mycoprotein (myco = mold or fungi, not mushrooms).

Kraft owns both Boca Burger and Oscar Meyer; the latter just entered the meat alternative business. Kraft's newest introduction is Boca Ground Burger in microwaveable pouches, for use in recipes ranging from tacos to spaghetti.

3478. *Nutrition Business Journal* (*San Diego, California*). 2002. Quorn enters U.S. market for meat alternatives: Sales grow for meat-free entrees amid mushrooming controversy. 7(7):7. July.
• ***Summary:*** Quorn Foods Inc. (Riverside, Connecticut) entered the U.S. market in January 2002, and has since generated $1 in sales–along with plenty of controversy over Quorn's main ingredient, mycoprotein. Quorn products are marketed by Marlow Foods, a division of AstraZeneca. Last year their retail sales in Europe were $170 million, according to the company. Product labels describe mycoprotein as a "small, unassuming member of the mushroom family." But both Gardenburger and Center for Science in the Public Interest have petitioned the FDA claiming that Quorn is mislabeled.

Quorn now has 7 SKUs in 1,000 U.S. stores, all frozen, including chicken-style nuggets, chicken-style tender, lasagna, and a beef-style ground ingredient. However in Europe, Quorn sells more than 90 SKUs, equally divided between fresh and frozen. Quorn's U.S. pricing is competitive with other meat alternatives at $3.79 for a typical entree, or 10-15% higher than similar meat-based products.

Quorn says that 45% of European households buy frozen meat alternatives each year versus only 15% on the USA. The company claims that in taste tests American consumers prefer Quorn products to their Morningstar Farms counterparts by two to one. Morningstar is the leading U.S. meat-free brand.

3479. *Nutrition Business Journal* (*San Diego, California*). 2002. Summary of organic initiatives by large corporate entities. 8(11):17. Nov.
• ***Summary:*** Coca-Cola has acquired Odwalla. ConAgra, Inc. acquired Lightlife Foods. Danone acquired part of Stonyfield Farm. Dean Foods acquired White Wave and Suiza (which owns 14% of Horizon Organic Dairy). General Mills acquired Small Planet Foods (Cascadian Farms, Muir Glen brands). Kellogg acquired Kashi and Worthington Foods. Kraft Foods acquired Boca Burger.

3480. *Nutrition Business Journal* (*San Diego, California*). 2002. Top U.S. natural & organic food companies, 2001. 8(11):5. Nov.
• ***Summary:*** For each of 43 companies gives the ranking by sales, the natural / organic sales in 2001 ($ million), the percentage of natural & organic that are organic, and the organic sales in 2001 ($ million).

The following companies make soyfood products: 1. The Hain Celestial Group $360. 2. Kellogg (Worthington, Kashi) $255. 4. Coca-Cola (Odwalla, Mad River Traders) $160. 5. Dean Foods (White Wave, Alta Dena) $150. 8. General Mills (Sunrise, Cascadian Farms, Muir Glen) $125. 11. Stonyfield Farm $85. 13. Amy's Kitchen $76. 14. Vitasoy USA Inc. $75. 15. Imagine Foods Inc. $70. 19. Pacific Foods $63. 20. Kraft Foods (Boca Burger) $60. 23. Eden Foods Inc. $57. 25. Gardenburger $55. 29. Galaxy Nutritional Foods $42. 33. Conagra (Lightlife Foods) $35.

Sum of sales of top 43: $3.28 billion. Sum of organic sales of top 43: $1.63 billion.

3481. Shao, Margaret. 2002. *Parkia biglobosa:* Changes in resource allocation in Kandiga, Ghana. Master's thesis, Michigan Technical University. vi + 106 p. http://forest.mtu.edu/pcforestry/people/1998/shao.pdf [72 ref]
• ***Summary:*** Contents includes: 1. Introduction. 2. Background... 5. *Parkia biglobosa:* Botany, traditional uses, process of dawadawa preparation, microbiology and fermentation, natural regeneration [of the trees] (p. 44-78). 6. Soybeans (p. 79-82). 7. Results and discussion. 8. Conclusion. 9. Literature citations. 10. Appendix.

"In 1757, Michel Adanson first recorded *Parkia biglobosa* during his collecting trips to Senegal and Gambia. Although Adanson did not name the tree, in 1763 Nicolaus Jacquin formally published the valid binomial name *Mimosa biglobosa."* In 1826 Robert Brown suggested renaming the genus *Parkia* to commemorate Mungo Park, a Scottish surgeon who explored western Africa in the 1790s, following the course of the Niger River (p. 44). *Parkia biglobosa* is a leguminous tree. A photo (p. 45) shows the tree. Bats are the primary pollinators of this tree. "The fruit or seedpod is the most widely used and economically important part of the tree... In Feb. or March the pods, when green, fleshy, and pliable are sometimes eaten by humans after roasting the pods over embers" (p. 48, 52). Baboons, chimpanzees and other primates also feast on the immature pods–thus competing with humans.

A map (p. 52) shows the distribution of *Parkia biglobosa* trees in Africa (adapted from Hall et al. 1997); it is

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found in 19 African countries.

"In March and April, the beginning of 'hunger season' when other foods are becoming scarce, mature pods are collected for food. The seeds are used in preparation of dawadawa, a protein and fat rich food.

This tree has many important medical uses. "The name of the tree and the food product, dawadawa is from Hausa, the lingua franca of West Africa spoken by over" 50 million people in western Africa. Hausa borrowed many words from Arabic, and these greatly influenced its vocabulary. In Swahili, also a language of Arabic origin, *dawa* refers to any medicament supplied by a doctor. A decoction of the seeds, pounded with salt and fermented is used to treat tension, mouth ulcers, skin infections, and wasp or bee stings.

The process of making dawadawa from locust bean seeds in Kandiga, Ghana, is described (p. 58-65) and a flow chart appears on p. 63. "A more recent processing method is to add fermented soybeans as a filler, increasing the volume, diluting but not losing the preferred taste of the traditional dawadawa" (p. 64).

"The process of producing soybean dawadawa is similar with only one critical and major difference. The first major step of boiling the seeds of *P. biglobosa* for fourteen hours is changed to only one hour of boiling of the soybeans. The composition of *P. biglobosa* seed is 30% testa [seed coat] and 70% cotyledons (Campbell-Platt 1980) compared to soybean which is10% testa and 90% cotyledons (Wolf 1971). The soybeans have a thin seed coat; the bran is easily removed after only one hour of boiling. An alternate method of removing the bran is to dry roast or fry the soybeans, imparting a golden brown color to the soybeans, then the beans are pounded to remove the bran (Odunfa 1986). The sequence of steps then follows the traditional method." The author observed one woman and two men "produce both the traditional and soybean versions of dawadawa.

"The traditional dawadawa is greatly preferred for taste over the soybean version. Every person I interviewed for this study preferred the traditional. I believe this is due to the recent introduction of soybeans and slow adoption or acceptance of new foods. Konlani et al. (1999) states that *tonou* in Togo is now prepared from soybean. However, those interviewed would only use the soybean version because it was a cheaper substitute or because the traditional dawadawa was not available.

"One of the major advantages, perhaps a critical advantage in the future, is the shorter boiling period of the soybeans. The traditional dawadawa takes an enormous amount of fuel wood to boil the *P. biglobosa* seeds for fourteen hours when compared to the one or two hours necessary to boil the soybeans. Fuel wood is a precious commodity in all of West Africa and a major factor driving deforestation in northern Ghana" (p. 65). "In Kandiga, the dawadawa is usually sold in the market by young children, mainly girls, and women" (p. 66).

The chapter on "Soybeans" states: "West African countries are looking to soybeans as 'the miracle crop' to alleviate malnutrition and poverty" (p. 80).

"In 1987, the International Institute of Tropical Agriculture (IITA) supported with funds from the International Development Centre (IDRC) aggressively introduced soybeans into Nigeria. In 1985, Nigeria only produced 28 metric tons and in 1995, production increased to 200,000 metric tons (Dashiell 1998). In the last 20 years, several agencies within Ghana have advocated soybean cultivation. Ghana's Ministry of Food and Agriculture (MoFA), Adventist Development and Relief Agency (ADRA), Catholic Relief Services (CRS), and other NGOs have been educating, promoting, and assisting farmers in the cultivation and use of soybeans" (p. 81).

"The presence of soybeans in Kandiga, both in the market and in the fields is on the increase. I worked directly with ADRA (Adventist Development and Relief Agency) farmers promoting agroforestry. Those chosen by ADRA were low-resource farmers who needed assistance attaining self-sufficiency. One of the expectations from ADRA for the farmers was to cultivate soybeans. Farmers were given soybean seed on credit and the assurance that ADRA would buy the harvest in lieu of cash for payments on farmer's loans. I observed that non-ADRA farmers would also plant soybeans in their fields. One example was a widow, a neighbor of mine who farmed a small plot of soybeans from seed given to her from an ADRA farmer. The crop yields could vary with rainfall and proper spacing and cultivation methods. The greatest obstacle to the success of soybeans in Kandiga was that approximately half of the ADRA farmers would sell the seed for cash immediately, instead of planting it on their farms." Photos show: (1) Forming balls of dawadawa. (2) Dawadawa balls left out to dry. (3) Royco bouillon cubes (top), traditional dawadawa (left), soybean dawadawa (right).

The author observed the increased substitution of soybeans for locust beans.

Note: This thesis was submitted toward a Master of Science in Forestry. The research was conducted from Sept. 1999 to Dec. 2001 during her service with the Peace Corps in Kandiga, Upper East Region, Ghana. Address: Michigan Technical Univ., Houghton, Michigan.

3482. Adventist Health Study-2 (AHS-2) starts at Loma Linda University. 2002. http://www.llu.edu/public-health/health/about.page

• ***Summary:*** "Adventist Health Study-2 (AHS-2) is a health research study of 96,000 Seventh-day Adventists in the U.S. and Canada. Adventists, due in part to their unique dietary habits, have a lower risk than other Americans of heart disease, several cancers, and probably high blood pressure, arthritis, and diabetes. This, along with their wide variety of dietary habits, provides a special opportunity for careful

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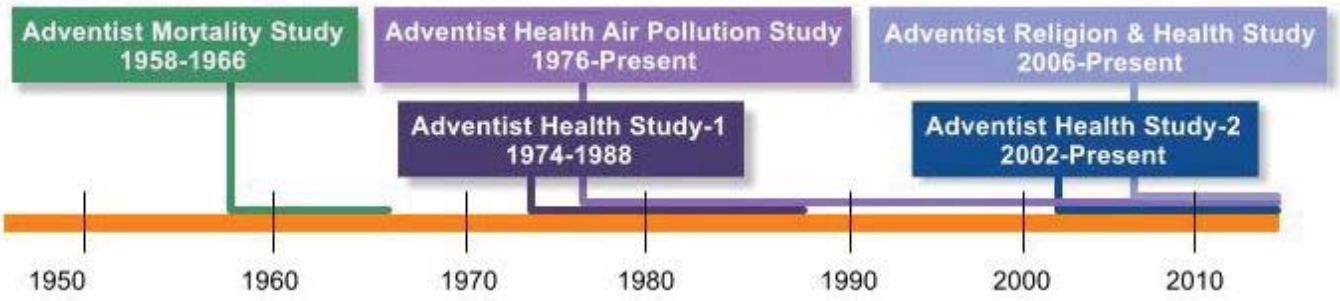

research to answer a host of scientific questions about how diet (and other health habits) may change the risk of suffering from many chronic diseases.

"Two previous studies on Adventist health involving 24,000 and 34,000 Californian Adventists have been directed from Loma Linda University over the last 40 years. These have been among the first to raise scientific awareness of the close relationship between diet and health. This groundbreaking work has brought visibility and accolades to the lifestyle recommended by Seventh-day Adventists from both the scientific and lay communities.

"Dr. Gary Fraser with a team of researchers from the School of Public Health, Loma Linda University, is conducting the study."

"History of Adventist Health Studies:

"Studying Seventh-day Adventists: Seventh-day Adventists (Adventists) have increasingly become the objects of epidemiologic studies, both because they tend to be far more homogeneous in many lifestyle choices and because they are more heterogeneous in nutritional habits than the general population. Certain lifestyle characteristics, such as heavy cigarette smoking, consumption of alcohol, and diets heavy in fats may confound or modify the effects of other factors, making it difficult to study members of the general population.

"In the Adventist population, these potentially distorting characteristics are largely absent, making other factors more easily observed. Perhaps even more importantly, the wide range of dietary habits, from strict vegetarianism to a normal American diet, greatly enhances the ability of investigators. Below are links to summaries of each of the five major Adventist Health Studies conducted by researchers at Loma Linda University.

"Adventist Mortality Study: 1958-1966: The first major study of Adventists, begun in 1958, has become known as the Adventist Mortality Study, a prospective study of 22,940 California Adventists. The study was conducted at the same time as the large American Cancer Society study of non-Adventists, and comparisons were made for many causes of death between the two populations.

"Adventist Health Study-1 (AHS-1): 1974-1988: The second major study was designed to determine which components of the Adventist lifestyle give protection against disease. Over the course of the study, several questionnaires were mailed to 34,198 California Adventists. In the beginning, AHS-1 was primarily a cancer investigation. (See a PDF of cancer findings.) In 1981, a cardiovascular component was added.

"Adventist Health Air Pollution Study (AHSMOG): 1976-Present: The AHSMOG Study is a substudy consisting of 6,338 California Adventists who were members of the parent AHS-1. It is believed this population provides a unique opportunity for also investigating the health effects of long-term exposure to ambient air pollutants with very little confounding (distortion) by active tobacco exposure. Since 1977, the cohort has been followed and monitored for newly diagnosed malignant neoplasms, coronary heart disease, and all-cause mortality.

"Adventist Health Study-2 (AHS-2): 2002-Present: With 96,000 Adventist participants in the U.S. and Canada, AHS-2 is one of the largest and most comprehensive studies of diet and cancer in the world. It is also one of the largest dietary studies of Black/African Americans and will help answer why this group has a disproportionate amount of cancers and heart disease.

"Adventist Religion & Health Study (ARHS): 2006-Present: ARHS is a substudy of AHS-2 consisting of 11,000 Adventist Americans who are members of the parent AHS-2. It aims to understand what specific aspects of religion, life stressors and other health behaviors account for better or worse health and trace some of the biopsychosocial pathways to health."

3483. White (Ellen G.) Estate. 2002. Legacy of Light: An interactive journey of faith, heritage, & prophecy (Compact disc–CD-ROM). Silver Spring, Maryland.

• ***Summary:*** Contents of this two-CD interactive multimedia collection: (1) Library. All of Ellen White's 375 published works with a comprehensive index. Take a self-guided tour of the White Estate Vault. (2) Time Lines: Interactively explore more than 70 years of Seventh-day Adventist history, (3) Photo gallery: View more than 150 original photographs of Adventist pioneers, the White family, and related institutions, including 3-D stereoviews. (3) Reel to Real:

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Video vignettes relating to the life and ministry of Ellen G. White. (4) Learning Center: Teach children about the past through painting, puzzles, and memory games. And much more.

A note states: "EGWebSite news: www.WhiteEstate.org. We've recently provided access on our website to a new, updated database of Ellen White's complete published writings. It is HTML-based, fully searchable and browsable." Select search, then search asp. Also issues, issues.asp. And books, books.asp. Address: Silver Spring, Maryland.

3484. Praestiin, Julie. 2003. Sanitarium buys out Soyaworld. *Record* (*SDA, Victoria, Australia*) 108(2):3. Jan. 18.
• ***Summary:*** Kevin Jackson, CEO of Sanitarium Foods (Australia), recently announced the company successful purchase of SoyaWorld in Canada. "'On entering the initial agreement [about 2 years ago] we purchased half of the business and also negotiated an option to buy the remaining part of the company. We have now exercised our option to purchase the remaining 53% of SoyaWorld, and, as such, we now own 100 per cent of the Canadian company' said Mr Jackson on announcing the takeover."

SoyaWorld, which produces So Good soymilk, now has a 60% share of the soymilk market in Canada. Its current annual sales is about $A46 million (Australian). A photo shows Kevin Jackson. Address: Berkeley Vale, NSW, Australia.

3485. *Institutional Investor.* 2003. CEO interview with Alberto Weisser of Bunge: Taking the leap. A low-key agribusiness giant is stirring. Its seventh acquisition in roughly three years–France's Cereol–won't be its last. Jan.
• ***Summary:*** Though Bunge is not a household name, the company produces more bottled salad and cooking oils than any company in the world–but it generally sells these commodities to familiar brand-name packagers such as General Mills, Kellogg Co., Frito-Lay, Nestlé, etc. With the acquisition last year of French agribusiness Cereal, Bunge now has 24,000 in 28 countries and a very strong presence in Eastern Europe.

Bunge has recently made two major transactions: (1) Its initial public offering (IPO) in August 2001, by which the company raised $278 million by floating 23% of its shares on the New York Stock Exchange. (2) Its acquisition of Cereol, the French agribusiness, which enabled Bunge to jump from 8 million tons of oilseed processing capacity in 1997 to 32 million today. Cereol is the biggest of 7 acquisitions completed since 1999.

Bunge was founded in 1818 by Johann Peter Gottlieb Bunge, a Dutch grain trader. Descendants of the founders were still running the company in the early 1990s, however the location of its headquarters have bounced around from Amsterdam to Rotterdam, Antwerp (Belgium), Buenos Aires (Argentina), Sao Paulo (Brazil, where it stayed for 30 years), and White Plains, New York (since 1999, to be closer to the hub of international trade and finance).

Weisser, age 46 and a native of Brazil, joined Bunge in 1993 as CFO and in 1999 became CEO. Bunge has 3 main divisions: Agribusiness (which includes soybean processing), food products, and fertilizers. Though a giant, Bunge is only about half as big as ADM, the U.S. agribusiness colossus, and its market capitalizations is only about one fourth of ADM's. Bunge went public mainly to gain access to new kinds of financing–equity capital. The transition from family ownership went smoothly.

3486. Little, Janice. 2003. Dr. John Harvey Kellogg's financial problems near the end of his life (Interview). *SoyaScan Notes.* June 16. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Dr. Kellogg had increasing financial problems towards the end of his long and very productive life. The Battle Creek Sanitarium was sold to the U.S. government in 1940. He died insolvent. He and (after his death in Dec. 1943) his estate had to sell his private libraries and furniture to pay his debts. The Heritage Room of the Del E. Webb Memorial Library has a bookcase filled with Dr. Kellogg's personal books. It was donated by Dunbar Smith, who was a close friend of Dr. Kellogg.

Dr. Kellogg spent the last third of his life outside the Adventist church; he was expelled or "disfellowshipped" in 1907. Address: Library Asst., Del E. Webb Memorial Library, Loma Linda Univ., Loma Linda, California 92350. Phone: 909-558-4942.

3487. Mangels, Reed. 2003. Nutrition hotline: Omega-3 fatty acids and DHA. *Vegetarian Journal* (*Baltimore, Maryland*) 25(3):2, 23. [43 ref]
• ***Summary:*** The omega-3 fatty acid that Kellogg may be adding to its products is DHA (docosahexaenoic acid), which is usually found in fatty fish. The fish get it by eating microalgae. Martek Biosciences Corp. has skipped the fish and developed a vegetarian (and probably vegan) DHA directly from the microalgae. The health benefits of DHA and omega-3 fatty acids are discussed. "Our bodies are able to produce some DHA from alpha-linolenic acid, another omega-3 fatty acid, but we are not very efficient at this production. To maximize DHA production, vegetarians are encouraged to include good sources of alpha-linolenic acid" in their diet–flaxseed, tofu, soybeans, etc. Address: PhD, RD.

3488. Fraser, Gary E. 2003. A search for truth in dietary epidemiology. *American J. of Clinical Nutrition* 78(3S):521S-525S. Supplement. Sept. [14 ref]
Address: Dep. of Epidemiology and Biostatistics, School of Public Health, Loma Linda Univ., Loma Linda, California.

3489. Haddad, Ella H.; Tanzman, Jay S. 2003. What do

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vegetarians in the United States eat? *American J. of Clinical Nutrition* 78(3S):626S-632S. Supplement. Sept. [29 ref] Address: 1. Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

3490. Nelson, Tina. 2003. SANA [Soyfoods Association of North America] 25th anniversary celebration. September 4, 2003. Washington, DC: Soyfoods Association of North America. 2 p. 28 cm.
• ***Summary:*** A brief and superficial story of the founding of the Soyfoods Association of North America in July 1978 in Ann Arbor, Michigan. Steve Demos and Lester Karplus, who were present at both the founding and at this reception, shared their reflections of the past 25 years. She thanks the chefs who created the evening's soy delicacies: Kim Galaez, Patricia Greenberg, Dana Jacobi, and Akasha Richmond. She also thanks and acknowledges the sponsors of the evening: ADM, Cargill, Hain-Celestial Group, Kellogg / Worthington Foods, Light Life, Solae LLC, Sunrich, Tetra Pak, Vitasoy-USA, and White Wave. And she welcomes special guests from USDA, FDA, and Capital Hill.

The talks ends: "Thank you all for coming and enjoy the soy treats and the historical documents and photos with your colleagues." Address: Galaxy Foods.

3491. Rajaram, Sujatha. 2003. The effect of vegetarian diet, plant foods, and phytochemicals on hemostasis and thrombosis. *American J. of Clinical Nutrition* 78(3S):552S-558S. Supplement. Sept. [77 ref]
Address: Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

3492. Reijnders, Lucas; Soret, Sam. 2003. Quantification of the environmental impact of different dietary protein choices. *American J. of Clinical Nutrition* 78(3S):664S-68S. Supplement. Sept. [41 ref]
• ***Summary:*** This remarkable paper uses life cycle impact assessment (LCIA) techniques for evaluating dietary choices environmentally and quantitatively. Processed foods based on soy protein, one of the types evaluated, have a small environmental impact, especially when compared with meat protein, or even fish protein. The environmental burden of vegetarian foods is usually relatively low when production and processing are considered.

Technological advances have enabled dramatic increases in modern agricultural production. But with these advances, the environmental impact of food production and consumption has also increased. Many scientists, and even some policymakers, have begun to question the sustainability of agriculture as practiced today. "Particular skepticism has been directed at supporting the increased demand for animal products in the diet of economically advantaged persons of the world."

Long distance of transportation of all food by airplanes dramatically increases its environmental impact. The same is true of freezing and deep-freezing.

Of the different primary production systems, organic agriculture has the lowest environmental impact, including advantages to soil quality and biodiversity. Address: 1. Inst. for Biodiversity and Ecosystem Dynamics, Center for Sustainable Development, Univ. of Amsterdam, The Netherlands; 2. Dep. of Environmental & Occupational Health, Loma Linda Univ. School of Public Health, Loma Linda, California.

3493. Sabaté, Joan; Rajaram, Sujatha. eds. 2003. Fourth International Congress on Vegetarian Nutrition: Proceedings of a symposium held in Loma Linda, California, April 8-11, 2002. *American J. of Clinical Nutrition* 78(3S):501S-668S. Supplement. Sept.
• ***Summary:*** Joan Sabaté and Sujatha Rajaram are the guest scientific editors; both are from Loma Linda University. Sponsor: Loma Linda University. Members of the congress organizing committee (8) and advisory board (11) are listed. "Acknowledgment: The organizing committee... is thankful to Loma Linda University for providing the venues for this congress and for the continuing support in supporting the congress.

"Additional financial support was provided by: International Tree Nut Council. Loma Linda University Medical Center."

Contents: Program participants (directory, 2 p.). Preface, by J. Sabaté and S. Rajaram. Nutrient, food and dietary patterns (5 papers). Epidemiologic studies of vegetarians (3 papers). Vegetarian diets and risk of selected chronic diseases (9 papers). Nutritional adequacy and public health issues (5 papers). Environmental impact of vegetarian diets (3 papers). Address: Dep. of Nutrition, Loma Linda Univ., Loma Linda, California.

3494. Sabaté, Joan; Rajaram, Sujatha. 2003. Preface: Fourth International Congress on Vegetarian Nutrition. *American J. of Clinical Nutrition* 78(3S):501S. Supplement. Sept. [4 ref] Address: Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

3495. Sabaté, Joan. 2003. The contribution of vegetarian diets to health and disease: a paradigm shift? *American J. of Clinical Nutrition* 78(3S):502S-507S. Supplement. Sept. [58 ref]
Address: Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

3496. Sabaté, Joan. 2003. Nut consumption and body weight. *American J. of Clinical Nutrition* 78(3S):647S-650S. Supplement. Sept. [42 ref]
Address: Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

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3497. Singh, Pramil N.; Sabaté, Joan; Fraser, Gary E. 2003. Does low meat consumption increase life expectancy in humans? *American J. of Clinical Nutrition* 78(3S):526S-532S. Supplement. Sept. [52 ref]
Address: 1. Dep. of Epidemiology and Biostatistics, School of Public Health, Loma Linda Univ., Loma Linda, California.

3498. Willett, Walter. 2003. Lessons from dietary studies in Adventists and questions for the future. *American J. of Clinical Nutrition* 78(3S):539S-543S. Supplement. Sept. [42 ref]
Address: Deps. of Nutrition and Epidemiology, School of Public Health and Harvard Medical School, Harvard Univ., Boston, Massachusetts.

3499. Richmond, Akasha. 2003. Visit to Franklin Publications and *Let's Live* magazine in Santa Monica, California (Interview). *SoyaScan Notes.* Nov. 11. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Yesterday Akasha drove to Santa Monica and spent 4 wonderful hours at Franklin Publications, the owner of *Let's Live* magazine, doing research for her forthcoming book. She got to know the editor, Beth Salmon, who is very nice, healthy, and committed to healthful living. Franklin Publications has almost every back issue of *California Health News–except the entire year 1938. A National Journal of Better Living* (started in Jan. 1933 by Clark Irvine); it is a magazine a little larger than 8½ by 11 inches and in fragile condition. On 15 May 1942 he changed the name to *Let's Live.* No one has ever contacted Beth to request permission to do research at her office.

Akasha, overwhelmed with this superb, unknown collection of early food history, says: "I started to cry. They don't even understand what treasures they have." Beth has to focus on the next issue; they publish 3 magazines out of that one office. Akasha looked through the years from 1930 to 1936 and found a surprisingly large number of articles about soyfoods and pioneers in California's early soyfoods health food industry–such as La Sierra Industries, Bill Baker, California Food Kitchens, Loma Linda Foods, Paul Bragg, and Otto Carque. "Soy was just everywhere." There were ads for Yogananda's lectures and a lot of spiritual things. She took notes but did not ask to photocopy any articles. She plans to return go through the issues carefully. The *Let's Live* offices in Santa Monica are only a 15-minute drive by freeway from Akasha's home. Address: Los Angeles, California.

3500. *SoyaScan Notes.* 2003. What is titanium dioxide and how is it used with soy products? (Overview). Nov. 26. Compiled by William Shurtleff.
• ***Summary:*** According to the *Encyclopedia Britannica* (2002), titanium is a chemical element–a lightweight, high-strength, low-corrosion, structural metal. Titanium dioxide, a nontoxic, pure white powder, is extensively used as a pigment in paints, enamels, and lacquers.

The SoyaScan database presently contains 20 records that mention "titanium dioxide." From 1936 to 1961 (3 records) it is used as a pigment to whiten paints. In 1953 The Glidden Company, in a joint venture, started a large plant in Japan to manufacture titanium dioxide. From 1965 to 1981 (4 records) it is used as a tracer or tag, mixed with isolated soy proteins (ISP) or textured soy protein products, so that their presence could be detected when used in meat products. One label read: "0.1% titanium incorporated as food grade titanium dioxide in accordance with USDA regulations." In 1984, during the Reagan administration, the USDA eliminated the requirement that titanium dioxide be added to soy protein products as a tracer.

In 1993 it was used as a whitener in Mocha Mix Fat Free Non-Dairy Creamer (made by Presto Food Products). In 1997 it was used as a whitener in Rice Moo (Non Dairy Beverage Mix) (Original and Vanilla flavors, made by Sovex Foods). Also in 1997 it was used as a whitener in SoySoft Deep Treatment Penetrating Cream (made by SoySoft, Inc.) In 1988 its use as a whitening pigment for paper coatings was discussed. According to Ted Nordquist (Dec. 2003), he saw it on the label of 8th Continent Soymilk (Vanilla and Original flavors, made by General Mills) in which it was presumably used as a whitener when the product was first launched in about 2001, however (Dec. 2003) it presently no longer appears on the label.

3501. Brown, Reg. 2003. Back to the beginnings: 3. *Record* (*SDA, Victoria, Australia*) 108(47):8-9. Nov. 29.
• ***Summary:*** "This article continues a series on the history of the Adventist Church in the South Pacific." In 1897, Edward Halsey, one of Dr. John Harvey Kellogg's bakers at the Battle Creek Sanitarium, Michigan, arrived in Melbourne, Australia, and began manufacturing Granola, caramel cereal (a coffee substitute), and peanut butter. "The Sanitarium Health Food Company was registered as a business on April 27, 1898." On the advice of Ellen G. White, the health food factory was moved to Cooranbong, NSW, to be near the newly established school at Avondale.

Sanitarium Foods is the soymilk market leader in Australia. Its flagship product, So Good, enjoys almost 50% of the market share, and is also the leading brand in New Zealand, the UK, and Canada. So Good was developed at Sanitarium's laboratory at Cooranbong. "In 2002 Sanitarium purchased a Canadian company, SoyaWorld, which gives it 60 per cent of the Canadian [soymilk] market." Address: Australia.

3502. Jacobi, Dana. 2003. Serving soyfoods on Capitol Hill (Interview). *SoyaScan Notes.* Dec. 20. Conducted by William Shurtleff of Soyfoods Center.

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• ***Summary:*** Each year the American Soybean Assoc. (ASA) has a board meeting in Washington, DC. At that time they have an event for Congress. This year ASA decided to "host its first Soyfoods Luncheon," which they announced in a 2-page news release. Representative Jo Ann Emerson (R-MO) served as the Congressional host of the event. White Wave, Solae, Soyatech, and SANA sponsored the event but it (incl. Dana and her food) was paid for by ASA.

Apparently Nancy Chapman of the Soyfoods Association told ASA that Dana was a professional chef with expertise in soyfoods. So Dana got a call from Anna Pavolva of ASA inviting her take responsibility for catering this event. Dana ended up hiring a local caterer, because she lives in New York City and could not make all the preparations at such a long distance. Dana supplied the recipes and supervised the food preparation.

The event took place at lunchtime on Tuesday, 1 April 2003 at the Rayburn Building in Washington, DC. Dana was told to prepare for 200 people, but about 250-350 showed up–most of them staffers, but there were a few members of Congress. The room (29 by 52 feet, or 1,508 square feet) was packed, with standing room only. Food was served on four draped tables, buffet style like a real catered party, with real China plates (no paper plates), and spoons and forks. The attendees ate *all* the food. Dana's meatless recipes (the majority of which came out of her latest cookbook), all on one long table were: Sweet & sour meatballs. Beans and franks (Using Bratos for the franks). Macaroni salad (using ADM's Soy-7 macaroni). Honey mustard with tofu (served 3 kinds of donated soyburgers from Boca and Morningstar Farms). Chocolate velvet mousse. Edamamé. Finger sandwiches with soynut butter and jelly.

ASA hired a chef (Tod Schiller) from one of Washington, DC's premier restaurants, Kinkead's, and he conducted a cooking demonstration at the luncheon; at a second table he served a very elegant soyfoods recipe that included edamamé.

White Wave / Dean Foods had a 3rd table at which they served Silk Cappuccino soymilk out of a cooling machine. On a 4th table at the end of the room was Solae 8th Continent soymilk and Luna Bars (cut into pieces for finger foods). ASA and United Soybean Board had a 5th long table on which was information (leaflet, pamphlets) and exhibits about soybeans and soyfoods.

Dana mingled anonymously and talked with many of the staffers. "They were astounded by all the good food. This sort of event helps greatly to dispel the negative image that soy still has in terms of how it tastes and looks." Dana notes: "My interest in not in preaching to the converted, it is in introducing soyfoods to the rest of the people." Address: New York City.

3503. Reich, Egon. 2003. An unusual life: How to cope with difficulties and come out on top. Los Angeles, California: Published by the author. *
• ***Summary:*** Egon ran a marketing company that represented a baking company named Better Way Foods, located in Los Angeles. The baking company made and sold Granola and bread with Adelle Davis' name on the package. A photo shows a sign for the Granola.

Talk with Akasha Richmond of Los Angeles. 2004. Aug. 10. She talked with Egon Reich (age 75-80) yesterday. "He has been married for 50 years and is a super-nice guy." It is a fact that there was a commercial product named Granola with Adelle Davis's name on the package. Egon said it was sold in every health food store nationwide. It was never sold in grocery stores. So Adelle Davis really did help popularize granola. The Granola developed by Layton Gentry and sold (first) to Sovex in Tennessee, is different from and earlier than Adelle Davis's granola. All the royalties that Adelle received from these two foods went to start her Adelle Davis foundation. The royalties from her book served as her personal income and did not go into the foundation. Address: Los Angeles, California.

3504. Willis, Richard J.B. 2003. The Kellogg imperative: John Harvey Kellogg's unique contribution to healthful living. Alma Park, Grantham, England: The Stanborough Press Ltd. 110 p. Illust. No index. 21 cm. [90 ref]
• ***Summary:*** Contains a list of books by Dr. John Harvey Kellogg (alphabetically by title), a good bibliography, and 12 pages of black-and-white photos related to Dr. Kellogg. Unfortunately this book has no index.

However Willis makes this profound observation in the caption to a portrait photo: "Dr. John Harvey Kellogg, whose scientific approach to the wonders of life brought a new orthodoxy to health reform, formerly the domain of many outlandish ideas." Address: Health educator.

3505. Little, Janice. 2004. Organization of information on Seventh-day Adventist food companies worldwide at Del E. Webb Memorial Library (Interview). *SoyaScan Notes.* Feb. 20. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The best collection is on the Loma Linda Food Co. When they started in 1906 (as Sanitarium Food Co.), they were a very small operation and were located about 35-40 miles away next to the Sanitarium in Loma Linda, California. Then in the 1930s, they realized they needed a bigger facility, so they moved the factory about 35-40 miles to La Sierra / Arlington–which is now a suburb of Riverside.

Most of the information on Loma Linda Food Co. (LLF, other than books and periodicals–such as *Today's Foods*) is located in either of two places: (1) The vertical file, which has 10-20 published pamphlets, brochures, etc. (2) The SDA (Seventh-day Adventist) document files, which are expanding archival files with numerous subfiles–also stored in file cabinets. Each file has an archival record in their database and typically contains hundreds of documents. The

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Loma Linda Food Co. file is No. 3574. The subfiles for LLF are: History, promotional brochures, labels, correspondence, minutes & committee actions, International Research Foundation and Laboratory (Dr. Harry Miller). In addition, there is material in boxes "all over the place" that has not been cataloged and is sometimes hard to locate.

Each Seventh-day Adventist food company, worldwide, has similar files in the library–which is typically open 9-5 Mon-Thurs, and 9-1 Friday. Researchers can stay in a local hotel (ca. $50+/night), and sometimes in the boys dormitory at Loma Linda University. Los Angeles in about 90 miles away by car–depending on the traffic. Address: Library Asst., Del E. Webb Memorial Library, Loma Linda Univ., Loma Linda, California 92350. Phone: 909-558-4942.

3506. Drosihn, Bernd. 2004. Update on soyfoods in Europe. Part II (Interview). *SoyaScan Notes.* March 15. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Soymilk: A major new soymilk maker in Europe is named Wild (www.wild.de), an old German food company that specializes in fruits and ingredients; their retail soymilk is named Soy and Joy. Their most famous brand is Caprisun, a non-soy drink in a foil pouch, well known in the USA. They and So Good, the Australian soymilk now made with Solae, are both strong competitors of Alpro.

Several weeks ago Hain-Celestial of New York purchased two German soymilk makers, both owned by Bruno Fischer, Jr.: Natumi and Gut Honneroth. He sold both companies at a low price–probably because he had to. Bruno had gotten his soymilk into Aldi, the mother company of Trader Joe's and the No. 1 discounter in Germany–and maybe in all of Europe, and he developed a large soymilk business with Aldi–perhaps so large he could no longer handle it himself. Bruno also made a lot of private label soymilk. With Hain, Bruno found a large German dairy to make soymilk for Aldi under a new Aldi brand. The new European CEO of Hain-Celestial is Philippe Woitrin, who was CEO of Lima Foods when Hain acquired it.

Triballat makes the best soy yogurts (Sojasun brand) in the world–in Bernd's opinion. They have a new brand, Sojadé, which are delicious creamy yogurt drinks–maybe organic. The Japanese Yakult concept of drinking live beneficial probiotic bacteria each morning has now caught on in a big way in Europe. Yakult is one of the best entries into the European food market in years. Bernd just saw White Wave's Silk Alive [the name was soon changed; it was sold commercially only under the name "Silk Live"], a similar product, at the Anaheim Natural Products Expo. But he liked the Wildwood smoothie even better, and the WholeSoy fermented soymilk best of all American products.

In France a small company named Sojami (pronounced so-zha-MEE), which started about 10 years ago, makes very creative, unique, and interesting soy cheeses and cultured soy yogurts. The founder has a university research background and is a very nice guy.

Tofu: Tofu consumption in Europe has expanded steadily over the past 5-7 years, but it is still a very small product. The largest maker of the tofu and tofu products sold in Germany is Life Food GmbH / Taifun Produkte, run by Wolfgang Heck and Guenter Klein. Heuschen-Schrouff B.V. (Landgraaf, Netherlands) and Viana are tied for second place. About 10 years ago, Heuschen-Schrouff started selling their tofu under the organic So Fine brand (www.sofine.nl). An Indian-run company in Kerkrade, Netherlands, run by the brothers Singh (both Sikhs), makes tofu mostly for the Asian (Indonesian) market. In 2001 Viana started selling its tofu to the mainstream market under the Veggie Life brand; this English-language brand name communicates well to people speaking many different languages throughout the EU (European Union)–though distribution is still limited to Germany and Austria. Soto Tofu, formerly run by Rolf Barthof has been sold to a very large dairy company, Algäuland. Viana's main products are tofu and tofu products–such as meat and cheese alternatives. Viana is #1 in Germany in meat alternatives. Germans buy soyfoods for three main reasons: They are good for one's health, they taste good, and good for the environment. Bernd is a vegan, but about 90% of Viana's products are sold to non-vegetarians.

Early tofu companies still active in Europe include Sojafarm (founded and still run by Lothar Stassen), Albert's Tofuhaus (Albert Hess; exports lots of his products to France). A basic problem with the smaller, early tofumakers in Germany is that they didn't have the creativity or power to put a brand on the market. So both these companies produce a lot of tofu under private labels. Lothar bought the Svadesha brand (Svadesha was the first German tofu company) and produces tofu under the Svadesha brand. About 2-3 years ago he also purchased the Nagel's Tofu brand from Christian Nagel, who now markets the tofu under his former brand. So Lothar makes tofu under 3 brands. Berief Feinkost (in Beckum, northern Germany), started 10-15 years ago, tries to cover the mainstream tofu market, but not very successfully. Kassel Tofu Kato (started by Gyoergy / Yuri Debrecini, who was at Soyastern). Thomas Karas is no longer involved with soyfoods; he tried to enter the computer business but Bernd does not know what he is doing now. In Spain, the market leader is Natursoy near Barcelona. Nearby is Salvador Sala of Vegetalia. In Spain, there is a lot of interest in and rapid growth of soyfoods and organic foods. In Italy the Ki Group (Schenker) owns a tofu company–fairly old but not very creative.

In the United States, Pulmuone now has three U.S. factories; their first one in Southgate, southern California, a new one at Fullerton, California, and a 3rd one in New York. The Fullerton factory is the most modern Bernd has ever seen. There they make Gourmet Tofu, introduced in about Jan. 2004, which is presliced and marinated, in 4 flavors / styles: Baked, Sliced, and Marinated.

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Meat alternatives: Nestle now owns Osem which owns Tivall, the Israeli maker of meat alternatives. Since all of Tivall's products are held together by eggs or egg whites, none of them are vegan–and none are organic. Quorn, which also contains lots of egg protein, is owned by AstraZeneca [Marlow Foods]–which wants to sell the company because growth and profits have been lower than expected. DE-VAU-GE in Germany is a very big company, they make large amounts of meat alternatives (incl. burgers), and they do a lot of business with Aldi in breakfast cereals–not in soyfoods. Bernd thinks they are good, and very economical manufacturers, but they are not very creative and they have no USP (unique sales point); moreover, many of their products contain egg protein, but their quality is lower than that of Tivall. Bernd believes his meat alternatives are as good as Tivall's, but more expensive, in part because of organic ingredients. Tivall makes its raw materials in Israel, then exports these to Europe for cutting and flavoring.

Klaus Gaiser owns Topas which sells Viti brand meat alternatives based on wheat gluten, with no soy; he owns the brand and markets the products, but he has meat companies manufacture them. However, when his typically 3-year contract with the manufacturer expires, he has to find a new manufacturer, but the previous one keeps making his products under their own brand. In the USA: At Turtle Island Foods (Hood River, Oregon), Bernd met Hans Wrobel, a German who does product development. Note: Hans and Rhonda Wrobel of The Higher Taste developed Tofurky in Portland, Oregon. Bernd makes Pizzarella, a tofu-based cheese alternative. Address: Founder and president, Viana Naturkost GmbH, 54578 Wiesbaum / Vulkaneifel, Germany. Phone: +49 06593-99670.

3507. Burt, Merlin D. 2004. Keeping the vision alive. *Adventist Heritage Ministry Bulletin* (*Silver Spring, Maryland*) 17(2):1. March/April.
• ***Summary:*** "During the spring of 1844, Elder Fredrick Wheeler accepted the Sabbath through the efforts of a Seventh Day Baptist widow named Rachael Oaks. He was probably the first 7th day Sabbath-keeping Adventist minister in North America.

"Soon after he accepted the Sabbath a Millerite camp meeting was held just south of Washington in Hillsboro, New Hampshire." The outdoor meeting, and its benches, tents, and music is described. This camp meeting "may have been the first where the Sabbath was presented to Millerite Adventists by Frederick Wheeler. During the summer of 1844, another Adventist minister in Nashua, New Hampshire, named T.M. Preble also accepted the Sabbath perhaps under the influence of Frederick Wheeler.

"Preble in turn wrote an article and tract on the Sabbath in February and March 1845 that convinced Joseph Bates. Bates then wrote tracts which convinced others such as James and Ellen White and Hiram Edson to keep the Sabbath." Address: PhD, Director, Center for Adventist Research, Ellen G. White Estate Branch Office, Andrews Univ. [Berrien Springs, Michigan].

3508. *SoyaScan Notes.* 2004. How health foods came to America and Los Angeles–starting with the American Health Food Co. of New York City, and Dr. John Harvey Kellogg of Battle Creek, Michigan (Overview). May 24. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** First came American Health Food Co. of New York City. The idea of making and selling health foods in American originated in Battle Creek, Michigan, the brainchild of Dr. John Harvey Kellogg–who was a Seventh-day Adventist, an influential "health reformer" who wanted to change American eating habits, a vegetarian, and the head of the Battle Creek Sanitarium, one of America's most famous and respected hospitals from the late 1800s until the mid-1930s. He lived to age 91.

In Aug. 1866 he started *The Health Reformer,* a periodical published in Battle Creek, of which he was the editor and publisher. He used it to disseminate new ideas on health and diet reform.

In Jan. 1879 he changed the name of his magazine to *Good Health,* which soon developed a very large circulation. An excellent publication, it continued until 1953.

In the early 1880s, Dr. Kellogg felt the need to supply healthy vegetarian foods to Sanitarium patients. In Dec. 1882 he established the Sanitarium Food Department, his first food manufacturing company. Initially it made foods for patients, but after these patients returned to their homes, they began to order the unique foods that had been prescribed for them at the Sanitarium. Thus, a small mail order business developed. The early foods were mostly baked goods (such as crackers, wafers, and diabetic foods) with a low moisture content and long shelf life.

Dr. Kellogg then realized that there was a potential nationwide, even worldwide, market for the many new foods he was developing since Seventh-day Adventists were active starting other sanitariums and vegetarian restaurants across America and in Australia and the UK. Between 1896 and 1908 he started several early commercial food manufacturing companies: Sanitas Food Co. (by Feb. 1896), Battle Creek Sanitarium Bakery (July 1896), Battle Creek Sanitarium Health Food Co. (Nov. 1896; this was the world's first company to have the term, "Health Food" in its name), Sanitas Food Co. (July 1900), Battle Creek Sanitarium Food Co. (July 1901), and Battle Creek Food Co. (1908).

Among the early foods that Dr. Kellogg developed were the first meat alternatives (based on finely ground nuts) and the first nut butters (he invented and patented peanut butter). Brand names included Nuttose (by July 1896), Protose (1899), and Malted Nuts (1900; a dairy alternative resembling malted milk made primarily from peanuts and almonds). Being an extremely generous man, dedicated

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helping humanity, Dr. Kellogg gave other Seventh-day Adventists the right to use his formulas to make foods in other countries–free of charge!

By the late 1890s, Dr. Kellogg began to advertise and promote these foods widely–especially in his own magazine. By Sept. 1899 they were being sold in Sydney, Australia and Los Angeles, California–both places on the edge of the known world! A column in the *Los Angeles Times* (Sept. 24, p. 28) titled "Care of the body," states: "During the past few years a great number of new foods, composed of nuts and other products, have been placed on the market, so that those who prefer to abstain from flesh food have a large variety of other foods to choose from. In London there are probably twenty of these restaurants. There are many vegetarians in Los Angeles, and it seems that a first-class vegetarian restaurant, conducted by some one who understands the business, should be a paying investment."

Less than four months later the wish has been granted: The same column (7 Jan. 1901, p. IM27), in a section titled "A vegetarian restaurant," reports: "Los Angeles now has a first class vegetarian restaurant and it appears to be well patronized. The restaurant, which also keeps health foods for sale, is connected with a well-known hygienic institution [Battle Creek Sanitarium] in Michigan, which manufactures these foods on a large scale, and has branch sanitariums all over the world."

Kellogg's goal of helping to establish vegetarian restaurants and providing them with healthy foods was being realized. In Jan. 1904 his magazine *Good Health* published a directory of "Vegetarian cafes and restaurants." It gave the name and address of (amazingly) 29 of them in the United States alone–with more overseas. Most of them, no doubt, sold Battle Creek health foods to help them pay the rent.

The pioneer in making and selling health foods in Los Angeles was Otto Carqué. He and John Harvey Kellogg had much in common. They both had very original, creative minds, both were vegetarians (Carqué wrote his first book on vegetarianism in 1904) and deeply interested in what they believed was the strong connection between diet and health, both were good businessmen, and both (quite selflessly) dedicated their lives to making the world a better place and helping others.

By the summer of 1906, Carqué was creating a new industry for southern California: unfermented grape juice. He had invented a new and lower cost process for putting up the delicious juice in wooden barrels instead of the usual glass bottles. On Aug. 19 the *Los Angeles Times* wrote: "Mr. Carque put about 25,000 gallons of grape juice in barrels last fall and expects to turn out a larger quantity this season." About 2 years later (25 Oct. 1908) the *Times* reported that Carque had spent the summer in Fresno and Sonoma counties, "where he put up about 500,000 gallons of unfermented grape juice."

Carqué began to focus his considerable talents on southern California's most precious food resource: Fruit. He learned how to dry many kinds of fruit without the use of sulphur, and he became known as the father of the Black Mission Fig. By Jan. 1912 he decided to start what was (so far as we know) the first health food store in Los Angeles. But he also processed many of the foods that he sold. His original tiny classified ad in the *Times* (Jan. 18, p. I7) read (in full): "Wanted–Boy with wheel to assist in manufacturing of health foods; vegetarian preferred. Otto Carque, 943 West 12th st. Home Phone 52269. Call early." In addition to his own line of fruits, he carried foods made by Dr. Kellogg in Battle Creek, Michigan–foods which he had probably first seen in the Los Angeles' first vegetarian restaurant, the "Vegetarian Cafeteria," run by Seventh-day Adventists.

On 15 Aug. 1912 Carque incorporated his company, together with three other people.

By Oct. 1923 his shop, now named The Carqué Shop, had been remodeled and was located at 2618 West 7th St. in Los Angeles. Widely publicized with attractive ads in the *Times*, it now sold foods under the brilliant registered trademark "Natural Foods of California." Carque had coined the term "natural foods" in its modern meaning–i.e., unrefined and unadulterated.

Soon others began to follow his lead. On 18 Oct. 1926 "Hain Health Foods" opened its first store at 329 W. 3rd St.

By 4 Oct. 1925 the Carque Pure Food Company, Inc. had moved into The Natural Foods Building, 729 Seward St., in Los Angeles. This became his new factory and manufacturing company. On 23 July 1927 Hain opened a second store.

By the late 1920s the health food industry in Los Angeles was a small but growing enterprise–with Otto Carque as its admired, indeed beloved, godfather. But no one at that time could have dreamed of the heights it would reach or the influence it would have on America (and Hollywood) during the next three decades.

3509. Kellogg NA Co. 2004. Olivia Newton-John. Born 1948, Cambridge, England. Kellogg's Smart Start Soy Protein (Ad). *Vegetarian Times.* May. p. 24.
• ***Summary:*** This full-page color ad is for Smart Start breakfast cereal. A large photo shows Olivia Newton-John singing.

3510. Mason, David. 2004. Memories of Bill Baker of Ojai, California (Interview). *SoyaScan Notes.* June 9. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** David did not know Bill Baker but he has written various articles about him. He still has copies of all these articles and some photos of Baker and his bakery. Many scrapbooks containing hundreds photos concerning Bill Baker are in the Ojai Museum; contact Jane T. McClenahan, executive director (805-640-1390).

In 1928 the St. Francis Dam (205 feet high) burst /

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failed; it was located in San Francisquito Canyon about 10 miles north of the town of Saugus in Los Angeles County. It held 38,000 acre feet of water from the Owens Valley. Its failure (due largely to the inappropriateness of the geological substrate) resulted in the birth of engineering geology.

When the dam burst, Bill Baker rushed to the rescue. He wanted to do something big both to help the people there and to promote his bakery. He supplied all the shelters and trucked over free fresh bread to the survivors in Santa Paula and Fillmore.

The Santa Barbara Earthquake took place in June 1929. Again, Baker rushed to the rescue and provided bread.

The source of information about his death related to poison oak probably came from the long obituary published in the *Ojai Valley News* in 1942. Rose Boggs of Ojai (805-646-3659) is an authority on Bill Baker, tried to have his bakery established as an Ojai historic site, and is thinking about writing a book about him.

Talk with Janice Little of Del E. Webb Memorial Library, Loma Linda Univ., Loma Linda, California 92350. 2004. June 28. When this dam broke, many Seventh-day Adventist doctors, nurses, and others rushed to the site to try to save lives and be of help. Address: Ojai, California 93023.

3511. The history of St. Helena Hospital. Chapter VI– The Sanitarium Food Company. 2004. http://www.sthelenahospital.org/anniversary. Printed June 23.
• ***Summary:*** The Sanitarium Food Co. operated at the St. Helena Hospital in St. Helena, California, from 1898 to 1920. It was founded by John A. Burden, the business manager of the hospital, who was also a visionary and a true entrepreneur. Burden came to St. Helena in 1891.

In 1898 the food company started production in a small building north of the original Sanitarium building. One early product was whole-wheat bread.

In 1901 a four-story building was opened on Sanitarium Road. State-of-the-art machinery included two large reel ovens, five granose flake machines, a granose mill, and a wine press for making unfermented grape juice. Rol Rose, the manager of the facility for over 20 years, supervised 32 employees." Products included Zwieback, Granose flakes and biscuits, Caramel Cereal Coffee ([grain coffee] similar to Postum; made from roasted grains), peanut butter, grape juice, malted nuts, and Nut Cereo and Nut Loaf (vegetarian meat alternatives which are known today as Nuteena and Proteena). Gives additional history.

Sources: (1) *The vision bold: An illustrated history of the Seventh-day Adventist philosophy on health*, by Warren L. Johns and R.H. Utt (1977). (2) An historical narrative from the 100th Anniversary Celebration. (3) http://www.gilead.net/egw/books. (4) St. Helena Star. 2001. Sept. 6. Article on the 100th anniversary of Foothills School. (5) Spectrum Magazine. 1977. Jan. Address: St. Helena, California.

3512. Little, Janice. 2004. Pacific Health Journal published in Oakland, California (Interview). *SoyaScan Notes.* June 28. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** *Pacific Health Journal* was a Seventh-day Adventist periodical published by Pacific Press Publishing Co. in Oakland, California. It was published from 1885 to 1904. Like all SDA periodicals related to health, it advocated a vegetarian diet. For a while, the SDA church was publishing dual health journals, one published on the West Coast by the Pacific Press Coast (California) and the other (*Life and Health*) on the East Coast by the Review and Herald Publishing Co. (Maryland). The prevent redundancy, the two eventually merged in about 1904 or 1905.

Current SDA health periodicals are *Life and Health* and *Vibrant Life.* Address: Library Asst., Del E. Webb Memorial Library, Loma Linda Univ., Loma Linda, California 92350. Phone: 909-558-4942.

3513. Cohen, Robert. ed. 2004. Food for thought: Words to live by from Ellen G. White. Garden City Park, New York: Square One Publishers, Inc. 208 p. 22 cm. *
• ***Summary:*** Contains over 400 inspiring quotations from the writings of Ellen G. White (1827-1915). Paired with each of White's inspiring thoughts are the voices of such noteworthy individuals as William Shakespeare, Thomas Edison, Florence Nightingale, Mother Teresa–who provide further food for thought. The quotations are arranged topically and alphabetically.

3514. Zinko, Carolyne. 2004. At 60 he swam to Alcatraz handcuffed. As he turns 90, Lalanne has his eye on Catalina Channel. *San Francisco Chronicle.* Sept. 24. p. S1, S17. Datebook section.
• ***Summary:*** Jack LaLanne was born on 26 Sept. 1914 in San Francisco, California. His parents were French immigrants, a house maid and a telephone installer. He grew up in Berkeley and was a sickly kid with pimples and an addiction to sugar. Then his mother, a Seventh-day Adventist, took Jack to hear Paul Bragg lecture at the Oakland Women's City Club. He "took one look at Jack and told the audience, 'It matters not what your age is or your physical condition, if you obey nature's laws, you can be born again.'" Bragg "advised against eating white sugar, white flour, red meat, and processed foods. That night Jack got down on his knees and prayed, asking God to help him turn his life around and promising to help others in return." He changed his diet and started lifting weights. He became captain of the school football team. His friends, impressed by his physical transformation, began working out with him in his backyard. Today, a force of nature, still swims laps in his private swimming pool at Morro Bay.

In 1936 Jack "started America's fitness craze" with a gym (Jack LaLanne's Physical Culture Studio) in Oakland in 1936. In 1951 he began hosting a live exercise show on

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KGO-TV. After a few years, it expanded to Los Angeles. At age 42 (in about 1956) he first went on national TV doing 1,000 push-ups in 19½ [then 1,033 push-ups in 23 minutes] minutes on Art Baker's "You Asked for It." In 1959 the "Jack LaLanne Show" went national and ran for a total 34 years in the USA, Europe, and Russia. Jack is still urging Americans to give up their unhealthy ways, to eat right, and to exercise daily.

He has always liked publicity stunts: At age 40, he towed a 2,000-pound cabin cruiser as he swam the Golden Gate Channel. "At 60 he put handcuffs on his wrists and swam from Alcatraz to Fisherman's Wharf while towing a half-ton boat. At 70 he swam a portion of the Long Beach harbor with 70 people in 70 boats tied to his back." At age 90 he plans to "swim 22 hours underwater (with air tanks or a hose to the surface) the 26 miles from Catalina Island to Los Angeles.

The life goal of America's "original fitness guru" has always been to help others–because he still believes his life was changed by diet and exercise. Photos show: (1) Jack in his swimming pool (color). (2) Jack and his German shepherd, Happy; they were household names during the 1950s and 1960s. (3) Jack and his wife, Elaine, standing and laughing together as they enjoy an exercise break at their Morro Bay home. Address: Staff writer.

3515. Hottinger, Greg. 2004. The best natural foods on the market today: A yuppie's guide to hippie food. Vol. I. Asheville, North Carolina: Huckleberry Mountain Press. 223 p. Index. 23 cm. [94 ref]

• ***Summary:*** This book looks very commercial because it mentions many natural products by brand name. We wonder if companies paid to be mentioned. Contains scattered recipes for branded products, and scattered sidebars titled "Hippie wisdom." Discusses: Almonds, almond butter, almond milk, American Miso Co., antibiotics (used in agriculture in 4 different ways; prevention, treatment, and control of disease, and growth promotion. In 1998 the European Union banned the use of antibiotics to promote growth in livestock. In Oct. 2000 the FDA proposed a ban on two antibiotics also used to treat humans), antioxidants, Bifidobacterium (bifidus), bovine growth hormone, bovine somatotropin (BST), Bragg Live Foods, Bragg Liquid Aminos, breast cancer, calcium, canola oil, celiac disease, cereal & Kellogg Brothers, cheese alternatives, dulse, edamame, Eden Foods (says "Eden Foods opened shop in 1968. By 1969 they were grinding their own flours and bottling their own oils and nut butters"), FDA, flaxseed oil, Galaxy Foods (says they "started in 1972 when founder Angelo Morini invented a new way to make a cheese product free of saturated fat, cholesterol, and the milk sugar, lactose"), genetically engineered foods, ghee, ginger, gluten sensitivity, glycemic index, GMO [genetically engineered] crops, Graham–Sylvester, heart disease, hippie foods, Horizon Organic, hormones, Lactobacillus, lactose intolerance, Lappe–Francis Moore, Lightlife Foods, magnesium, Maine Coast Sea Vegetables, Messina–Mark, milk–problems with, miso, Miso Master brand, nutritional yeast, oils, olive oil, omega-3 and omega-6 fatty acids, organic farming, palm oil, phytochemicals, phytoestrogens, prostate cancer, protein, Red Star nutritional yeast, quinoa, saturated fat, sodium, soymilk, soy products, soy sauce, soy supplements and concerns, soy yogurts, spelt, Stonyfield Farm, tahini, tamari, tempeh, trans fats (hydrogenated oils), WholeSoy Company. Near the back are many color coupons for the companies mentioned in the book by name. Address: MPH, RD, Asheville, North Carolina.

3516. Iacobbo, Karen; Iacobbo, Michael. 2004. Vegetarian America: A history. Westport, Connecticut, and London: Praeger Publishers. xvi + 267 p. Illust. Index. 25 cm. [447 ref]

• ***Summary:*** An excellent history of the vegetarian movement in the United States from the late 1700s to the present–extremely well researched, well documented, and original. There have been three major waves of interest in vegetarianism, each beginning about 70 years apart. The first was in the 1830s and 1840s, and included Sylvester Graham and William Alcott. The second was from about 1900 to 1930. And the third and current period began in about 1970.

Contents: 1. Seeds are sown: Native Americans, Benjamin Franklin, Johann Conrad Biessel (1691-1768; founded Seventh-Day Baptists, Ephrata Cloister in Pennsylvania), vegetarian Dunkers, William Dorrell and The Dorrellites (Leyden, Vermont), John Wollman (Quaker) and his journal, Herman Daggett, L. Du Pre, Johnny Appleseed (John Chapman, follower of teachings of 18th century Christian mystic and vegetarian Emmanuel Swedenborg), Joshua Evans. 2. Abstinence from fleshfoods: Christian vegetarians, and the English connection: Percy Bysshe Shelley, George Nicholson, Joseph Ritson, Rev. William Cowherd and the Bible Christian Church of Salford, William Metcalfe comes to the Philadelphia 1817 and establishes the Bible-Christian Church.

3. Sylvester Graham, Grahamism, and the Grahamites: Cholera epidemic, Graham's preventive medicine, why vegetarian?, Jacksonian era dining habits, Graham bread, Jacksonian era medicine, Isaac Jennings, Asenath Hatch Nicholson, Dr. John Burdell, Graham in the press, William Andrus Alcott and *The Moral Reformer,* American Physiological Society (APS) in Boston, founded in 1837, Mary Gove Nichols, *The Graham Journal of Health and Longevity,* the vegetable diet, Dr. Luther V. Bell and his prize-winning essay, Dr. Milo L. North, Asa Mahan and Charles Finney of Oberlin College [Ohio], Dr. Reuben Mussey, Grahamites and anti-Grahamites, J.J. Flournoy, abolitionists and transcendentalists, A. Bronson Alcott (father of Louisa May) of Concord, Massachusetts, nonviolence

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and Thoreau, James Pierrepont Greaves, Ham Common, Alcott House, William Lambe and the Physiological and Health Association, Fruitlands, abolitionist-vegetarians, Orson S. Murray, Horace Greeley and Mary Youngs Cheney (his wife), Graham's teachings on physiology and anatomy, William Metcalfe's book *Bible Testimony on Abstinence from the Flesh of Animals as Food...* (June 1840), Larkin B. Coles.

4. The American Vegetarian Society (AVS, organized in 1850 by William Metcalfe): First convention on 15 May 1850 in New York City, the society's periodical *The American Vegetarian and Health Journal* (Nov. 1850–Oct. 1854), Joel Shew and water cure / hydropathy, John Grimes and the first Vegetarian Festival in New York City (Christmas, 1851), feminism, Anne Denton, Charles Lane, death of Sylvester Graham, Dr. Russell Trall, Graham's legacy, front-page headlines in 1853 at the Vegetarian Festival (guests incl. Trall, Greeley, James Caleb Jackson, Frances Dana Gage, Lucy Stone, Susan B. Anthony, and Emilia Bloomer), New York Vegetarian Society (est. 1852), decline of AVS, Henry Stephen Clubb, Fowler & Wells, *The Water Cure Journal*, Quaker Jeremiah Hacker, Thomas Low Nichols.

5. The water cures, Seventh-day Adventists, and the Civil War: Henry Clubb, Octagon Settlement in Kansas (1856), Dr. James E. Spencer and the Harmonial Vegetarian Society in Arkansas (1857), James Caleb Jackson, Our Home on the Hillside, Dr. Harriet N. Austin, Seventh-day Adventists, Millerites, Ellen G. White, drugless medicine, Dr. Russell Thacher Trall, end of AVS with the death of Wm. Metcalfe.

6. The Civil War to the end of the century: Dr. Mussey, Rev. Henry Ward Beecher, Henry Clubb keeps vegetarianism alive in America (though its lacks a national organization), John Harvey Kellogg, Isaac and Susan Rumford and Joyful News, California, Victoria Woodhull, Clubb founds the Vegetarian Society of America (VSA) in 1886, the VSA cookbook, and its periodical *Food, Home and Garden*, Chicago Vegetarian Society, Rev. A.T. De Learsey, Annie Besant, the New Thought movement, Charles and Myrtle Fillmore found the Unity School of Christianity in Missouri, Ralph Waldo Trine, Chicago World Exposition of 1892 (Illinois), William Axon is secretary of the Vegetarian Federal Union, vegetarian society formed in Washington, DC, vegetarian lectures at the Chicago World Expo, Alice Stockham, Dr. Susana Way Dodds, Dr. Martin Luther Holbrook, *The Herald of Health* magazine (Trall), vegetarianism and Christianity, J. Howard Moore, Lawrence Grunland, Henry Perky and his New Era Cooking School, 1895 gathering of vegetarians to celebrate Thanksgiving at University of Chicago, the animal question and ethical vegetarianism, antivivisection movement.

7. The Progressive Era and the rise of vegetarianism: It followed the Gilded Age and the Victorian Era, women's suffrage and vegetarianism, refrigeration expands food choices, vegetarian foods developed at the Battle Creek Sanitarium and Sanitas Nut Food Co. (Michigan), peanuts and meat substitutes, Dr. John Harvey Kellogg, Lena Francis Cooper, vegetarianism in the media, George Bernard Shaw, Sarah Bernhardt, General William Booth and the Salvation Army, athletes and showmen, Eustace Miles, Karl Mann, walking and cycling, Bernarr Macfadden and his *Physical Culture*, his chain of vegetarian restaurants in New York City, scientific evidence in favor of vegetarianism, M.E. Jaffa, Dabney, E.V. McCollum, Russell H. Chittenden of Yale, Nicola Tesla, Kellogg's *Good Health* magazine, Upton Sinclair and *The Jungle*, passage of the 1906 Pure Food and Drug Act and the Meat Inspection Act, Hereward Carrington, Ernest H. Crosby, glamorous socialite Mrs. Maude R.L. Hammer Sharpe, the Millennium Guild (1912), M.R.L. Freshel, Benedict Lust and naturopathy, Kellogg battles the meat industry, the *Vegetarian Magazine*.

8. The Depression to the sixties: The lean years: Eat more meat, the soybean, Jethro Kloss, Henry Ford, World War II, Symon Gould, John Maxwell, Dr. Christopher Gian-Cursio, Herbert Shelton and natural hygiene, Dr. Jesse Mercer Gehman, *Recovery of Culture*, by Henry Bailey Stevens, the American Vegetarian Party found in 1948 by Symon Gould, its first presidential candidate was John Maxwell, Dr. Mervyn G. Hardinge, H. Jay and Freya Dinshah, American Vegan Society.

7. Peace, love, and vegetarianism: The counterculture of the 1960s and 1970s: Socialites Pageen and Ed Fitzgerald, the California scene, Gypsy Boots, drugless doctor Pietro Rotundi, Los Angeles Vegetarian Society, Bianca Leonardo, Woodstock, Hog Farm commune of New Mexico, Wavy Gravy, Lewis B. Marvin, Lisa Laws, Yogi Bhajan, Golden Temple restaurant, Haight-Ashbury, hippies, The Farm and Stephen Gaskin in Tennessee, the soy dairy, *The Book of Tofu*, by Shurtleff & Aoyagi, Helen & Scott Nearing, *Diet for a Small Planet*, Nellie Shriver and Connie Salamone, *Vegetarian Times*, PETA, Isaac Bashevis Singer, North American Vegetarian Society, the press, William Blanchard and *Vegetarian World*, McGovern Report.

10. Vegetarianism has arrived: Animal rights, popular vegetarian cookbooks, vegetarianism and the environment, John Robbins and *Diet for a New America*, new scientific evidence, Dr. Neal Barnard and PCRM, Suzanne Havala, Howard Lyman, the movies and television, new vegetarian foods, the Internet, the Atkins Diet attack.

Photos show: (1) William Metcalfe. (2) Sylvester Graham (illust.). (3) William Alcott. (4) Front page of *Graham Journal of Health and Longevity* (16 Feb. 1839). (5) Reuben Mussey, M.D. (6) A. Bronson Alcott in top hat and cape. (6) Henry S. Clubb. (7) James Caleb Jackson. (8) Ellen G. White. (9) Russell T. Trall. (10) John Harvey Kellogg, M.D., dressed in white, riding a bicycle. (11) Menu cover of The First Vegetarian Restaurant, Carl Rasmussen, proprietor. (12) Battle Creek Sanitarium. (13) Bernarr MacFadden on

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the cover of *Physical Culture* magazine (Sept. 1902). (13) Cover of *Good Health* magazine (Aug. 1898). (14) M.R.L. Freshel. (15) Cover of *The Vegetarian Magazine* (July 1924). (16) Constantina "Connie" Salamone. (17) Ingrid Newkirk of PETA. (18) PETA poster "Does your food have a face? Go vegetarian." (19) Neal Barnard, M.D. of PCRM. (20) Suzanne Havala Hobbs. (21) Howard Lyman. (22) VivaVegie's Penelo Pea Pod. (23) Two PETA spokeswomen with signs outside Rhode Island State House. (24) Bruce Friedrich of PETA.

Note: This book has several weak points: (1) The authors repeatedly confuse a vegetarian diet with a "plant-based" (vegan) diet. (2) The history focuses too much on the story of individuals and not enough on the great historical forces by which those individuals are shaped. Address: 1. Journalist, researcher, and Adjunct Prof. of English at Johnson and Wales, Univ., Rhode Island; 2. Journalist who has worked for the Associated Press, the Providence Phoenix, and other publications.

3517. White, Ellen G. 2004. God's nutritionist: Pearls of wisdom from Ellen G. White. Edited by Robert Cohen. Garden City Park, New York: Square One Publishers, Inc. xvi + 173 p. Foreword by Agatha Thrash, M.D. No index. 22 cm. [500* ref]

• ***Summary:*** As a spiritual leader, prolific writer, and pioneer nutritionist, Ellen G. White (1827-1915) had a profound effect on people around the world. Today her words still guide millions of individuals. "Her books have been translated into more languages than those of any other author in the history of American literature. Yet few outside the Seventh-day Adventist Church know of her work–that is, until now. In this unique book, editor Robert Cohen has blended Ellen White's most insightful quotations on health and nutrition with current scientific facts that confirm her views. She generally advocates a simple, vegetarian diet.

"Here are 500 of Ms. White's 'pearls of wisdom'–words that are as practical, insightful, and moral as they are accurate." The source of each is cited, but not precisely. Robert Cohen, the editor, is a Seventh-day Adventist. Her views on dairy products changed over the years.

3518. Loma Linda University School of Nursing. 2005. A century of caring (Calendar). Loma Linda, California. 28 p. 22 x 28 cm.

• ***Summary:*** Contents: A message from the dean. About the School of Nursing. Page per month calendar. "The School of Nursing, established in 1905, was the first in a group of schools which in 1961 became Loma Linda University." The inspiring mission is described and the number of diplomas and degrees listed. As you open to any month, on the top page is an historic photo about the nursing school, on the bottom page is calendar for that month plus a caption explaining the upper photo. Address: Loma Linda, California.

3519. Loma Linda University; Loma Linda University Medical School. 2005. Fulfilling the global vision: Centennial gala, Sunday, February 13, 2005, Loma Linda University, Drayson Center. Loma Linda, California. 42 p. 28 cm.

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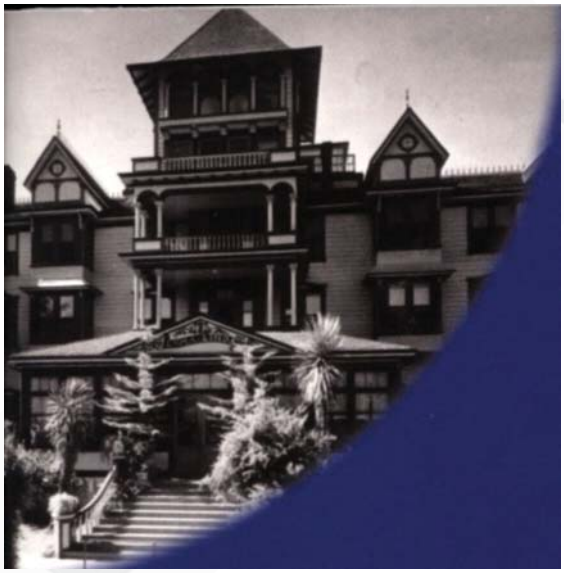

Summary: Contents: Welcome. Loma Linda University Adventist Health Sciences Center leadership. Message from the chair of the board. Loma Linda University Adventist Health Sciences Center (LLUAHSC) Board of trustees and advisors. Letters of congratulations (6). Program. Program notes. Telegram to John Burden (28 May 1905) from a church officer in Washington, DC, telling him not to purchase the Loma Linda property. Letter to John Burden from Ellen G. White (14 May 1905) telling him to "secure the property by all means" and not delay. He chose to follow Mrs. White's advice. About us (gives a 2-page historical overview of LLU Medical Center, then specifics about each of the 20 schools, centers, faculties, and institutes and when each was established). Historical photos with captions (10 p.). Loma Linda timeline [excellent chronology] (p. 37-41). Thank you and acknowledgments. Photos of the LLU Medical Center.

Photos (see next page) on p. 36 show: (1) The original Loma Linda Sanitarium, a 64-room building on 76 acres of land. (2) John Allen Burden; following Ellen White's counsel, he purchased the building that would become the College of Medical Evangelists. (3) Dr. P.T. Magan. In 1914 he was invited to join the Loma Linda faculty. The rest of his life was dedicated to the education and training of Adventist medical workers. Address: Loma Linda, California.

3520. Little, Janice. 2005. Re: Centennial for the purchase of Loma Linda Sanitarium in 1905. Letter (e-mail) to William

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Shurtleff at Soyfoods Center, Feb. 10. 1 p.
• ***Summary:*** Loma Linda Sanitarium became the College of Medical Evangelists, and is now Loma Linda University & Medical Center.

Note: The College of Medical Evangelists (CME) was renamed Loma Linda University on 1 July 1961.

The library building where Janice works constructed in 1953. The new section, the Del E. Webb, was added in 1980. "There was a library for the college and hospital nurses in 1907. It was located in the original hospital building. It later moved to other locations before moving to this building in 1953." Address: Library Asst., Del E. Webb Memorial Library, Loma Linda Univ., Loma Linda, California 92350. Phone: 909-824-4942.

3521. Ridenour, Jeremiah. 2005. Pulmuone first invests in Wildwood Natural Foods in April 2004 (Interview). *SoyaScan Notes.* Feb. 13. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Jeremiah met Tom Lacina and his partner / brother-in-law one day when they showed up at the Wildwood plant in Santa Cruz. Jeremiah took them on a tour of the plant, then they went out to lunch. Tom was one of those rare people who was both an attorney and a farmer. He owned a farm and had built a small tofu shop on his land. He was selling about $50,000/year worth of soy products at the most. They said they were struggling in Iowa trying to make their tofu plant work, and they were losing tons of money. Somebody (Shurtleff) told Lacina that if he wanted to be successful, he should model his company after Wildwood. After visiting Wildwood, they visited San Diego Soy Dairy and Luke Lukoskie. He then called Jeremiah and said that if he was ever in the Midwest, he was welcome to stop by for a visit. On a trip to the East, Jeremiah stopped in to see Tom, who introduced him to venture capitalists (VCs) in Des Moines who scouted for companies potentially suited for Iowa state money. The VCs grilled Jeremiah about his business. To get money from the state of Iowa, a company had to have more than $5 million/year in sales. Jeremiah really liked Tom and the Soy Sisters (Tom's wife and sister). Wildwood had run out of capacity, working around the clock 7 days a week, so it was "grow or else." Wildwood and Midwest Harvest Corp. (Tom's company) ended up merging, becoming an Iowa corporation and getting money from the state of Iowa for job creation in Iowa and value-added products made in Iowa from Iowa farm crops. A certain percentage of that money had to be spent in Iowa, but Jeremiah was able to get enough to buy a used meat-packing plant in Watsonville, about 25 miles southeast of Santa Cruz. First the new corporation bought 10 acres of land in Grinnell, Iowa, 1½ miles down the road from Tom Lacina's farm and in 2001 built a state-of-the art plant (22,000 square feet) where only soymilk and cultured foods (such as soy yogurt) were made–the only such plant in the USA. Jeremiah has long had a strong commitment to organic farming and the use of organic ingredients wherever possible in his products. On his 320-acre farm, Tom Lacina grows some of the organic soybeans that Wildwood makes into cultured soyfoods in Iowa. This is the type of vertical integration that Jeremiah had long sought. Jeremiah used to contract with various organic farmers, but he gradually found problems keeping the protein levels of his two select varieties high enough and ensuring the cleanliness of the soybeans he wanted. So 5-6 years ago he started to buy his soybeans through a broker, and giving very clear specifications–such as at least 43% protein in the soybeans to be used in making tofu. That system has proven to be much better.

While building his first factory in Iowa, Jeremiah

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bought an old meat-packing plant in Watsonville, California and began to renovate it for food processing. Building two plants at once turned out to be a big mistake. The usual cost overruns occurred. After building plans had been approved by the inspectors and the meat-packing plant renovation was almost finished, inspectors came back in and said that about $1 million worth of earthquake retrofitting would have to be done. Jeremiah did the work and finished the plant. But now he needed the last million dollars of marketing money that he had been promised by Iowa. But Iowa refused to pay that money, arguing that it would take more than that amount for the company to reach the break-even point. What Wildwood couldn't see, was that politics was at work behind the scenes; Iowa wanted to get out. The money guys told Jeremiah he would have to find a strategic partner. Jeremiah suddenly found himself short of cash and in a financial crisis.

So he made a short list of potential partners who might invest money. House Foods America Corporation (Los Angeles) showed some interest then backed off. Jeremiah had first met Pulmuone in the spring of 2003 at the Natural Products Expo West in Anaheim; their booths happened to be across the aisle from one another. They had a smoothie product and Wildwood had introduced a smoothie the year before; Jeremiah thought that Pulmuone's wasn't very good. Some people from the Pulmuone booth came over to visit. They said that their CEO was coming from Korea and invited Jeremiah to meet him. But for some reason it never happened. So Jeremiah never thought of putting Pulmuone on his short list of potential partners.

Meanwhile, the Iowa cultured products plant was not doing well. "This discipline required to make cultured soyfoods is like that in an operating room." Jeremiah's basic concept was to make these cultured soy products probiotic, which would give them functional value. At his first meeting with the employees he asked how many people had heard of "probiotics," Nobody. Woops. How many had heard of "antibiotic." Everybody. He knew from that moment he would have marketing problems. Jeremiah and a PhD in microbiology had traveled to the plant, established the sanitation protocols, and trained the workers. But soon after he left, the quality control problems returned. Tom Lacina was more interested in having the paperwork done well than in enforcing the sanitation rules. This led to a loss of business and of money.

There was another factor. Jeremiah has come to believe that many, if not most, Midwesterners see anyone from California as a hippie. Hippies don't know how to run businesses and don't understand most Midwesterners. At one point the VCs put their foot down and told Jeremiah, "Too much travel. We don't want you to come here anymore." At that point things got out of control.

Stonyfield Farms was planning to have their soy yogurt made at Wildwood's Iowa plant–a huge potential account. But the people in Iowa could not produce the quality that was required. They missed a huge opportunity to make the Iowa plant successful. Jeremiah's wishes he had waited until the Iowa plant was making good quality products before bringing in Stonyfield.

Today, the Iowa plant is doing very well in every way; sales grew 400% last year. Pulmuone sent their R&D experts there and turned things around in short order. (8) In April 2004 Wildwood sold a controlling interest to Pulmuone. It was a matter of economic survival. So Wildwood has become an international company, with Korean partners. To celebrate the deal, Jeremiah went on a tour of Pulmuone's facilities in Korea. (9) Origins of Pulmuone in 1955 in Korea as a Christian Farming Cooperative. Their mission is "Love Thy Neighbor" and they are deeply committed to pure foods, organic agriculture, and no artificial ingredients. The saintly Mr. Won. Alex Nam went to college with Mr. Won's son. Pulmuone now has 12 organic food products.

In the early days, the Soyfoods Association was unable to attract any Asian soyfoods companies. Today both Asian companies, huge American food processors (Kellogg, ADM, DuPont, Kraft), and even state soybean boards are members. Address: 412 E. Riverside Drive., Watsonville, California 95076.

3522. Smith, Paul. 2005. Re: W.E. "Bill" Roberts, brother of F.G. Roberts, and president of the Vegetarian Society of Australia–starting in 1948. Letter (e-mail) to William Shurtleff at Soyfoods Center, April 29–in reply to questions. 2 p.

• ***Summary:*** Shurtleff wrote Smith on 13 April 2005: "Today I learned: 'It is not until 1948 when the Vegetarian Society [of Australia] is re-founded under the presidency of W.E. Roberts, a naturopath and owner of a health farm...' I am very interested in the history of vegetarianism. In looking through our SoyaScan database I found one document (a letter from you) stating that F.G. Roberts had a brother named W.E. "Bill" Roberts, who was in Sydney during the 1930s and 1940s.

"Can you tell me any more about Bill Roberts. Do you know when and where he was born, married, died? Was he a younger or older brother of F.G. Roberts? Do you have any documents that describe his life?"

Paul replied: "In relation to the Roberts family. The Roberts were Seventh Day Adventists and deeply interested in good health achieved through natural means and a well planned, balanced vegetarian diet, based upon whole grains, fresh fruit and vegetables. They were not adverse to the use of eggs, dairy and cheese. Bill Roberts wrote a recipe book that I have on file. It is undated but comes from the 1930s or 1940s. It would appear that Bill had very similar interests and direction to F G Roberts. However Bill lacked the breadth of influence achieved by F G, who started the Australasian School of Naturopathy in the early 1930s and later in 1954 the Australian School of Chiropractic after

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my father bought out Roberts share of the manufacturing business. F G Roberts either trained or influenced most of the senior natural health practitioners throughout Australia and both the training organisations he started survive to this day.

"Bill Roberts also lacked the multiplier effect of having a business which has carried on his name for more than 50 years beyond the 20 years plus period that F G Roberts was at the helm. I have no idea as to whether Bill was younger or older than F G Roberts.

"The Roberts family came from Tasmania. F G Roberts was born in Tasmania in October 1891 and died in October 1977 in Melbourne. F G Roberts moved to Melbourne either during or just after World War I. Apart from the recipe book, I have no information or documents about W E Roberts. There was often intense rivalry and jealousy between the various members of the Roberts clan and the lack of family co-operation often appears to have been counter productive. Another brother, George, worked in the railways in Tasmania.

"F G Roberts had 3 children who followed him into the business. Horace Eric who was killed in Changi POW camp working on the Burma railway. Fred, a naturopath who resided and practiced in Brisbane, and Gladys, a naturopath and chiropractor who resided and practiced in Melbourne. F G Roberts had 2 grandsons, Peter Roberts in Brisbane (Fred's son) and Graeme Newitt in Melbourne (Gladys' son) both of whom practice as chiropractors and are at or near retirement."

3523. Crook, Edgar. comp. 2005. Bibliography of Australian sources for vegetarianism and veganism. 2nd rev. ed. Wanniassa ACT: Australia. 58 p. Unpublished typescript. April. 28 cm. [297 ref]
• ***Summary:*** The best (and only) bibliography seen on this subject. The compiler is a professional librarian. Contents: Monographs (general works; 41 refs). Monographs (cookery, nutrition and health; 135). Periodicals (34). Manuscripts [archival collections] (4). Theses (15). Music (1). Other materials (Audio visuals, ephemera, pamphlets; 4). Archived websites (2). Other websites (15–URLs accessed Feb. 2005). Seventh Day Adventist Church: Monographs, periodicals, other materials (46).

The Introduction (p. 2) states: "This bibliography is only concerned with works produced within Australia, or by an Australian, which prominently feature vegetarianism or veganism. Most, but not all of the works, are currently available to researchers from Australian libraries (according to institutional catalogues and the Australian National Bibliographic Database).

"This bibliography is as comprehensive as possible on works published prior to 1980 but it is not a complete record of all works published. The bibliography contains only that which is known to the compiler or available in a library or other institution..." For more information: edgarcrook@hotmail.com. Address: Librarian, Wanniassa ACT 2903, Australia.

3524. Crook, Edgar. 2005. A history of vegetarianism in Australia–1788 to 1948. Wanniassa ACT: Australia. 117 p. Unpublished typescript. April. 28 cm. [297 ref]
• ***Summary:*** The best (and only) history seen on this subject. The compiler is a professional librarian. Contents: Introduction. The establishment of meat. A new dawn. Religious and temperance reformers. Alfred Deakin and the Melbourne spiritualists. The advent of the Adventists. A radical diet. Women. Eccentric reformers. Dietary reformers. Food. Vegetarian societies. Animal rights and welfare. Vegetarian writers. Opposing artistic and literary perceptions. Concluding remarks. Address: Librarian, Wanniassa ACT 2903, Australia.

3525. Sanitarium. 2005. About us: Our history (Website printout–part). www.sanitarium.com.au/about-us/history.html Printed May 3.
• ***Summary:*** "A Century of Good Health: Over a century ago, in 1898, a small business opened its doors in Melbourne, Australia with the vision to help people `learn to stay well'–the meaning of the word Sanitarium–by linking good diet with good health.

"From a modest rented bakery, Edward Halsey, a baker, created Sanitarium peanut butter (Australia's first) and ready-to-eat breakfast cereals like Granose (an unsweetened forerunner to Weet-Bix) and Granola (a cereal made from wheat, oats, maize and rye) which were unlike anything previously available.

"In late 1898, the fledgling company relocated to larger premises in Cooranbong, south of Newcastle in New South Wales. Halsey installed bake house equipment in a large building that had previously been a sawmill.

In 1900, Halsey transferred to New Zealand where he began making the first batches of Granola, Caramel Cereals (a coffee substitute) and bread in a small wooden shed in the Christchurch suburb of Papanui.

"Since Edward Halsey began the business, the Sanitarium company has been at the forefront of healthy eating. Sanitarium advocated vegetarianism before it was trendy and were the first to introduce the concept of the health food shop. Throughout the years, Sanitarium has remained true to the vision of its founders by promoting a better life through better nutrition.

"Today, Sanitarium Australia is owned and operated by Australians while Sanitarium New Zealand is owned and operated by New Zealanders. We do work together, however, to produce over 150 products and employ approximately 1700 people in our manufacturing and distribution sites throughout Australia and New Zealand.

"The Origin of Sanitarium icons–Weet-Bix: Sanitarium's original wheat biscuit, Granose, was marketed in Australia

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and New Zealand during the early 1900s, not only as a breakfast cereal but also as an alternative to bread. During the 1920s, Sanitarium faced a challenge to Granose from a new sweetened flake biscuit called Weet-Bix, which was produced by a company called Grain Products.

"In 1930, Sanitarium acquired Grain Products, which also had connections to the Seventh-day Adventist Church, and made Weet-Bix its own.

"Marmite: Marmite was introduced to Australia and New Zealand by Sanitarium. Initially it was imported from the United Kingdom but shortly before World War II, we secured the secret recipe from the English and made the first Australian Marmite in our Cooranbong factory in 1944. Since the 1970s, Sanitarium's Christchurch factory has manufactured all the Marmite sold in the South Pacific.

"Health Food Stores: As early as the 1900s, Sanitarium introduced Australians and New Zealanders to the concept of health food shops and vegetarian cafes. The first Sanitarium cafes opened in March 1902 in Sydney's Pitt Street and in 1907 in Auckland's Victoria Street. These stores generally incorporated a cafe as well as a retail outlet where patrons could buy much of what they had eaten.

"The overriding aim of the cafes was to introduce people to a better way of living through vegetarian meals and cooking lessons. While the stores flourished through to the 1960s, changes in buying habits of consumers prompted Sanitarium to close its cafes and retail shops. However our commitment to sharing our knowledge has not ceased. We now provide education and information through our Nutrition Education Service, which was established in 1987." Address: Australia.

3526. Walker, Cynthia. 2005. Re: Was Swedenborg a vegetarian? Rev. Wm. Cowherd was a Swedenborgian minister in Manchester. Alnwick grove, Pennsylvania and Bryn Athyn. Letter (e-mail) to William Shurtleff at Soyfoods Center, June 14. 1 p.

• ***Summary:*** 1. The evidence of Swedenborg as a vegetarian is somewhat convoluted. In the *Intellectual Repository* (1816-17, p. 272-78) is a statement and counterstatement, the latter by Robert Hindmarsh. Both concern a paper said to be a verbatim report from Shearsmith about Swedenborg, intimating that during the last 20 years of Swedenborg's life he neither ate meat not consumed alcoholic drinks. Hindmarsh was reported to have been with Shearsmith when he was quizzed by Armistead. Hindmarsh, in his counterstatement, says he was in fact there during the interview in 1910, but that Shearsmith's mind was wandering and contradicting earlier things he had said about Swedenborg when Hindmarsh frequented Shearsmith's barbershop in Clerkenwell.

2. Are you aware that the Rev. Wm. Cowherd was a Swedenborgian minister at the Peter Street church in Manchester from about the 1790s until 1817, and a very active vegetarian. We have a volume of his entitled *Facts Authentic in Science and Religion*, published in Salford, Manchester, in 1818. "I ran across a statement that one of his converts brought his beliefs first to Philadelphia and then to Michigan and influenced Dr. John Harvey Kellogg. Maybe you can help me with that."

3. Alnwick, Pennsylvania (in Chester Co., founded about 1697 by a Quaker named Abraham Marshall), is not the same as Alnwick grove, which is part of Lower Moreland Township, Montgomery County. The grove was the picnic stop on the Reading Railroad from which Bryn Athyn sprang. "I believe the first picnickers came out from Philadelphia about 1885, but I have no proof of that." In Alnwick grove, "Swedenborgians started building our village about 1895. The first school building was at the Inn and then about 1901 the main school was built, then an elementary school and library were added by 1910. The corner stone of the Cathedral was placed June 19, 1914." Address: Archivist, The Archives, Swedenborg Library, Box 740, Bryn Athyn, PA 19009. Phone: 267-502-2524.

3527. Loma Linda Wholesome Foods. 2005. Try our three new vegan products: 7-Grain Cutlet, Vege-Steak, and Super Frank (Ad). *Vibrant Life.* May/June. p. 26.

• ***Summary:*** "Faithful to its mission, to serve a worldwide community by promoting healthful living, Loma Linda University has joined *Vibrant Life* magazine (a Review and Herald Publication) in the development of a vegetarian product line under the brand name Vibrant Life that meets the highest standards for health and nutrition." "Shop for the Vibrant Life products at your local Adventist Book and Nutrition Centers, college markets, or on the web at www.vibrantlife.info."

A color photo (see next page) shows many meat alternatives in cans, boxes (frozen), or refrigerated packs, all under the Vibrant Life brand. These include: In boxes (frozen): Chik Bits. Chik Burger. Sliced Vegetarian Bologna. Sliced Vegetarian Chicken. Sliced Vegetarian Salami. Sliced Vegetarian Turkey.

Cans: 7-Grain Cutlet. Nut-Loaf. Super Frank. Vegeburger. Vege-Cuts. Vege-Franks Vegelets. Vege-Steak.

Refrigerated packs: Breakfast Sausage. Tofu Links. Vege-Links. Address: Loma Linda, California 92350. Phone: 888-893-2002.

3528. International Vegetarian Union. 2005. Vegetarian societies in the USA (Website printout–complete). www.ivu.org/history/societies/usa.html 2 p. Printed Aug. 12.

• ***Summary:*** "The dates below are when the Society was formed, where known. If the date of formation is not known then it is the date they joined the IVU. The links go to historical details about each society.

1850–American Vegetarian Society [link]. 1852–New York Vegetarian Association [link]. 1860-1880–both the

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Shop for the **Vibrant Life**® products at your local Adventist Book and Nutrition Centers, college markets or on the web at www.vibrantlife.info.

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above societies had closed by the early 1860s and, for about the next 20 years, we have no references to any vegetarian societies in the USA. The British vegetarian magazines carried many letters from Americans; reports from health establishments, particularly at Battle Creek, Michigan; reports from several religious communes such as the Shakers, and secular communities in Alabama and California. Vegetarianism was still very much alive and kicking in the States, but no societies.

1882–American Vegetotalivorian Society.

1884–Pacific Food Reform Society [link].

1926–Millennium Guild. 1927–Vegetarian Society of the District of Columbia [link].

1949–American Vegetarian Union [link], etc.

3529. Soyfoods Association of North America. 2005. Soyfoods (Website printout–part). www.soyfoods.org 13 p. Printed Aug. 15.

• ***Summary:*** Home: About SANA. BookMart. Technical / Regulatory. Members only. Become a member. Photos. Contact us.

Consumer news and consumer info: News releases, policy statements, presentations, 25 ways to enjoy soyfoods, recipes, events. Sales and product info: Sales and trends, soy fact sheets, history of soy products (members' products only [ridiculous]). Soy and health: Soy and heart disease claim, soy and dietary guidelines, soy and cancer claim, soy and children, primer on soy, FAQs. Locating soy products: Retailers list, wholesalers list, company contacts, soyfood samples, food service. Special announcement: SANA booth at Natural Products Expo East. E-mail: info@soyfoods.org. Copyright 2005. Website sponsored by Vitasoy, Boca, Soy7, White Wave, Yves, Morningstar Farms. Revival, The Solae Company. The logo of each is shown.

About SANA: Goals. Objectives. History of SANA. Chronology of SANA's main accomplishments, 1985-2004. 2005 Board of Directors. Officers. Committee Chairs. Executive director: Nancy Chapman. Address: 1001 Connecticut Ave., NW, Suite 1120, Washington, DC 20036. Phone: 202-659-3520.

3530. Soyatech.com. 2005. U.S. soyfoods market shows signs of maturity with slow growth in 2004, says new report. http://www.soyatech.com/bluebook/news/viewarticle.ldml?a=20050829-1. 3 p. Posted 29 Aug. 2005. [6 ref]

• ***Summary:*** *Soyfoods: The U.S. market 2005*, a new market study, shows that total sales of soyfoods hit $4.0 billion in 2004, but "showed the slowest year-over-year growth (2.1%) for the industry as a whole since the early 1980s, when the category began its climb."–according to Peter Golbitz, president of Soyatech, Inc. In 2004, 4 of the 5 top soyfoods categories (meat alternatives, tofu, energy bars, and meal replacements) showed decreased sales; only soymilk posted increased–but modest gains. Up and coming categories include snack foods and other dairy replacements.

In recent years, a number of articles and reports have questioned the health benefits of consuming soyfoods and products containing soy ingredients. "If you look at the top 10 companies in the soyfoods market today, virtually all of the original founders and visionaries are gone," observes Golbitz. During the boom years of the late 1990s and early 2000s, they were bought out by bigger food companies, such as Dean Foods, Kraft, Kellogg, General Mills, ConAgra and Hain-Celestial. These are solid companies but are less willing to take risks and are driven more by "market data than by vision."

The report, the 5th in a series by information partners Soyatech, Inc. and SPINS, is sold in parts. The "macro section" [80-page executive summary] costs $2,900. The more specialized sections are available for about $1,500 each. You can download the prospectus at: http://www.soyatech.com/ pdf/soyfoods05.pds. Soyatech was founded in 1985 and SPINS in 1995. Address: Bar Harbor, Maine.

3531. Soyfoods Association of North America. 2005. New taste of soy: Annual reception September 15, 2005 (Card). Washington, DC. 1 p. Front and back. 13 x 18 cm.

• ***Summary:*** "The New Taste of Soy is a chance to sample a delightful array of soyfoods and talk with policy makers, Administration officials and leading representatives in the soyfoods industry, including manufacturers, growers and suppliers.

"Thursday, September, 2005. 5:00–7:00 pm. U.S. Capitol, Room HC-5*, Washington, DC.

"A special thank you to Congressman Collin Peterson from Minnesota for hosting this year's event. RSVP: members@soyfoods.org–by September 7, 2005.

"Sponsored by: Soyfoods Association of North America, Archer Daniels Midland, Cargill, Boca Foods, Hain-Celestial Group, Kellogg's / Worthington Foods, Monsanto, Natural Products Inc., Revival Soy, Solae, Sunrich, a Division of SunOpta, Vitasoy USA, White Wave Foods." Printed green and black on white. Address: 1101 Connecticut Ave. NW, Suite 1120, Washington, DC 20036. Phone: 202-659-3520.

3532. Boismenue, Clyde. 2005. Loma Linda Foods, Worthington Foods, and Morningstar Farms products (Interview). *SoyaScan Notes.* Sept. 9. Conducted by William Shurtleff of Soyfoods Center.

• ***Summary:*** Loma Linda Foods products and Morningstar Farms products are both still being sold at Adventist Book Centers, The labels say they are being distributed by Kellogg Foods of Battle Creek, Michigan. Loma Linda Foods was purchased by Worthington Foods in the 1990s.

There is a rumor that the Worthington food plant in Worthington, Ohio, is being moved by Kellogg, and will be consolidated into the plant in Schaumburg, Illinois, that was built in 1975 by Miles Laboratories for Worthington's

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Morningstar Farms line of meat alternatives–because one of the two factories is way underused. Address: Basic Foods Co., P.O. Box 240070, Los Angeles, California 90024. Phone: 310-473-0719.

3533. *SoyaScan Notes.* 2005. What ever happened to the Loma Linda Foods plant at 11503 Pierce St., Riverside, California? (Overview). Sept. 12. Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** After Loma Linda Foods left in the mid-1990s, the plant was sold several times. As of Sept. 2005 it is owned by Stremicks Heritage Foods, LLC, which has its headquarters in Santa Ana, California. The plant packages beverages.

A Yohoo! Finance website on dairy products says that after selling its large fluid milk business, Adohr Farms, to Suiza Foods (now Dean Foods), Stremicks (whose president and CEO is Louis J. Stremick, a former Carnation executive) began producing more specialized beverages. "It is the exclusive bottler of NesQuick flavored milks in California and the Southwest, and packs extended self life [ESL] dairy and nondairy products, such as Coffee-mate." And it packs soy- and rice beverages into aseptic containers for one customer. It also blends ice cream mix for foodservice customers. Contact: 4002 Westminster Ave., Santa Ana, CA 92703. Phone: 714-775-5000.

3534. Little, Janice. 2005. Basic reasons for the split between Dr. John Harvey Kellogg, Ellen G. White, and the Seventh-day Adventist Church (Interview). *SoyaScan Notes.* Sept. 29. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** The issues that had been simmering came to a head in Dec. 1902 when the Battle Creek Sanitarium, owned by the Seventh-day Adventist Church, was destroyed by fire. Ellen G. White told Dr. Kellogg not to rebuild it. He decided to ignore her advice, and was able to gain control of the board of directors. He wrote a book titled *The Living Temple* which he hoped would pay the costs of reconstruction. When the book was published, it was sharply criticized by Ellen G. White for what she considered to be its many statements of pantheism (God is in everything). He made all or almost all the corrections she suggested, probably for at least two reasons: (1) To help sales of the book to SDAs, and (2) To try to repair his breach with her. The latter apparently didn't work. In 1907 he was disfellowshipped.

James and Ellen White had treated J.H. Kellogg like their own son. They had paid all or most of his way to medical school. As he became a good doctor, and then gained considerable fame, he wanted more and more control at the hospital. In the years before 1902, Ellen White urged him to curb his pride and to "come down off his high horse." He continued to press for more control.

It is not well known that Dr. Kellogg's wife was a Seventh-day Baptist, not a Seventh-day Adventist. She was a well-known nutritionist and wrote many books. She was near deaf for much of her later life.

Dr. Kellogg felt very strongly about vegetarianism and the other health teachings of the SDA church. Yet quite of few SDA leaders and brethren did not follow them. Dr. Kellogg criticized them sharply, openly, and in public, which created hostility toward him among many of those who he had criticized.

Janice has heard it said by many good SDA historians and researchers that there was another source of conflict. While young, Dr. Kellogg was quite attracted to a young lady about his age named Mary Kelsey. While he was away in Europe studying medicine, she and Willie White, Ellen's son, were married.

Another rift was between Dr. Kellogg and his younger brother Will Keith, of breakfast cereal fame. The split apparently began when Dr. Kellogg learned that his brother has started to put white sugar in his breakfast cereals. Will Keith was an entrepreneur, and he had observed that sugared cereals sold by his competitors increased in sale. A lawsuit resulted and the two brothers were estranged for the rest of their lives. Address: Library Asst., Del E. Webb Memorial Library, Loma Linda Univ., Loma Linda, California 92350. Phone: 909-558-4942.

3535. Little, Janice. 2005. Arthur White was determined to preserve the immaculate reputation of his beloved grandmother Ellen G. White (Interview). *SoyaScan Notes.* Sept. 29. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** Arthur was head of the Ellen G. White Estate. He did not want researchers using selected letters in the estate's vault that might in any way tarnish the reputation of his grandmother. The most carefully protected letters were in the "Z file." It took a committee vote before any researcher could examine them.

After Arthur died in 1991, this protective policy was reversed. The letters in the "Z-file" were dispersed among the rest of the archives and researchers where given very open access to all her records. This is gradually leading to a much more realistic appraisal of Ellen G. White, a truly remarkable woman, but one (who like all people) had her shortcomings and struggles.

One of the best of these is *Messenger of the Lord: The Prophetic Ministry of Ellen G. White,* by Herbert E. Douglass (Pacific Press Publishing Association, 1998, 640 p.). This is used as a college textbook.

Another new look, much easier to read, is found in a series of four slim books (ca. 108-144 pages each), by George R. Knight, written from 1997 to 1999 and published by the Review and Herald Publishing Association (SDA church): They are: (1) *Reading Ellen G. White: How to Understand and Apply Her Writings* (1997). (2) *Meeting Ellen White* (1997). (3) *Ellen G. White's World* (1998) (4)

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Walking with Ellen White: The Human Interest Story (1999).

Many Americans do not realize that Ellen G. White is the most widely translated author in American history. That is, her writings have been translated into more languages than any other American author. To arrive at this figure, multiply the number of her books that have been translated times the number of languages into which each has been translated. Her book *Steps to Christ* has been translated into more languages than any other single book by an American author. Address: Library Asst., Del E. Webb Memorial Library, Loma Linda Univ., Loma Linda, California 92350. Phone: 909-558-4942.

3536. Shurtleff, William; Aoyagi, Akiko. 2005. Doufu zhi shu [The book of tofu]. Taipei, Taiwan: Persimmon Cultural Enterprise Co., Ltd. viii + 270 p. Sept. 1. Illust. by Akiko Aoyagi. No index. 26 cm. [Chi]
• ***Summary:*** A very attractive, complex character, Chinese-language edition of *The Book of Tofu* (2nd ed. Ten Speed Press). A slightly revised edition (different color cover) was published in mid-2012. Address: 1. Soyfoods Center, P.O. Box 234, Lafayette, California 94549.

3537. Loma Linda University. 2005. Fulfilling the educational vision: Loma Linda University 1905-2005. Loma Linda, California. 60 p. 36 cm.
• ***Summary:*** Contents: 1. The beginnings. 2. The early years. 3. The Depression years. 4. The war years [World War II]. 5. The building years. 6. The consolidation years. 7. The growing years. 8. The notable years. 9. Where to, now? 10. Milestones [1905-2005; chronology].

"1905 Feb. 4. Ellen G. White's letter says: 'A place must be provided to which the sick could be taken, where they could be taught how to live so as to preserve health.'"

"1905 Nov. 1. Loma Linda Sanitarium officially opens." Address: Loma Linda, California.

3538. Richmond, Akasha. 2005. Hollywood dish: More than 150 delicious, healthy recipes from Hollywood's Chef to the Stars. New York, NY: Avery–A member of the Penguin Group (USA) Inc. xi + 310 p. Illust. Index. 25 x 20 cm. [125 ref]
• ***Summary:*** One of the most original and interesting cookbooks seen in decades. This book, originally titled *Healthy Hollywood*, is much more than just a collection of superb recipes and stories about Hollywood celebrities and glitterati. In carefully researched and well-written sidebars, it documents the history of health foods in Hollywood and southern California. The introduction to each chapter tells the history of that type of food, and every recipe has a long and interesting historical headnote. The acknowledgments show vividly Chef Akasha's high and wide circle of Hollywood friends. The introduction–"The Road to Hollywood" tells the story of how Akasha got interested in and researched this subject. History is woven into every page of this book–in the most palatable way. In short, this is a cookbook with a remarkable tale to tell–one to read and study–as well as one to cook from.

Sidebars and illustrations: (1): "The stars and the Hollywood Diet"–Sue Carol (lovely future wife of Alan Ladd) on the cover of *Motion Picture* magazine, Oct. 1929. (2) Mildred Lager (1908-1960). (3) Harry Chandler (1864-1944). (4) Granola (Layton Gentry, Adelle Davis, Dorothea Van Gundy Jones). (5) Photo of silent film star Anita King eating Sun Maid Raisin Pie, 1916. (6) Adelle Davis (1904-1974). (7) Clarke Irvine, 1892-1975. (8) Photo of Radiant Radish health food store, owned by Beach Boy Brian Wilson, Los Angeles, 1969. (9) Otto Carque, 1867-1935, with a photo of his health wagon, around 1912. (10) Gayelord Hauser (1895-1984). (11) "Nature Boy"–Bill Pester and the 1948 hit song by Eden Ahbez. (12) The Ashram–Hollywood restaurant founded by Anne-Marie Bennstrom. (13) The Hollywood diet, with a photo of page 1 of the "18-Day Diet" from *Motion Picture* magazine, Oct. 1929. The sidebar begins: "The first best-selling diet book in America, *Diet and Health, with a Key to the Calories*, was written by Los Angeles-based Dr. Lulu Hunt Peters in 1918, and sold over 2 million copies. The book introduced the concept of counting calories." (14) Alan Hooker (1902-1993). The grandfather of California cuisine, he opened the Ranch House restaurant in 1956 in Ojai, California. (15) Gloria Swanson–Hollywood's Green Goddess. She "was the highest paid and most popular, influential star of the 1920s." (16) Jim Baker (1922-1975). A pioneering organic restaurateur, he Opened the Aware Inn in 1957, then the Source restaurant in 1969. (17) Raw, raw, raw (Arnold Ehret, Vera and John Richter, and raw foods). (18) Photo of silent film star Mary Pickford drinking orange juice made with Sunkist fruit and juicer. (19) The godfather of fitness–Jack LaLanne. Master chef Danny Kaye (1913-1987). (20) The Farmer's Market in Los Angeles, started in 1934. (21) Paul Bragg (1881-1976), with photo of Rita Hayworth on the cover of his *Health Builder* magazine. (22) Books and cooks–"150 Recipes of the Stars (1928), Helen Evans Brown. (23) Health foods–Dr. John Harvey Kellogg, the rise of health food sections in the late 1800s in L.A. department stores, the rise of health food stores, Sandy Gooch. (24) Mae West (1893-1980). Gypsy Boots (1914-2004). Photo of Boots and Paul Bragg. (25) Food and film. (25) Photo of Donna Reed and Paul Bragg, sometime in the 1950s. (26) Bernarr Macfadden (1868-1955). (27) Celebrity stew and Leo Pearlstein. (28) Vegetables, fruits, and nuts (incl. Frieda Caplan, Albert's Organics). (28) Rancho La Puerta and the Golden Door. Photo of young Burt Lancaster baking bread at La Puerta. (29) Fred Waring (1900-1984), the blender, and smoothies. (30) Hain Pure Foods. "Harold Hain opened his first health food store in downtown Los Angeles on October 17, 1926." (31) Swamis and yogis. Paramahansa Yogananda arrived in L.A. in 1925; he advocated a healthy

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vegetarian diet, including in his magazine *East West,* first issued in 1926. On 8 April 1951 he opened SRF India Café at his India House compound on Sunset Boulevard. "Yogi Bhajan (1930-2004) came to Los Angeles in 1969, bringing the teachings of Kundalini Yoga and his own unique style of Indian and Ayurvedic cooking. In 1974 his students opened Golden Temple Conscious Cookery in Los Angeles. I [Akasha] was a cook there from 1979 to 1984..."

Soyfoods are used in recipes (and recipe titles) throughout this book: Edamame or fresh green soybeans (used in 2 recipes), miso (1 recipe), soymilk (many, especially in place of milk in desserts, incl. "Chocolate Jack Daniel's soy gelato" and "Soya chocolate" milk), soy flour (1, Bill Baker's bread), soybeans (whole, 1, "Soybean casserole"), tofu (10), and tempeh (4).

Also discusses: Sophie and Harry Cubbison (p. 47), El Molino Mills (p. 106). Early veggie burgers (p. 106). Silk soymilk and Steve Demos (of White Wave, p. 266).

The recipes in this book are largely vegetarian (including 17 vegetarian main dishes), all call for organically grown ingredients, and many are dairy-free (using soymilk instead of cow's milk). However: Beef (used in 2 recipes, incl. "Fillet mignon Japanese"). Pork (used in 1 recipe, "Citrus roasted pork chops with rosemary potatoes"). Chicken (used in 6 recipes, incl. "Endive petals with curried chicken salad"). Turkey and duck (3 recipes). Fish (many recipes as for cod, halibut, salmon, whitefish). Shellfish (crab, scallops, shrimp).

Talk with Akasha Richmond, who calls. 2005. Dec. 7. Her favorite parts of the book are: The smoothie story (p. 275-80, both dairy and nondairy). Otto Carque. Gloria Swanson. Yogis and Swamis, Granola. She is very happy with everything about the way the book and its promotion turned out ("It looks great")–except she wishes she could have included more photos. Address: Los Angeles, California.

3539. **Product Name:** Morningstar Farms Grillers (Meatless Hamburger Patties) [Prime, or Original].
Manufacturer's Name: Kellogg Sales Co. (Marketer-Distributor).
Manufacturer's Address: Battle Creek, MI 49016.
Date of Introduction: 2005.
Ingredients: Prime: Textured vegetable protein (wheat gluten, soy protein concentrate, concentrate, soy protein isolate, water for hydration), corn oil, sunflower oil, egg whites. Contains 2% or less of cornstarch, natural flavors from non-meat sources, soy protein isolate, autolyzed yeast extract, salt caramel color,...
Wt/Vol., Packaging, Price: 10 oz (284 gm). Four patties in paperboard box. Retails for $4.59.
How Stored: Frozen.
New Product–Documentation: Products (two) with Labels purchased at Safeway supermarket in Lafayette, California. 2006. July 31. Prime: 8 by 4 by 1¼ inch box. Green, red, black and yellow on white. Color photo of a patty with veggies between two buns. Soyfoods Center taste test. Poor. Has the aroma of warm, moist dog food. Tough, not tender or juicy or tasty.

3540. Campbell, T. Colin; Campbell, Thomas M, II. 2005. The China Study: the most comprehensive study of nutrition ever health ever conducted and the startling implications for diet, weight loss and long-term health. Dallas, Texas: BenBella Books. xviii + 417 p. Illust. Map. 24 cm. [757* ref]
• ***Summary:*** The China Study examines more than 350 variables of health and nutrition with surveys from 6,500 adults in 65 counties, representing 2,500 counties across rural China and Taiwan. But only about one-third of this book is about The China Study.

While revealing that proper nutrition can have a dramatic effect on reducing and reversing these ailments as well as obesity, this text calls into question the practices of many of the current dietary programs, such as the Atkins diet, that enjoy widespread popularity in the West. The impact of the politics of nutrition and the efforts of special interest groups on the creation and dissemination of public information on nutrition are also discussed (from publisher description).

Contents: Acknowledgements. Preface, by Howard Lyman. Foreword, by John Robbins. Introduction. Part I: The China Study. 1. Problems we face, solutions we need. 2. A house of proteins. 3. Turning off cancer. 4. Lessons from China.

Part II: Diseases of affluence. 5. Broken hearts. 6. Obesity. 7. Diabetes. 8. Common cancers: breast, prostate, large bowel (colon and rectal). 9. Autoimmune diseases. 10. Wide-ranging effects: bone, kidney, eye and brain diseases.

Part III: The good nutrition guide. 11. Eating right: eight principles of food and health. 12. How to eat.

Part IV: Why haven't I heard this before? 13. Science–the dark side. 14. Scientific reductionism. 15. The "science" of industry. 16. Government: it is for the people? 17. Big medicine: whose health are they protecting? The good work and sad endings to stories of Caldwell Esselstyn (in reversing heart disease using diet) at the Cleveland Clinic (Ohio) and Dr. John McDougall (in reversing autoimmune diseases using diet) at St. Helena Hospital (Napa Valley, California; a Seventh-day Adventist Hospital). 18. Repeating histories.

Appendixes. A. Q&A: Protein effect in experimental rat studies. B. Experimental design of The China Study. C. The "Vitamin" D Connection.

From cover of paperback edition: "Everyone in the field of nutrition science stands on the shoulders of Dr. Campbell, who is one of the giants in the field. This is one of the most important books about nutrition ever written–reading it may save your life." Dean Ornish, MD.

Note: This book is also available (as of 2009) in audio,

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as an abridged sound recording on 6 CDs.

The findings of this book were criticized on the Web by various people, one good example of which is Denise Minger, age 23. Minger lists her educational and professional qualifications on her Facebook page as writer, Catholic school teacher, summer camp instructor, and "Professional Sock Puppeteer." Her critique The China Study: Fact or Fallacy? by Denise Minger–may be found at: http:// bit. ly/9s5pn8.

Dr. Colin Campbell took the time to write a excellent, lengthy, detailed "Reply to Denise Minger" which may be found at http://www.vegsource.com/ news/ 2010/07/ china-study-author- colin-campbell- slaps- down-critic-denise-minger.html. Address: Jacob Gould Schurman Prof. of Nutritional Biochemistry, Div. of Nutritional Sciences, Cornell Univ., Ithaca, New York 14853.

3541. Price-Pottenger Nutrition Foundation. 2006. Resource guide–2006 edition: Books, videos, membership & services. La Mesa, California. 23 p. 28 cm.
• ***Summary:*** Includes: PPNF fundamentals and dietary guidelines (p. 20). Similarities of traditional diets (p. 21).

Talk with Pat Connolly. 2006. April 3. Weston Price studied 14 groups but was never able to study any groups in Asia or any vegetarian groups. He believed that butter and cod liver oil were good foods (people should consume ½ teaspoon a day), but Pat says that, in today's world, most butter and most cod liver oil are not good foods. The butter must be a deep yellow orange and made from cows reared on rotational pasturing–such as Mark Mcafees organic pastures. Cod liver oil should be of the Norwegian kind with the pollutants found in the oceans removed.

Her husband was a dentist, who was given Weston Price's books and writings. She believes that Seventh-day Adventists are not very healthy, and explains that Ellen G. White was "all crippled up with arthritis." She met Royal Lee, who was also a dentist. Address: P.O. Box 2614, La Mesa, California 91943-2614. Phone: 619-462-7600.

3542. Michigan Women's Hall of Fame. 2006. Lenna Frances Cooper (1875-1961). http://hall.michiganwomenshalloffame.org/honoree. 2 p. Printed Feb. 14.
• ***Summary:*** Inducted: 1993. Era: Historic. Area of achievement: Dietetics. She was a "leader and innovator in the development of dietetics as a science and profession.

"Originally trained as a nurse, Cooper was a protege of Dr. John Harvey Kellogg, director of the Seventh-day Adventist sanitarium in Battle Creek, and his wife, Ella. Under their tutelage, Cooper took up the study of nutrition and became a leading proponent of health care through diet.

"In 1908 Kellogg established a School of Home Economics at the 'San,' and Cooper was named its first director... More than 500 dieticians graduated from the Battle

Creek program during her tenure.

"To lend structure and professionalism to the field, Cooper co-founded the American Dietetic Association (ADA) in 1917... She was a charter member of the American Home Economics Association, founded in 1909, and of the Michigan Home Economics Association, founded two years later... She served as the first dietician in the United States Army in 1918-19,..."

"In 1928 Cooper was named one of the ten most distinguished women of achievement in Michigan. Cooper's greatest renown came through her role as senior author of *Nutrition in Health and Disease*, a text that was used for 30 years in dietetic and nursing programs around the world. She participated in 13 of the book's 17 revisions."

A portrait photo shows Lenna F. Cooper.

3543. Gupta, Rajendra ("Raj") P. 2006. New developments at ProSoya in the USA and Canada (Interview). *SoyaScan Notes.* May 30. Conducted by William Shurtleff of Soyfoods Center.
• ***Summary:*** "ProSoya" is the popular name of Raj's company. ProSoya Corporation in Heuvelton, New York state is not a new entity. ProSoya Corporation has long existed as a holding / parent company, based in St. Louis, Missouri. The one in New York is a branch of that. The ProSoya UK Ltd. in Livingston, Scotland, which was a separate entity under license from ProSoya Inc., no longer exists. ProSoya Foods India Pty. Ltd. is now active in India.

ProSoya Corp. in Heuvelton is now shipping "soy extract" [soybase / soya base] to a company in Canada. They

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have also developed a delicious "creamy orange" soymilk with a thick consistency like a smoothie–but it is not yet for sale. Supermarkets that have their own brand of soymilk do not buy soyabase; they want a finished product delivered to their door in their package. Last year Raj could not find a co-packer; but now he has found one in Toronto that packs about 3 truckloads a day for him. He is still looking for one in the USA. If he had been able to find one a year ago, he would be in almost every store by now.

SoyaWorld is now very strong everywhere except in the USA; they have the best-selling soymilk brands in Canada. Since about 2001-2002 they have been owned by Sanitarium Foods of Australia. Originally SoyaWorld was owned by Dairyworld, which was sold to Saputo, then Saputo sold the soymilk business to Sanitarium Foods. Sanitarium kept "SoyaWorld" as a name for both the business and the brand. They don't want to call it Sanitarium, which is sort of an outdated, old-fashioned funny name. SoyaWorld no longer has royalty or exclusivity agreements with ProSoya (they expired in May 2004), which is why ProSoya can now make and sell soybase, soymilk, and soymilk products.

Raj's soybase is now made by an improved process. It is still made by the basic airless cold-grind process, so that change is more in the art than in the science–it is not a breakthrough, but a fiddling with details. He has not licensed his process to anyone. It is better for formulation, is more bland, and is unique in that it has no soy taste. Raj likes to say that his soybase has "no soy taste" and "no beany taste." Most good manufacturers have be able to get rid of the "beany taste, which is normally associated with rancid oil-like flavors, chalkiness, and astringency," but Raj believes that only his company has been able to also get rid of the "soy taste," which is more subtle yet still a big obstacle to widespread acceptance of soyfoods and soy beverages. When Raj talks to big distributors, they say that all the soyfoods manufacturers claim to have gotten rid of the "beany taste," yet the taste still leaves something to be desired–"it still tastes like soy." So Raj speaks of "no soy taste" to distinguish his products from the others. Raj has found that the people of India "hate soy taste." But they love his products, which have no soy taste. Certain flavors go very, very well with his soybase. If a company uses strong flavors or heavy masking, consumers say the product tastes like medicine.

One interesting phenomenon is that the flavor of soybase or soymilk improves as it is allowed to age for 4-5 days.

Raj is not sure whether or not he should put the word "soy" on the package or not. Address: President and CEO, ProSoya Inc., 2-5350 Canotek Road, Ottawa, ONT, K1J 9N5, Canada. Phone: 613-745-9115.

3544. Green, Carolyn. 2006. Top ten: Welcome to the garden–Garden Protein International, Richmond, BC. *Food in Canada.* May. p. 39.

• ***Summary:*** Garden Protein International makes meatless chicken and beef from identity preserved (IP), non-GMO soy protein and wheat protein, plus various other ingredients such as carrot fiber, minerals and vitamins. In its first year, ending March 31, the company had sales of $10 million.

By contrast, Yves Fine Foods, which he started in 1985, had sales of $235,000 its first year. When Potvin began considering the next generation of meat alternatives in the early 1990s, he used the example of surimi, a Japanese crab-like product made from pollock fish. The result was Gardein, which is made like pasta (sort of) by a unique process of extrusion technology.

By 2003, Potvin began demonstrating Gardein to other food Manufacturers. One of his first customers was Morningstar Farms, a division of the Kellogg Co., Battle Creek, Michigan. Gardein will also be a major ingredient in Loblaw's President's Choice Blue Menu products this fall.

In 2001, when Yves sold Yves Veggie Cuisine to the Hain Celestial Group, he signed an agreement that contained a "non-compete clause" (covenant not to compete–CNC), which prevented Potvin from putting Gardein in the market as a stand-alone product until the fall of 2006. At that time he hopes to have four Garden Protein products in grocery stores: chicken or beef strips can be used in recipes such as stir fries or fajitas, and a chicken or beef dish in a sauce. The price is expected to be about $3.99 for 250 gm.

A photo shows Yves Potvin, a native of Sherbrooke, Quebec, Canada (the only major city in the Eastern Townships) standing and looking happy.

Note: Yves was born in Waterloo, Quebec, then moved with his family to Sherbrooke, Quebec, when he was a teenager.

3545. Loma Linda Wholesome Foods. 2006. Meatless never tasted so good! Vibrant Life (Ad). *Vibrant Life* (*Hagerstown, Maryland*). Special issue on Taming Stress. p. 26. Undated.
• ***Summary:*** See next page. A full-page color ad. "Loma Linda University has joined *Vibrant Life* magazine (a Review and Herald Publication) in the development of a vegetarian product line under the brand name Vibrant Life..."

"Vibrant Life products are sold exclusively in Adventist Book and Nutrition Centers, college markets and selected web sites." Photos show: (1) Five plates of prepared dishes. (2) The various products in the Vibrant Life line. Canned products (19 or 48 oz.) include: 7-Grain Cutlets, Vege Steak, Super Franks, Vegeburger, Vege-Franks, Vegelets, and Vege-Cuts.

Frozen products in paperboard cartons (8 oz. to 15 lb) include: Sizzl'n Burger, Chick Burger, Chik Bits, Chik Nuggets, Vege-Link, Tofu Links, Breakfast Sausage, Vege-Chick'n Slices, Vege-Turkey Slices, Vege-Salami Slices, Vege-Boloni Slices, Vege-Chick'n Rolls, Vege-Turkey Rolls, Vege-Salami Rolls, Vege-Boloni Rolls, Breakfast Links, Tofu Franks, Vege-Dogs, Jumbo Vege-BBQ Franks.

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Meatless Never Tasted So Good!

Faithful to its mission, *to serve a worldwide community by promoting healthful living,* Loma Linda University has joined Vibrant Life magazine (a Review and Herald publication) in the development of a vegetarian product line under the brand name **Vibrant Life®** that meets the highest standards for health and nutrition.

Made with the finest in wholesome and nutritious ingredients **Vibrant Life®** offers great tasting, ***low carb*** and ***low fat*** products.

Vibrant Life® products are sold exclusively in Adventist Book and Nutrition Centers, college markets and selected web sites.

Vibrant Life®

Marketed by Loma Linda Wholesome Foods
Loma Linda CA 92350 • Phone: 888-893-2002 • www.vibrantlife.info.

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For more information visit www.vibrantlife.info. Address: Loma Linda, California. Phone: 888-893-2002.

3546. Crook, Edgar. 2006. Vegetarianism in Australia–1788 to 1948: a cultural and social history. Australia: Lulu.com. 172 p. [297 ref]
• ***Summary:*** The best (and only) history seen on this subject. The compiler is a professional librarian. Contents: Introduction. The establishment of meat. A new dawn. Religious and temperance reformers. Alfred Deakin and the Melbourne spiritualists. The advent of the Adventists. A radical diet. Women. Eccentric reformers. Dietary reformers. Food. Vegetarian societies. Animal rights and welfare. Vegetarian writers. Opposing artistic and literary perceptions. Concluding remarks.

"Australia has had for many years the highest meat consumption in the world, but conversely it also boasts one of the oldest Vegetarian Societies and the earliest Western animal cruelty laws." Address: Librarian, Wanniassa ACT 2903, Australia.

3547. **Product Name:** Morningstar Farms Sausage Patties (Meatless Sausage).
Manufacturer's Name: Worthington Foods, Inc. Div. Kellogg NA Co.
Manufacturer's Address: 900 Proprietors Rd., Worthington, OH 43085.
Date of Introduction: 2006.
Ingredients: June 2007: Textured vegetable protein (wheat gluten, soy protein concentrate, soy protein isolate, water for hydration), egg whites, corn oil, sodium caseinate, modified tapioca starch, contains 2 percent of lactose, soybean oil, hydrolyzed vegetable protein... plus many vitamins and minerals.
Wt/Vol., Packaging, Price: 8 oz paperboard box. Retails for $2.69 (2007/06, Lafayette, California).
How Stored: Frozen.
New Product–Documentation: Product with Label purchased at Trader Joe's (Lafayette, California). 2007. June 10. 7.5 by 4.5 by 2 inches high. Paperboard box. Brown, light green, green, blue, red and yellow. Design innovation. The design and text on the front panel are horizontal, but on the back panel are vertical, to provide two different facings. A color photo on each panel shows three deep-fried patties on a white plate with trimmings. "75% less fat than pork sausage patties. Savory, sizzling veggie patties seasoned with herbs and spices. Visit us at www.morningstarfarms.com for easy recipes, fun food ideas and more!"

3548. Fromartz, Samuel. 2006. Organic, Inc.: Natural foods and how they grew. New York, NY: Harcourt, Inc. xx + 294 p. No illust. No index. 24 cm. [270 ref]
• ***Summary:*** Contents: Introduction (the case of Arthur Harvey, a small organic blueberry farmer from Maine). 1. Humus worshippers: The origins of organic food. 2. The organic method: Strawberries in two versions. 3. A Local initiative: From farm to market. 4. A spring mix: Growing organic salad. 5. Mythic manufacturing: Health, spirituality, and breakfast (very interesting, largely about Steve Demos, White Wave Silk soymilk and Dean Foods / Suiza, plus Sylvester Graham, Dr. James Caleb Jackson, Dr. John Harvey Kellogg and his brother Will K. Kellogg, Jeremiah Ridenour, Ted Nordquist, *The Book of Tofu* by Shurtleff and Aoyagi, *Diet for a Small Planet* by Frances Moore Lappe). 6. Backlash: The meaning of organic. 7. Consuming organic: Why we buy. Acknowledgments. Notes.

A history (sort of) of the organic food industry in the United States, and how the movement has gone from fringe, to commercial, to mainstream. This is a niche or underdog food culture involving many issues of morality–the relationship of humans to agriculture and nature, and specifically how a principled person or business can thrive in the modern world without compromising ideals.

The author, a business writer, says in the introduction: "I was particularly interested in the people who sought to manifest their values in business... The intersection of idealism and business was not an easy place to stand, since one usually trumped the other."

"Sales of organic food had shot up about 20% per year since 1990, reaching $11 billion by 2003." This industry, which has its roots in utopian ideologies, will surely have an interesting future.

A great deal of the book is devoted to the recent history, and the early history of the organic food industry in the United States is (unfortunately) extremely weak. The book is hurt first by the lack of an index, second by the lack of endnote reference numbers in the text (the 254 endnotes themselves are excellent), and third by the lack of complete references to key books cited in the endnotes (he gives the author and title, but no year of publication or publisher; so one who wishes to cite these books must take the time to look up the missing information). Address: Business writer, Washington, DC.

3549. Jones, Ellis. 2006. The better world shopping guide: every dollar makes a difference. Gabriola Island, B.C., Canada: New Society Publishers vi + 169 p. Portrait. Product Category Index. 16 cm. [26 ref]
• ***Summary:*** This is a book about green and ethical products. The ratings are not about flavor or sales or market leadership; they are about company commitment to a green and ethical world. The author has consulted many reliable sources (p. 7) for his ratings.

Soy related sections include: Dairy alternatives (p. 68-69): Corporate hero: Silk (White Wave). Corporate villain: Cool Whip (Altria). A+: Silk. A: Follow Your Heart, Stonyfield Farms, Nancy's, Wildwood. A-: WholeSoy, ZenSoy. B+: Tofu Rella, Vegan Rella, Almond Rella, Soya

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Kaas. C: Lisanatti, Tofutti, Soy Moon, Soyco, Galaxy Nutritional, Soymage, Vegie Slices, Rice Slices. C-: Borden. D: International Delight. D-: Carnation. F: Cool Whip.

Note: Cool Whip is a brand of imitation whipped cream named a whipped topping by its manufacturer. Cool Whip was introduced in 1967 by the Birds Eye division of General Foods. Within two years of introduction, it became the largest and most profitable product in the Birds Eye line of products. Birds Eye later merged with Kraft Foods and Philip Morris, eventually becoming part of Altria Group until the spin-off of Kraft Foods from Altria in 2012. Cool Whip was invented by William A. Mitchell, a food chemist at General Foods Corporation. The key advantage of the invention was that it was a whipped cream-like product that could be distributed in a frozen state by grocery chains and kept in the consumer's refrigerator.

Ice cream alternatives (p. 96-97): Corporate hero: Ben & Jerry's. Corporate villain: Haagen Dazs (Nestle). A: Stonyfield Farms, Ben & Jerry's, Soy Delicious, Straus Family. A-: Celestial Seasonings, Wholesoy, Rice Dream, Soy Dream, Natural Choice. B+: Double Rainbow, Julie's, Newman's Own. B: Starbucks. B-: Dole. C+: Weight Watchers, Godiva. C: Tofutti, Crystal, Fruitfull. C-: Breyers, Klondike. D+: Dove, Snickers. D-: Healthy Choice. F: Dreyer's, Nestle, Haagen Dazs.

Meat alternatives (p. 102-03): Corporate hero: White Wave. Corporate villain: Boca (Altria). A+: White Wave, Tofutown. A: Amy's, Wildwood. A-: Yves, Small Planet. B+: Turtle Island, Tofurkey, SuperBurgers. B-: Morningstar Farms. C+: Pete's. C: Gardenburger, Veggie Patch, Veat, Soy Deli, Health is Wealth, Sweet Earth, Mori Nu, Nasoya, Vitasoy, Primal Strips. C-: Quorn. D: Lightlife. F: Boca.

Milk & alternatives (p. 108-09): Corporate hero: Silk (White Wave). Corporate hero: Straus family. A+: Silk, Straus Family, Edensoy. A: Horizon. A-: Organic Valley, Nancy's. Organic Pastures, WestSoy, Rice Dream, Soy Dream, Amazake, Helios. B+: Clover Stornetta, Pacific. B: Lactaid. B-: 8th Continent. C+: Alta Dena. C: Crystal, Vitasoy. D-: Nestle. F: Knudsen. Address: Sociology teacher, University of California, Davis.

3550. Schwarz, Richard W. 2006. John Harvey Kellogg, M.D.: Pioneering health reformer. Hagerstown, Maryland: Review & Herald Publishing. 240 p. Illust. Index. 24 cm. *
• ***Summary:*** This is a new revised and updated edition of the original classic 1970 edition. Address: Andrews Univ., Berrien Springs, Michigan.

3551. Chalmers, Elizabeth. 2007. Business history of the Chalmers family: Making soyfoods in New Zealand (Interview). *SoyaScan Notes.* Jan. 16. Conducted by William Shurtleff of Soyinfo Center.
• ***Summary:*** On Easter 1980 Rick & Elizabeth Chalmers, together with Rick's brother Greg (his formal name is "Stephen"), opened Harvest Wholefoods, 403 Richmond Road, Grey Lynn, Auckland. They borrowed the money from Elizabeth's mother, and were all equal owners. It was New Zealand's first wholefoods / natural foods store as well as the country's first macrobiotic foods retail store. They were idealists and purists, refusing to sell any vitamins, or minerals, or dairy products.

They started the store partly as a result of becoming interested in macrobiotics, and partly because Elizabeth and Rick had a 3 year old son (Daniel) who could not tolerate dairy products. As the Chalmers could not get the food they wanted anywhere, they thought that they would open a shop to also provide it to others. Moreover, Greg, who had been overseas in London (where he had worked in a restaurant) and the USA, was a pioneer in bringing macrobiotics to New Zealand. "He brought home miso and some seaweeds–foods we had never seen before."

After about six months, in Oct. 1980, in order to attract customers to the shop, they started to make nigari tofu (for their own store only) in a small room at the back of the store, designated just for that purpose. They made the simple equipment themselves, and they learned the process from *The Book of Tofu,* by Shurtleff and Aoyagi.

After another six months they were inundated with other store owners, and cafe & restaurant owners from all over New Zealand wanting to buy their tofu. "It was just amazing." The tofu was completely unpackaged and they sold it under water in bulk buckets only. So in about April 1981 they started to sell their tofu outside of Harvest Whole Foods. "Sometimes they would pick it up, and sometimes we would deliver it."

Sanitarium Health Food Co. was making many kinds of breakfast cereals and canned nut meats, but no soyfoods. Several Chinese restaurants were making tofu (they called it "bean curd"), but only for use in their own restaurants; they did not sell it elsewhere. One of these was named Sun Sun, located in Khyber Pass, Auckland.

Their daughter, Jesse, was born on 1st October 1981, and by this time it was becoming difficult to manage both the shop and making tofu. So they sold the shop and with the capital gained they brought in special tofu making equipment from Japan, moved to new premises at 1 Wallingford St., Auckland, and started Harvest Soyfoods. Harvest Whole Foods is still at its same original location today; it is going strong and doing well financially.

Harvest Soyfoods' first product was nigari tofu; to this they soon added Tofu Spreads (Feb. 1981) then Tempeh (April 1981). The business grew very rapidly, and during this period Greg also had a child, so they all had very young children and were trying to manage their lives as well as an extremely rapidly increasing business.

Greg's partner decided that she wanted to leave Auckland, and as they could not picture another partner in his place and were feeling very overloaded anyway they

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decided in 1983 to sell the business to Paul and Trevor Johnston, who renamed it Bean Supreme. The Johnstons paid half the money at the time of sale and the remainder a year later; Elizabeth and Rick Chalmers worked for the Johnstons during that year. This business is also still in existence, although it was bought out by Sanitarium Health Food Co. in about Aug. 1986. Note: Trevor is no longer with the company; Paul sold the company to Sanitarium Health Foods.

From 1983 to 1986 Rick and Elizabeth had a commercial cleaning business, which suited the family structure very well, but was very unsatisfying workwise and environmentally.

In about 1980 or 1981 Austin Holden had started a largely macrobiotic import and wholesale business, Kiaora Naturals, at 374 West Coast Road, Glen Eden, in west Auckland. Holden soon started a very small shop in the corner of his warehouse and called it East West Wholefoods. For the first few years, his only customer was Harvest Wholefoods. "We kept him going."

Then in 1986 Rick and Elizabeth started East West Organics, taking over the building (and business) formerly occupied by Austin Holden and Kiaora Naturals. They knocked out all the walls, resulting in a much larger shop that specialised in organic food, with a big emphasis on fruit and vegetables.

They had no intention of making soyfoods. However there was suddenly an influx of Asian immigrants to New Zealand and Asian Tofu (usually made with calcium sulfate in aluminum pots) became widely available. By this time organics was really growing in New Zealand. Elizabeth and Rick wanted to stock organic tofu in their store, but they couldn't find a source. They talked with Trevor and Paul Johnston about making it for them, but the brothers felt there was no future in it, so they declined to do it.

So in 1996 Elizabeth and Rick started The Organic Soy Company, again in a small food factory out the back of East West Organics. They started making nigari tofu again–for their own store only. For the first time, they started to use organic soybeans, and as many other organic ingredients as they needed and could get. "We were right back where we started. And then exactly the same thing happened again. Once the word got out that organic nigari tofu was available again, people started coming from everywhere to buy it. It was not our intention to get back into the soyfoods business; we'd already sold our company. But we wanted the quality, so we had to make it ourselves." East West Organics is still operating today, although out of new premises (outgrew old one), and has just moved up the road slightly.

Their son Daniel joined them in January 1998, and in October of 1998, they sold East West Organics and moved the Organic Soy Company to their current premises at Unit A, 2 Corban Avenue, Henderson, Auckland.

Elizabeth and Rick separated the same year, but continued on in the family business together. In 2001 their daughter Jesse returned from Europe and also joined us in the business. Later that same year Rick left the business to go to University and currently, Elizabeth, Daniel and Jesse are in joint ownership, with Rick still having a 10% share. They started using the brand names (the first being Tonzu) in 2002.

The business is growing slowly, currently producing tofu, tempeh, soy yoghurt, tofu burgers and teriyaki sauce, all 100% organic. Elizabeth has moved to part time as the younger generation are taking on the responsibility for the business. They currently have 3 full time employees as well as themselves, so are still reasonably small.

"We see a great future for the business and will probably outgrow our current premises within the next few years. We love making traditional soy products, and eventually hope to make miso and tamari, which will be export products as well as for the domestic market."

First sold commercially by the organic soy company: Tofu (1996), Teriyaki Tofu (1999), Tempeh (1999), Tofu Burgers (2001), Teriyaki sauce (2003).

All current labels and packaging are new, and have changed very much from the original. They once made two tofu spreads, one teriyaki and the other curry flavour. However it was hard to get a good enough shelf life out of them to make them viable, so reluctantly they discontinued them. They have also changed their burgers significantly. When they first produced a burger in 2001, they had 3 varieties: Garlic and Cheese, Sundried Tomato, and Feta, and Vegan. They have discontinued them all and now just make one that is actually Vegan, although they do not call it that. The burgers did not sell well; they are not certain why that was, maybe they were too expensive with all the organic ingredients and very labour intensive. So they have simplified and streamlined their current burger making the whole process more viable.

As the population of the whole of New Zealand is around 4 million and only 15% of them are vegetarian, they are playing to quite a small market; this can sometimes be quite a challenge. In the long term it will be sensible to develop products that they can export. Address: Founder and owner, The Organic Soy Company, Ltd., Unit A, 2 Corban Ave., Henderson, Waitakere, Auckland 0612, New Zealand. Phone: +64 9 835 3617.

3552. Tibbott, Seth. comp. 2007. Tofurky brand products overview: Natural foods segment. Hood River, Oregon: Turtle Island Foods, Inc. [36] p. 28 cm. [1 ref]
• ***Summary:*** A full-color booklet bound with a handsome, black ProClick plastic spine. On the front cover: "1980-2006: 26th anniversary Turtle Island Foods, Inc." "Sales data from: SPINscan Natural and SPINscan Conventional. 52 weeks ending December 30, 2006. All statistics are for the total U.S. market.

Contents (unnumbered pages): (1) "Turtle Island Foods

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honored by Inc. magazine: 2,240th fastest growing small business in the USA (of 6 million total). 159.7% growth rate over last 4 years. 57th fastest growing food and beverage company in the USA. 19th fastest growing food processor.

(2) About Tofurky products: 100% vegan. Based on organic soy products. Use non hexane extracted proteins. VejNews. Winner veggie awards–Best meat substitute.

(3) Natural foods market without Whole Foods (which no longer shares sales info with the industry). Growth of top ten brands ranked by dollar volume. Frozen and refrigerated meat alternatives. 52 weeks ended Feb. 24, 2007. Category: $35.5 million. Growth: 4.7%. Turtle Island is the fastest-growing brand: 16.1%, followed by Quorn, Nates, Amys Kitchen, Morningstar Farms, Gardenburger, and Yves. Lightlife, Boca Foods, and White Wave all have negative growth.

(4) Natural foods market. Frozen and refrigerated meat alternatives. Top ten of 478 items by dollar volume. 52 weeks ending Dec. 30, 2006. #1. Quorn Chicken Style Nuggets. 10.6 oz. $1,507,537. 5.6%. #2. Turtle Island Tofurky Italian Sausage (organic) 14 oz. $1,262,616. 25.7%. #3. Quorn Chicken Style Patties. #4. Lightlife Gimme Lean Sausage. #5. Quorn Veg. Naked Chicken Cutlet. #6. Turtle Island Tofurky Deli Slices, Hickory Smoked. 5.5 oz. $1,131,760. 19.2%. #7. Lightlife Smart Dogs. #8. Boca Original Patties Chicken Natural (4-pack). #9. Amys Burger California Veggie. #10. Quorn Meat Free Chicken Tenders.

(5) Natural foods market. Refrigerated meat alternatives, Top 10 of 260 items by dollar volume. 52 weeks ending Dec. 30, 2006. Turtle Island currently as the #1, #3, #9 and #10 best selling items among the 260. They are: Tofurky Italian Sausage. Tofurky Deli Slices Hickory Smoked. Tofurky Deli Slices Oven Roasted. Tofurky Kielbasa (sausages).

(6) Tofurky deli slices: Six features, incl. "Organic tofu based." The six types of deli slices are: Oven roasted, Hickory smoked, Peppered, Italian deli, Cranberry & Stuffing, "Philly-style" steak.

(7) Tofurky deli slices. Bar charts of refrigerated meatless deli sales, 2001-2006. For each year are given: Competitor #1. Competitor #2. Turtle Island. Overall category. "While the competition sales have been flat, Turtle Island has grown the subcategory 72 and has become the #1 brand.

(8) Deli slice standings. (9) Tofurky gourmet sausages. (10) Frozen and refrigerated meat alternatives. (11) Tofurky Jurky: 5 features.

(12) Top 10 jerky items (meat and meatless)–SPINscan natural channel. 52 weeks ending Feb. 24, 2007. The category is $8.3 million. There are three vegetarian jerkys among the top 10. Tofurky Jurky Original is the #2 seller and Tofurky Jurky Peppered is #7. The other vegetarian brand (#6 seller) is Primal Strips Seitan Teriyaki.

(13) Tofurky "foot long" veggie dogs: 5 features, incl. organic tofu based. (14) "Open mouth, insert foot."

(15-17) Turtle Island tempeh: Five features.

(18-22) Happy Tofurky Day: Five features.

(23-35) Glossy color sell sheets, printed on both sides, with the following titles: (23-24) Happy Tofurky Day! (25-26) Brave New Tempeh. (27-28) Tofurky Jurkey. (29-30) Frankly speaking Tofurky Franks & Links are the best! (31-32) There's 3 big new dogs in the house. (33-34) Go beyond the bun: Introducing Tofurky 'foot long' veggie dogs. (35-36) Tofurky deli slices: New look. Other Turtle Island glossy color sell sheets. Address: Founder and President, Turtle Island Foods, P.O. Box 176, Hood River, Oregon 97031.

3553. Johnston, Paul. 2007. Re: Bean Supreme–Sale to Sanitarium Foods. Letter (e-mail) to William Shurtleff at Soyinfo Center, Feb. 7. 1 p.

• ***Summary:*** In 1999 Paul sold his very successful soy ice cream, brand-named "LiteLicks" to "Movenpick" in New Zealand.

In Feb. 2006, Paul sold Bean Supreme to "Lisa's Healthy Foods Ltd." (which is owned by the Seventh-day Adventist Church of New Zealand, as is Sanitarium Foods). He remains on a 3-year management contract. The sale has enabled Bean Supreme to pursue a broad new product development plan and to commission a new mid-sized tofu plant from Takai in Japan. "Our intention is to double the sales of vegetarian chilled products in New Zealand and from our year together we are well above target, so some export to Australia will follow in late 2007." Address: New Zealand.

3554. Gupta, Rajendra ("Raj") P. 2007. The purchase of SoyaWorld by Sanitarium Foods (Interview). *SoyaScan Notes.* July 24. Conducted by William Shurtleff of Soyinfo Center.

• ***Summary:*** SoyaWorld is now completely owned by Sanitarium Foods of Australia. First Sanitarium bought the 47% of SoyaWorld owned by Sunrise Soya Foods. Later they bought the remaining 53% owned by Saputo. The person who knows the exact dates is Maheb Nathoo, who is still president of SoyaWorld.

SoyaWorld still makes two soymilk products: (1) Soy Good, made from soy protein isolates, is made using the formula developed by Sanitarium Foods. It is very heavily promoted in Canada, using both TV and print, and has about 60% of the Canadian market, but because it is so heavily promoted and costs more to make, Raj thinks that it is presently not as profitable as the other product, So Nice. (2) So Nice is made from whole soybeans, using the ProSoya process. It is never promoted or advertised by Sanitarium Foods. It has about 40% of the Canadian market.

The fact that So Nice is outsold by So Good no longer effects Raj's income, because the exclusive agreement between ProSoya and SoyaWorld (from which ProSoya earned royalties) has expired. SoyaWorld now has non-exclusive use of the process and ProSoya does not get any

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royalties.

It is difficult to do blind taste tests comparing these two products, in part because so many people already have developed. There are also issues about using another person's branded product in a taste test and publicizing the results. Address: President and CEO, ProSoya Inc., 2-5350 Canotek Road, Ottawa, ONT, K1J 9N5, Canada. Phone: 613-745-9115.

3555. Joe, Peter. 2007. Sale of Sunrise's share of SoyaWorld Inc. and starting a new tofu plant in Toronto, Canada (Interview). *SoyaScan Notes.* July 24. Conducted by William Shurtleff of Soyinfo Center.

• ***Summary:*** In Dec. 2000 Peter Joe sold his 47% share of SoyaWorld to Sanitarium Foods of Australia.

He recently built a new tofu manufacturing plant in Toronto, Ontario. It began production in March 2002. All is well for Peter and Sunrise. The market for tofu in Canada is growing. Address: General Manager, Sunrise Soya Foods, 729 Powell St., Vancouver, BC, V6A 1H5 Canada.

3556. Luther, Claudia. 2007. Obituaries: Jack LaLanne dies at 96; spiritual father of U.S. fitness movement. *Los Angeles Times.* Sept. 24. p. AA1.

• ***Summary:*** Jack LaLanne, for decades America's master of health and fitness, first popularized the idea that Americans should work out and eat right to retain youthfulness and vigor. He died Sunday at age 96. According to his agent, Rick Hersh, he underwent heart valve surgery in December 2009.

LaLanne was far more than merely a "muscle man." He "was the spiritual father of the health movement that blossomed into a national craze of weight rooms, exercise classes and fancy sports clubs."

In 1951 he launched an early-morning exercise program on television keyed to housewives. His religion was physical culture and nutrition, and he spent his life on a crusade to help Americans is these two areas.

"Well into his late 80s, LaLanne continued his personal fitness routine of two hours a day–one hour of weight training and another hour exercising in the pool–beginning at 5 or 5:30 in the morning (a concession to his age; in earlier days, he started at 4 a.m.).

"No one–not even Arnold Schwarzenegger–could argue that LaLanne wasn't the best. Schwarzenegger, who met LaLanne in the 1960s on Muscle Beach on the Venice Boardwalk, said LaLanne would try to see who could match him in numbers of chin-ups and push-ups.

"'Nobody could,' Schwarzenegger told The Times. 'No one even wanted to try.'

"Francois Henri LaLanne (nicknamed Jack by his brother) was born Sept. 26, 1914, in San Francisco to French immigrant parents; his father worked at the telephone company and was a dance instructor and his mother, who was a maid, was a Seventh-Day Adventist, a religion that advocates "eight keys" to good health, including nutrition and exercise.

"LaLanne grew up in Bakersfield, where his parents had moved to become sheep farmers, but the sheep contracted hoof-and-mouth disease, and the family moved to Oakland. LaLanne's father died of a heart attack at age 50.

"LaLanne often told the story of how his mother spoiled him, giving him sweets as a reward. By the time he reached adolescence he had become a 'sugarholic' with a violent temper and suicidal thoughts.

"He was failing in school, his stomach was upset, he wore glasses, he had terrible headaches, he was weak and skinny, he had pimples and boils." Then he met Paul Bragg at a lecture in Oakland and turned his life around. "In 1936, he opened his first real gym–LaLanne's Physical Culture Studio in downtown Oakland." The rest is history.

In 2002 LaLanne was given a star on Hollywood's Walk of Fame.

LaLanne is survived by this wife, Elaine; Elaine's son, Dan Doyle, of Los Angeles; LaLanne's daughter by his first marriage, Yvonne, a chiropractor, of Walnut Creek; and the couple's son, Jon, of Kauai, Hawaii.

Note: Pioneers in physical fitness and physical culture in the USA (chronological): Bernarr Macfadden (1868-1955, an influential proponent of physical culture, a combination of bodybuilding, good nutrition, and a healthful lifestyle), Bob Hoffman and Joe Weider (born 1919; muscles, bodybuilders), Paul Bragg (1895-1976), Jack LaLanne (he had by far the greatest impact because of his TV show and the wide media coverage from his swimming events).

3557. Mahr, Krista. 2007. Why some countries feast and others famine. *Time* (*Asia*). Sept. 27.

• ***Summary:*** In the 1930s Henry Ford used to wear a suit made from soybean fiber. He became extremely interested in the many possible uses of the soybean. He served gala dinners in which all the dishes contained soy, and he made great efforts to incorporate soy products into Ford cars, using it for things such as upholstery fabric and experimental panels. The potential that Ford saw in soybeans has today be come a reality.

In his new book *Stuffed and Starved,* Raj Patel takes a sweeping look at the international food system in which 800 million people are malnourished, while over a billion eat so much that a high percentage become overweight or obese. Patel has a good sense of world food history. He includes a story of how Ellen G. White, long head of the Seventh-Day Adventist church, had a vision showing that a vegetarian diet was the key to longevity. Thus Seventh-day Adventists were "the first white people in the United States to make tofu."

3558. Erickson, Leeann. 2007. Re: F.G. Roberts information. Letter (e-mail) to William Shurtleff at Soyinfo Center, Oct.

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7. 2 p.
• ***Summary:*** "Please accept my apologies for the time it has taken for me to contact you! I really struggled to find much genealogical information about my Great Grandfather. I have researched a couple of libraries here in Melbourne, but the genealogical websites did not fare too well, considering the cost for research which I cannot afford at this point. I have managed to find an obituary, though! It is attached to the end of this email.

"I found a few dates that you may find helpful. They are as follows: F.G. Roberts was born 28 November, 1892 in Hobart, Tasmania and died 17 October 1977 in Nunawading, Victoria. Son of William Thomas Roberts and Ellen Bloomfield.

"He married Gladys Maude Griffiths (born 13 July, 1895 and died 12 July 1978) on 14 February 1914 at the Hobart Registrary Office, Tasmania. However, I am not sure if this is actually when the marriage took place, or if this was the date their marriage was actually registered. It was explained to me that back at the turn of the century, a lot of marriages happened without actually being registered until someone was available to register marriages in the region. But, considering they were in Hobart, I don't think this was the case with my great grandparents. And considering the actual date (Valentine's Day), it would seem that this was the date they were actually married.

"They had three children: Fred, born in Hobart 14 September 1911, Horace Eric, born in North Lyell 30 September 1914 and Gladys Ellen, born in North Hobart 25 February 1916. Fred died in Brisbane, Queensland in 1967, and Horace died in WW2 in a prison camp (Changi I believe) in Singapore in 1943. Gladys is still living in Melbourne, now 91 years of age.

"I have not been able to gather information about their families, because the family is quite scattered. And the family of my Grandmother, Gladys, has been estranged for many years. I'm not sure how much family information I should be sharing because of this, but I can tell you that my Father, Ian Robert, was Gladys' second son, born on 29 July 1941. He married Margaret Leslie Thorpe (born 19 October 1942) on 8 September 1963, in Nunawading, Melbourne Victoria. They had two children, my brother, Brendan Leslie, born 21 July 1964, and myself, born 3 September 1965. My father died suddenly of a brain tumour on 17 April 1995.

"It's interesting that you wondered how well known F.G. Roberts was in the Seventh-day Adventist Church. From conversations I have had, the church actually shunned him for his beliefs in his work, especially iridology. Apparently, the practise of Chiropractics, Iridology, etc. was not widely accepted in Australia when my Great Grandfather set up his medical Practices, and even less accepted among Adventists. My Great Grandfather had brought my Great Grandmother into the Adventist Church, but for many years, he was not a member because of the way he had been treated by the Church. (And rightly so, in my opinion!!) However, he did return to the church after many years, and as you said, died a Seventh-day Adventist. He and my Great Grandmother are buried together at Springvale Cemetery, Melbourne, Victoria.

"In answer to your question regarding his connection to the other Roberts' mentioned, this was very hard for me to find out! There are a lot of Roberts' in Tasmania, and I'm sure they are all connected in some way, but I would probably have to find an expert who would be willing to research back that far.

"I'm sorry I couldn't be more helpful at this point, but if there is any other specific information you are wanting, please let me know and I will see what I can do. I am glad that you are writing about my Great Grandfather. He and my Great Grandmother were very good and generous people, and I have many childhood memories of them." Address: Melbourne, Australia.

3559. Stern, Yoni; Taragin, Robyn; Larry, Shahar. 2007. New thought for food. *Food Technology* 61(10):34-36, 38-40. Oct.
• ***Summary:*** Michael Shemer, a young Israeli, methodically tried to develop meat alternatives that had excellent taste, texture, and nutritional value. For years, he experimented with wheat and soy proteins. In "the early 1980s he had a breakthrough when he combined the two vegetable proteins. He quickly evolved his technology into a line of meat analog products..." He found a home for his line of meat analog products at Kibbutz Lohamei HaGeta'ot. "Production began in 1985 under the name Tivall, later to become part of Nestlé Corp."

Note: This article is deceptive in two areas: (1) It does not explain that Michael Shemer worked for Worthington Foods, the world leader in meat alternatives since 1939 and owner of the famous Morningstar Farms brand, for about 3 years after earning his PhD degree in 1973 in the USA and before returning to Israel. (2) The idea of using wheat gluten and soy protein together to make outstanding meat alternatives was discovered by a team of researchers at Worthington Foods in about the mid-1970s. Michael Shemer was one member of that team. The leader of that team at the time, Richard Leiss, said that Michael deserves no more credit for the discovery than any other member of the team.

3560. Chajuss, Daniel. 2008. Re: Brief biography of Dr. Micha / Michael Shemer. Letter (e-mail) to William Shurtleff at Soyinfo Center, Jan. 4. 1 p.
• ***Summary:*** "Micha [Michael] was born on April 26, 1944 and passed away on May 26, 2007 and had lived in Haifa.

"I knew Micha very well and for a long time. (His M.Sc. thesis [which was submitted in 1970 to the Technion, Haifa, Israel] on cottonseed protein isolation was a done based on a patent of mine that had used hexametaphosphate solution as extractant of proteins). Micha was a very capable and inventive person with an inquiring and opened mind. He

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was the food technologist that had developed most of Tivall products. After obtaining his PhD as a visiting student in the U.S., he went to work for Miles Laboratories (Worthington Foods, in the US) for a few years on vegetarian meat analogs; he was later the mind behind Tivall's success." This job with Miles was the first one he got after earning his PhD degree at the University of Illinois at Urbana, Champaign.

"Tivall was founded in 1986 and is today considered a leading producer of vegetarian protein derived meat analogs like hamburgers and sausages (mainly using soy, peas and wheat proteins) selling in the UK and the rest of Europe, including the Netherlands, Israel, Germany, Sweden, Italy and Belgium.

Micha was the first person in Israel who produced some technologically improved analogs of meat patties, hamburgers and sausages, that were commercially very successful. He did not invent meat alternatives.

"Tivall products were first made and still are made at kibbutz Lohamei-Hagetaot. Oshrat is probably the Mobile Post name not a real location and thus could not be found on a map.

"The Tivall plant (in Kibbutz "Lohamei-Hagetaot") is located north of Haifa and is far away from the place where I live.

"Micha was not the founder of Tivall per se. Tivall was owned and built by the members of the kibbutz Lohamei-Hagetaot. Micha was not a member of the kibbutz but a hired person that had developed the technology by which Tivall had made their products and thus can be considered as a part of the founders of Tivall." Address: Israel.

3561. Leiss, Richard S. 2008. Recollections of Michael Shemer's work at Worthington Foods (Interview). *SoyaScan Notes.* Jan. 7. Conducted by William Shurtleff of Soyinfo Center.

• ***Summary:*** Mike Shemer worked at Worthington Foods for about three years in about the mid-1970s (roughly 1974-1977), not long after he had earned his PhD degree. He lived with his wife, Ronitha, and perhaps some children. He worked at Worthington during the era when the company was doing research on ways to combine soy and wheat and a number of other vegetable proteins. Michael was one member of a team of about 4-5 researchers. For him to be given credit for the important discovery how to combine soy and wheat proteins is unfair. "We were all working together in that same area, and I don't think that any one of us was truly the discoverer of that idea."

Vegetable Skallops, introduced by Worthington in 1965, contained both soy and wheat. By the mid-1970s Worthington has a canned product that contained soy and wheat.

However, Michael returned to Israel for a family visit (about 2 weeks) while he was still employed at Miles Laboratories / Worthington Foods. He brought back an idea from a company that made extruded soy steaks, each about half the size of one's hand, called something like a "Joshua Steak." Note: Perhaps this steak was the Vegetarian Schnitzel / Cutlet {Dry}, made by Shefa Protein Industries Ltd. in Arad. They hydrated and soaked their extruded product in excess water for longer than they had before to get rid of the soy flavor and create a blander, more favorable flavor, before they infused it with flavor. That excess washing was the basis for a lot of subsequent R&D. Michael does deserve credit for bringing *that* particular idea to Worthington Foods. Address: Former Director, R&D, Worthington Foods, Worthington, Ohio 43085-3194.

3562. Leiss, Richard S. 2008. The old, historic Worthington Foods' plant in Worthington, Ohio, no longer exists (Interview). *SoyaScan Notes.* Jan. 7. Conducted by William Shurtleff of Soyinfo Center.

• ***Summary:*** In 1999, Worthington Foods was acquired by The Kellogg Company. At the time, Worthington had two food manufacturing plants: One in Zanesville, Ohio, built in 1989 to make Scramblers, the company's frozen egg product, and the main plant in Worthington, Ohio. Kellogg continued to use the plant at Worthington for 2-3 years. Then Kellogg decided to merge the plant at Worthington into the newer plant at Zanesville. So they moved everything of value and all the production to the plant at Zanesville, where all of the former Worthington products are now made. At about this time, Ron McDermott moved to Battle Creek, Michigan, to work at Kellogg's corporate offices. He is vice president in research.

The original plant in Worthington, Ohio, is no longer standing. Very sadly and tragically, they tore it down in about 2004-2005. They just leveled the whole facility–all three buildings: administrative, research and manufacturing. They are now building business condos on that site. It was a real historical landmark. The large oak tree, around which they so carefully built the new plant in Worthington, still stands. It's a bicentennial oak. Richard is not aware of any effort to place a monument or plaque on the site.

Mr. Allan Buller, who is now about age 90-91, recently celebrated his 65th wedding anniversary. He would probably have the strongest feelings about erecting a monument or plaque. Richard, who retired in 2001, and is now age 69, also has an interest in such a project. The former Harding Hospital is now part of Ohio State University. Address: Former Director, R&D, Worthington Foods, Worthington, Ohio 43085-3194. Phone: 614-889-1386.

3563. Shurtleff, William; Aoyagi, Akiko. 2008. Le livre du tofu: La source de protéines de l'avenir–dès maintenant! [The book of tofu: Protein source of the future–now! Translated from the English by Nathalie Tremblay]. Varennes, Quebec, Canada: Éditions AdA Inc. 430 p. Illust. by Akiko Aoyagi. Index. Feb. 28 cm. [53 ref. Fre]

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• ***Summary:*** Contents: Preface. Acknowledgements. Part I. Tofu: Food for mankind. 1. Protein East and West. 2. Tofu as a food. 3. Getting started. Our favorite tofu recipes (lists about 80 recipe names for each of the different types of tofu, plus soymilk, yuba, whole soybeans, gô, okara, and curds; very favorites that are also quick and easy to prepare are preceded by an asterisk).

Part II. Cooking with tofu: Recipes from East and West (500 recipes). 4. Soybeans: History, cooking with whole dry soybeans, roasted soybeans (*iri-mame*), fresh green soybeans (*edamame*), kinako (roasted full-fat soy flour), soybean sprouts (*daizu no moyashi*), natto (sticky fermented whole soybeans, with "gossamer threads"), tempeh (fermented soybean cakes), Hamanatto and Daitokuji natto (raisin-like natto), modern western soybean foods (natural soy flour [full-fat], soy granules, defatted soy flour and grits, soy protein concentrates, soy protein isolates, spun protein fibers, textured vegetable protein (TVP), soy oil products). 5. Gô (*purée de fèves de soya fraîches;* a thick white puree of well-soaked uncooked soybeans). 6. Okara or Unohana. 7. Curds and whey (*Caillé et petit-lait*). 8. Tofu (includes history, and preparatory techniques: Parboiling, draining, pressing {towel and fridge method, slanting press method, sliced tofu method}, squeezing, scrambling, reshaping, crumbling, grinding).

9. Deep-fried tofu (*Tofu frit*)*:* Thick agé or nama agé (*Agé épais* {*côtelettes de tofu frit*}), ganmo or ganmodoki (*burgers de tofu frit;* incl. *hiryozu / hirosu*), agé or aburagé (*pochettes de tofu frit;* incl. "Smoked tofu," p. 197). 10. Soymilk (*Lait de soya*). 11. Silken tofu (Kinugoshi ou tofu soyeux) ("*Kinu* means 'silk'; *kosu* means 'to strain'; well named, kinugoshi tofu has a texture so smooth that it seems to have been strained through silk"). 12. Grilled tofu (*Tofu grillé*). 13. Frozen and dried-frozen tofu (*Tofu surgelé et tofu surgelé séche*). 14. Yuba (incl. many meat alternatives such as Yuba mock broiled eels, Buddha's chicken, Buddha's ham, sausage). 15. Tofu and yuba in China, Taiwan, and Korea (incl. Savory tofu {*wu-hsiang kan*}*;* see p. 258 for illustrations of many meat alternatives, incl. Buddha's fish, chicken, drumsticks, and duck, plus vegetarian liver and tripe, molded pig's head, and molded ham). 16. Special tofu (*Tofu particuliers*).

Part III–Japanese farmhouse tofu: Making tofu for more and more people. 17. The quest. 18. Making community tofu. 19. The traditional craftsman. 20. Making tofu in the traditional way. Appendices: A. Tofu restaurants in Japan (many are vegetarian). B. Tofu shops in the West (Directory of 43 shops in the USA, 3 in Europe {Germany, Austria, Belgium, Denmark, Finland, France, Ireland, Italy, Netherlands, Portugal, Spain, Switzerland, UK, Wales}, and 3 in Latin America {Brazil, Colombia, El Salvador, Guatemala, Mexico}). C. People and institutions connected with tofu. D. Table of equivalents. Bibliography. Glossary. Index. About the authors (autobiographical sketches; a photo shows Shurtleff and Aoyagi, and gives their address as New-Age Foods Study Center, 278-28 Higashi Oizumi, Nerima-ku, Tokyo, Japan 177). Sending tofu in the four directions.

Pudding recipes include: Rice pudding with gô and apple (p. 76, incl. 2 cups soymilk). Tofu chawan-mushi (p. 147; Steamed egg-vegetable custard with tofu). Tofu fruit whips (p. 148). Tofu rice pudding (p. 150, incl. 1 cup soymilk). Tofu custard pudding (p. 152). Soymilk custard pudding (p. 208). Brown rice pudding (p. 208, with 2 cups soymilk). Soymilk chawan-mushi (p. 209). Chawan-mushi with yuba (p. 249).

Dessert recipes include: Tofu whipped cream or yogurt (p. 148; resembles a pudding or parfait). Tofu ice cream (p. 149, with chilled tofu, honey, vanilla extract and salt). Banana-tofu milkshake (p. 149). Tofu cream cheese dessert balls (p. 149). Tofu icing (for cake, p. 149). Tofu cheesecake (p. 150). Tofu-pineapple sherbet (p. 151). Also: Soymilk yogurt (cultured, p. 205). Healthy banana milkshake (p. 206). On p. 160 is a recipe for "Mock tuna salad with deep fried tofu."

Note. This is the earliest French-language document seen (Sept. 2013) that mentions soy cream cheese (p. 125), which it calls *Fromage à la crème au tofu.* Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549 USA. Phone: 925-283-2991.

3564. *Globe & Mail* (*Toronto, ONT, Canada*). 2008. Veggie innovator breaking new ground [Yves Potvin and Garden Protein International]. March 26. Eat Well, p. 2. Special information supplement.
• ***Summary:*** A photo show Yves Potvin shopping in a grocery store. In 1988, Mr. Potvin invented the meatless wiener.

Note: This last statement is incorrect. The first meatless wiener (named "Meatless Wiener") was introduced in 1944 by Battle Creek Food Co. in Michigan. By 1988 more than 115 different meatless wieners and sausages had been launched in the USA. The first tofu hot dog was "Weissman's Original Tofu Sausage," introduced in Nov. 1980 by the Vegetable Protein Co., Cambridge, Massachusetts. At least ten tofu hot dogs had been launched in the USA before 1988. These included: Tofu Links (Nov. 1981, by Soya Food Products, Cincinnati, Ohio). Light Links (July 1982, by Light Foods Inc., St. Louis, Missouri). Lightlife Meatless Tofu Pups (Sept. 1985, by Tempehworks, Greenfield, Massachusetts).

3565. Burt, Jonathan. 2008. If Wesley were alive today. *Adventist Heritage Ministry Bulletin* (*Silver Spring, Maryland*) 21(3):6. Fall.
• ***Summary:*** At the Adventist Heritage Center in Silver Spring, Maryland, is a Dr. John Harvey Kellogg Discovery Center including an orientation DVD and different exercise machines and exhibits. "By the time we had finished they

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realized that all of Kellogg's advanced medical practices were based on the principles found in Ellen G. White's 1863 health vision."

In Hardy house, African American history is portrayed. Note: The reference to Wesley in the title probably refers to John Wesley (1703-1791), a Church of England cleric and Christian theologian. Wesley is largely credited, along with his brother Charles Wesley, with founding the Methodist movement and church which began when he took to open-air preaching. Methodism was a highly successful evangelical movement in the United Kingdom and the United States; it encouraged people to experience Jesus Christ personally. John Wesley was among the first to preach for slaves rights, attracting significant opposition. Many African American slaves became Methodists. Address: Scholarship Student [Silver Spring].

3566. Potvin, Yves. 2008. The basic business model of Garden Protein International, Inc. (GPI) (Interview). *SoyaScan Notes.* Oct. 7. Conducted by William Shurtleff of Soyinfo Center.

• ***Summary:*** GPI's main product is Gardein (TM, pronounced gar-DEEN, derived from Garden + protein). In his previous business, Yves Veggie Cuisine, Yves was a retail brand manufacturer. He manufactured everything he sold, and built a brand. Then he realized in 1998, when he developed this new proprietary process, Gardein, that he is now an ingredient manufacturer. That was one reason he sold his former business, but also because his present business is very capital intensive, so he needed more money to get it started.

Many different formulas / recipes are used to make Gardein; its both an art and a science–and constantly evolving with new R&D. All the formulas have much in common (all are meatless. The main ingredients are wheat gluten and soy protein), but each one is different–and thus custom designed–to suit each individual product application. Yves works closely with a chef (and he is also a trained chef with many years of experience) to develop the best possible formula for each application. The product behaves differently with different sauces (when its a low pH sauce they must start with a softer product. The protein in Gardein reacts to a dairy-based sauce much differently from the way it reacts to a tomato sauce). They have recently started to add new grain ingredients such as quinoa, kamut, amaranth, etc. to give new and interesting textures, and to increase the percentage of grain in the product. In Canada Gardein must be fortified to makes its nutritional value equal to or better than that of the meat product it is designed to replace; this is not required in the USA. The strips that they make for Trader Joe's are simply the raw material (plain Gardein), whereas the Chick'n Breasts they make for Costco are carefully formulated and formed to make a second generation product. GPI has no list of all the different types of Gardein. Rather, each company tells GPI the application, and GPI develops Gardein specifically for that product; no two are the same.

Gardein is always sold in a moist form (62-65% moisture, very much like that of meat)–never dry.

GPI sells Gardein either refrigerated or frozen–to keep it fresh. Any product sold refrigerated must be pasteurized first, which creates a whole new manufacturing cycle. Gardein is still much more difficult to process and handle than meat–for example. Most retailers buy it refrigerated, but most of the bulk product (shipped overseas or to foodservice) is sold frozen as to Cysco, Kellogg, Loblaw.

In 2005, after two years of solely R&D, Yves started to sell Gardein; his first customer was the Kellogg Co., which was already selling a line of meat alternatives under their Morningstar Farms brand. This began even before sales in bulk to foodservice.

Yves' basic strategy is to sell the ingredient (Gardein) to food product manufacturers, but they are required by a license agreement to put the Gardein logo on the label. The agreement specifies very precisely the size and location of the logo, how the ingredients are to be listed, etc. and the fact that the buyer cannot mix Gardein with meat.

But GPI also sells Gardein in four other ways: (2) Private label, as when they sell to Kellogg's, Loblaw's, President's Choice or Trader Joe's. Each of these customers also signs a licensing agreement. GPI and the customer work together to design and name the product and ingredients. Many private label customers (such as Kellogg and Trader Joe's) design their own package / label–but this can be frustrating sometimes, as when Yves can see that a poor package design will hurt sales of the product. The customer then sends its packages to GPI in Vancouver (actually in Richmond, BC, a suburb of Vancouver) where GPI packages its product.

(3) Control label, as for very large customers such as Costco, under the name Garden Goodness. The Gardein logo appears prominently on both the front (lower right corner) and the back (bottom center) of the attractive box. GPI owns the brand "Garden Goodness." Costco asks GPI to develop the product and to design the package; Costco has to approve of both, but they do not get involved in the details. Costco is happy because no other company has that Garden Goodness brand, and GPI is happy because it is their own label and their Gardein brand prominently displayed. "It is a win-win situation." Presently GPI makes only one SKU for Costco–"6 Veggie Chick'n Breasts," but they are about to launch several new items with Costco. GPI has already made the presentation and Costco liked the ideas.

(4) Under its own label, using the "It's All Good" brand. Initially Yves had no intention of going back into the retail business, because its very painful. But as he was trying to work with his previous company (Yves Veggie Cuisine), they kept saying it was too complicated, etc. So he realized he could use his own brand to do basic R&D. For example, in

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Canada he has tried selling "Its All Good in the meat section, the deli section, and the produce section of food stores. From this experiment, he has learned where it sells best, and he can share this valuable information with his customers that buy Gardein. He has also learned which product types and names sell best, what's the price point, etc. And he gets lots of consumer feedback about those products. Customers such as Trader Joe's, Costco, and Safeway in Canada always want the best seller in the It's All Good" line. Yves always changes the product name slightly, as from "Tuscan Tomato" to "Basil Tomato." A new product Yves is developing to sell under his own label is a stuffed product (like a stuffed chicken), which is Gardein stuffed with black beans (frijoles) and corn; the package has a tomato sauce inside. GPI uses a broker (who is paid 5%) to get these products into the retail market. In addition, GPI has its own sales force (1 person each in Ohio, New Jersey, and Toronto, and 3 in Vancouver). One guy is responsible for private label, one for the club business, etc. Next Wednesday they will make a presentation at Safeway headquarters; GPI wants to launch the "It's All Good" line with Safeway in the U.S. The week after that they go to Kroger headquarters, then the next week to Publics. Yves attends the most important presentations, which causes him to travel a lot.

Yves is also in the process of raising some money to finance that growth; he projects sales to double in the next 24 months. Currently Yves owns all the shares in GPI Inc. He's basically looking for one venture capitalist who will invest about $1 million in exchange for 10% of the business–just enough to go to the next level. He hopes to find a person who understands his vision and wants to be part of the journey. Yves believes this can be a $1 billion company.

Yves believes that he GPI must be strong in its own back yard before it tries to conquer the world. So his initial focus has been on Vancouver, British Columbia, and Canada (with 30 million population). His products are all over Canada, with 80% distribution. "But the big market for us is really the U.S." Right now, about 40-50% of his sales are in the USA and 10% in the UK, but in 1-2 years he expects that figure to rise to 70%.

GPI presently has two manufacturing sites in Vancouver, located 5 minutes apart; the second facility is leased, 20,000 square feet, and houses all the sales and marketing. One is the distribution center where all products are shipped fresh, refrigerated. The other site makes products that are sold frozen. As soon as every batch of product is made, it is frozen to keep it fresh. Within the next 2-3 years Yves expects to have one plant in the USA and one in Europe, then one in Asia within 5 years. The product has tremendous global potential. Yves is fortunate to have already started one business, and to have already had so much business experience. This makes the growth go much faster, but its still painful–yet he wouldn't want to be doing anything else. Yves is married and has two kids. He feels that raising a family and growing a business are quite similar.

(3) GPI sells Gardein (as an ingredient, frozen, by the container) to a customer, such as Tesco or Grassington's Food Co. in the UK, which has the product developed and produced, and packaged. Of course they also sign GPI's licensing agreement as described above. In this case the Gardein logo and text must appear in the lower right corner of the front panel: "Made with Gardein (TM). Farm grown protein." UK customers have (so far) asked for GPI's opinion on their package design, and GPI always gives an honest opinion. A new brand in the UK will be "Pick of the Crop."

(4) Food Service Products started with Whole Foods Market in Los Angeles, California, but are now sold to delis, restaurants, schools, catering companies, cafeterias, hospitals, etc. and go mostly through a distributor (such as CANA, UNFI, or Cysco Corp.), unless a company has large enough volume to go direct. GPI's main foodservice customer at present is Whole Foods, which sells Gardein in their deli and displays the Gardein logo prominently on the deli case. When a product is sold to foodservice, GPI realizes that this product will be served in a wide variety of ways (salads, sandwiches, fajitas, in a sauce, etc.), so it must be designed with that flexibility in mind. Moreover, the product must keep its good texture and flavor whether it is eaten hot or cold. As of Oct. 2008 the following products were available to food service: Chicken Cubes, Chicken Strips, Beef Strips, Chicken Breasts (nonbreaded), Beef Burger, Chicken fillets (non-breaded or breaded), and a seasonal Stuffed Turkey.

3567. *SoyaScan Notes.* 2008. When was the first meat alternative turkey created? (Overview). Oct. 7. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** We will the answer into two parts: (1) When was meatless turkey first served? That turkey was almost surely made from meat alternatives such as Protose, Nuttolene, and Nut Food–all made by the Sanitas Nut Food Co. of Battle Creek, Michigan. The earliest references for that are:

1895 Dec. 29 Chicago Daily Tribune. Vegetarian society Thanksgiving.

1899. Guide for Cookery, by Almeda Lambert (SDA–Seventh-day Adventist).

1904. Vegetarian Cook Book: Substitutes for Flesh Foods, by Edwin Giles Fulton (SDA).

(2) When was the first commercial meatless turkey first launched?

1968. Loma Linda Foods, Riverside, California. Loma Linda Canned Meatless Slices–Turkey-Like Slices. (SDA).

1968. Loma Linda Luncheon Slices–Smoked Turkey Flavor (SDA).

1968. Worthington Foods, Worthington, Ohio. Holiday Roast (Meatless Turkey-like product based on spun soy protein fibers) (SDA).

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So 1968 was the "anno mirabilis" or "miracle year" for commercial meatless turkeys, just as a growing number of young vegetarian hippies were looking for something to eat at Thanksgiving and Christmas. Markets rarely fail to met a budding new demand!

3568. *WISHH Soy News.* 2008. Silk donation to World Soy Foundation will support Adventist Development and Relief Agency (ADRA) school feeding in Ghana. Nov. www.wishh.org/media/newsletters.

• ***Summary:*** "The World Soy Foundation announced October 16, World Food Day, that Silk (R) soy milk, a WhiteWave Foods brand, is expanding its commitment to a project that provides nutritious meals to school children in Ghana as well as supports sustainable economic development in the West African country. Silk is donating $75,000 over three years for the World Soy Foundation to increase its partnership with Adventist Development and Relief Agency (ADRA)."

"Silk first contributed to the World Soy Foundation when the foundation was created in late 2006. That initial support of $20,000 aided ADRA's school feeding in Ghana, which the World Soy Foundation leveraged through contributions from U.S. soybean farmers. The new funding will allow World Soy Foundation to purchase, transport and install a "VitaGoat" soymilk processing machine as well as train operators and provide a year's worth of soybeans. As a result, the VitaGoat will produce enough soymilk to feed a school of 280 children for at least one school year and have sufficient product to sell to the community as a sustainable small enterprise. The machine will be placed in a rural community in Western Ghana where local farmers grow soybeans."

Later in this same issue is an interview with Ellen Feeney, Vice President for Responsible Livelihood for WhiteWave Foods. Portrait photos show: (1) Jim Hershey. (2) School children eating in a classroom in Ghana. 3. Ellen Feeney.

3569. Hardy, Les. 2008. Socialising accountability for the sacred: A study of the Sanitarium Health Food Company. PhD thesis, School of Commerce, University of Adelaide, South Australia. xiii + 404 p. [490* ref]

• ***Summary:*** This well researched and well written PhD thesis has a long and very useful bibliography (p. 369-404).

Note: "B.Ed. St" apparently stands for "Bachelor of Educational Studies." Address: M.Ec (UNE [University of New England, New South Wales]), Grad Dip Acc (Monash), B.Ed St (QU [Queensland Univ., Queensland]).

3570. Hurd, Frank J.; Hurd, Rosalie. 2008. A good cook–Ten talents. New updated, expanded pictorial ed. Grants Pass, Oregon: Published by the authors. Printed by The College Press, Collegedale, Tennessee 37315. 668 p. Illust. Color plates. No index. 22 x 15 cm. Spiral bound. [1 ref]

• ***Summary:*** A feast for the eyes, the mind, and the palate. Filled with more than 1,300 beautiful color photos; many of them accompany over 1,000 healthful, natural recipes, but others show the great variety of natural foods, from colorful fruits to basic whole grains. Brimming with sound advice on diet, lifestyle, and health.

This is the new edition of a very important, pioneering, indeed classic American vegan cookbook. On the front and back covers is an idyllic painting of the Garden of Eden. Author Rosalie Hurd is seated under The Tree, reading the Bible–Genesis 1:29, which describes God's original diet for men and women. The book uses no animal products (except in one chapter at the end titled "Recipes Using Milk and Eggs," "for those who are in the transitional period. However, we encourage all those who still cling to milk and eggs to become acquainted with the facts concerning their use, and become weaned through this process"). Some recipes also use honey.

Contains even more innovative soy recipes than the original 1968 edition. A minor point: some of the soy terminology is inconsistent and/or outdated. Address: 1. D.C. [Doctor of Chiropractic], M.D.; 2. B.S. Both: P.O. Box 5209, Grants Pass, Oregon 97527. Phone: 541-472-1113.

3571. Packaged Facts. 2008. Soy foods and beverages in the U.S. Rockville, Maryland: Packaged Facts. ix + 210 p. Digital PDF file. *

• ***Summary:*** Contents: Market overview. Two classifications: foods and beverages. Market size and composition. Snack bars and soymilk post solid gains in 2007. Soy mainstreams from natural channel. Market outlook. Consumer awareness of soy's health benefits on the ups. Soy / meat combination maximizes potential. Soy allergies a growing U.S. concern. Supermarketing soy. Teaming up with other functional foods. Kids and soy. Soy prices on the rise? The global picture. Competitive overview. Marketer and brand shares. Clif Bar takes the lead in nutrition bars. Kellogg the clear frontrunner in frozen meat substitutes. Turtle Mountain is tops in frozen treats. Silk leads in yogurt category. GeniSoy dominates faltering salted snacks category. Loma Linda leads shelf-stable meat substitutes. Marketing and advertising trends. New product trends. Natural / organic introductions abound. Also coming on the strong: Omega-3 fatty acids. snack bars cover all bases. Meat substitutes going over for real meat flavor. All-in-one meals a convenient choice. Cereals start the day with soy. Baked goods add soy goodness. Soy chips / crackers make for familiar snacking. Edamame becoming more mainstream. Frozen treats: new kid-tested flavors spell success. Soy and chocolate: a healthy combination. Competitor profile: Amy's Kitchen. Competitor profile: Kellogg's Company. Competitor profile: Kraft Foods. Competitor profile: Physicians Laboratories / Revival Soy. Soy beverage marketing and competitive trends. Soymilk types. Competitive overview. Competition from traditional

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dairy. Marketer and brand shares. Marketing and advertising trends. New product trends. Soymilk: making healthy even healthier with other functional ingredients. Soy smoothies mix fruit and soy. Nutritional and weight-control beverages. Soy chai tea and coffee. Competitor profile: Dean Foods. Competitor profile: The Hain Celestial Group. Consumer trends. IFIC data on attitudes toward health foods and soy. Meat alternatives and soymilk are top categories. Alternative America style vs. classic tofu. Minority and regional patterns. Socio-economic diverse demographics.

3572. Morano, Jim. 2009. The transformation of the natural foods industry (Overview). *SoyaScan Notes.* Feb. 22. Compiled by William Shurtleff of Soyinfo Center.
• ***Summary:*** This is a summary of a talk with Jim Morano, PhD, founder and owner of Innovative Sweeteners, Somerset, New Jersey–on 29 Feb. 2009.

Jim watched as the natural foods industry changed from the first wave (the pioneers who built a new industry, starting in the mid-1960s, because of their deep commitment to and interest in natural foods) to the second wave (the money guys who saw that the industry was taking off and wanted to get in and make money). The pioneers started companies like Erewhon, Westbrae Natural Foods, Chico-San, Tree of Life, and Eden Foods. The pioneers typically had many great ideas and lots of energy; but they often lacked business skills and money. However they learned fast through experience.

The second wave guys typically had both business and marketing skills and experience, plus either money or the ability to attract it. They wore suits, ties, and short hair, and had less interest in the foods themselves than in the profit that could be made from taking them into the mainstream market. They were pretty smart guys and quick learners. Using marketing and money, they could make things happen, big time and fast.

During the 1990s the natural foods market was growing much faster than the mass market, even though it was much smaller. While the mass market for foods was experiencing annual growth rats in the low single digits, the natural foods market was growing in the low double digits–and certain segments of the natural foods market (mainly soyfoods) were growing well in excess of 25% a year.

It was this difference in growth rates that attracted both the "suits" and Big Food to take notice.

The transformation took place during the years 1995 to 1997. There had been three ingredients that it was forbidden to use or sell (by common unwritten consensus) in natural foods prior to about 1995; sugar (especially white sugar), meat, and highly refined products such as white bread, white rice, white flour, white sugar, etc.

The crucial event in the transition came when white sugar was renamed "evaporated cane juice" (by Bruce Kirk, who was working with Florida Crystals) and allowed into a growing number of natural food products. The era of real food had changed into the era of the illusion of real food.

Jim was well positioned to witness this transition. He was selling natural brown rice syrup, which he had developed and which was sticky and tan. Evaporated cane juice (which Jim calls "minimally refined sugar" and which is only 1% less refined than pure white sugar) gradually took away much of his market and hurt his business.

The "standards" set by the natural food stores represent the "last line of defense" for product quality to the consumer. If an ingredient supplier attempted to rename less-refined sugar as ECJ (Evaporated Cane Juice), it would not fly unless the natural food outlets went along with this false and misleading designation.

In many ways, your local natural food store was similar to the local pharmacy. Most people ask their pharmacist for recommendations and transparent information about medicine. In a similar manner, the natural-food consumer depends on the natural food store proprietor for similar information about natural / healthy food alternatives. As these outlets became more consolidated and commercialized, they lost the commitment to "higher standards" as an uncomfortable trade-off to "higher profits". Today, it is more about the perception and connotation of the *label* than it is about the quality of the *product.* What we seem to be doing more and more of today is finding new and better ways of making the consumer feel good about eating lousy foods.

Big Food and the "guys in suits" realized early on that the major deterrent to making acquisitions in this new and exciting growth segment was the fact that the natural foods industry started as a counterculture movement to the mass foods market. What consumer back then would trust the name of a mass-market company on a health food product? This is the very reason why, when companies like Kellogg from the mass-market acquired small natural foods companies like Kashi, the former was very careful not to allow their name to be commercially connected to the latter. Mass-market companies that broke this rule quickly learned a painful lesson. For example, General Mills was one of the first cereal companies to come out with an organic cereal under their own name. If you look up the history of the General Mills product called Sunrise (organic cereal), you will see that it lasted in the marketplace for less than two years. After they failed with the Sunrise product, General Mills purchased Small Planet Foods as well as Cascadian Farms and were careful not to let their corporate name contaminate the historically pure reputation of their acquisition. Even today, it is hard for the average consumer to connect Kashi to Kellogg's. Address: PhD, founder and owner of Innovative Sweeteners, 1 Kingsbridge Road, Somerset, New Jersey 08873; Now head of Suzanne's Specialties, Inc. Phone: 732-545-5544.

3573. Chan, Jacqueline; Jaceldo-Siegl, Karen; Fraser, Gary E. 2009. Serum 25-hydroxyvitamin D status of vegetarians,

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partial vegetarians, and nonvegetarians; the Adventist Health Study-2. *American J. of Clinical Nutrition* 89(5S):1686S-92S. Supplement. May. [59 ref]
Address: Adventist Health Study-2, School of Public Health, Loma Linda Univ., Loma Linda, California.

3574. Fraser, Gary E. 2009. Vegetarian diets: what do we know of their effects on common chronic diseases? *American J. of Clinical Nutrition* 89(5S):1607S-12S. Supplement. May. [85 ref]
Address: Dep. of Epidemiology and Biostatistics, Loma Linda Univ., Loma Linda, California, USA.

3575. Marlow, Harold J.; Hayes, William K.; Soret, Samuel; Carter, Ronald L.; Schwab, Ernest R.; Sabate, Joan. 2009. Diet and the environment: does what you eat matter? *American J. of Clinical Nutrition* 89(5S):1699S-703S. Supplement. May. [87 ref]
Address: 1. Dep. of Environmental Health (HJM and SS) and Nutrition (JS), Loma Linda Univ., Loma Linda, California.

3576. Rajaram, Sujatha; Sabaté, Joan. eds. 2009. Fifth International Congress on Vegetarian Nutrition: Proceedings of a symposium held in Loma Linda, California, March 4-6, 2008. *American J. of Clinical Nutrition* 89(5S):1541S-1716S. Supplement. May.
• ***Summary:*** Sujatha Rajaram and Joan Sabaté are the guest scientific editors. Sponsor: Loma Linda University. "The congress was well attended, with more than 750 participants, almost double those who attended the previous congress in 2002."

Contents: Program participants (directory). Preface. Vegetarian diet and plant-based dietary pattern (2 papers). Plant-based diets and risk of cancer (3). Plant-based diets and risk of other selected chronic diseases (4). Health and nutritional status of vegetarians (5). Dairy food group in vegetarian diets: a debate (2–pro and con). Foods of importance in vegetarian diets: nuts and soy (6, incl. 3 on soy). Nutrients of concern in vegetarian diets (3, incl. soybean ferritin). Effect of plant-based dietary choices on the environment (3 papers). Address: Dep. of Nutrition, Loma Linda Univ., Loma Linda, California.

3577. Rajaram, Sujatha; Sabaté, Joan. 2009. Preface: Fifth International Congress on Vegetarian Nutrition. *American J. of Clinical Nutrition* 89(5S):1541S-42S. Supplement. May. [3 ref]
Address: Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

3578. Rajaram, Sujatha; Haddad, Ella Hasso; Mejia, Alfredo; Sabaté, Joan. 2009. Walnuts and fatty fish influence different serum lipid fractions in normal to mildly hyperlipidemic individuals: a randomized controlled study. *American J. of Clinical Nutrition* 89(5S):1657S-63S. Supplement. May. [60 ref]
Address: Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

3579. Sabaté, Joan; Ang, Yen. 2009. Nuts and health outcomes: new epidemiologic evidence. *American J. of Clinical Nutrition* 89(5S):1643S-48S. Supplement. May. [66 ref]
Address: Dep. of Nutrition, School of Public Health, Loma Linda Univ., Loma Linda, California.

3580. Byrd, Alita. 2009. 50 years selling Choplets [Interview with Allan Buller of Worthington Foods]. *Spectrum: Journal of the Association of Adventist Forums* 37(3):36-41, 63. Summer.
• ***Summary:*** "Allan Buller joined Worthington Foods as a young ex-soldier right after World War II and served as an executive at the legendary Adventist food company for more than 50 years, until he retired as president and CEO in 1986.

"He watched the company grow from a small Adventist-focused business to a nationally valuable brand with a sales volume of more than $200 million and meat substitute products on the shelves of supermarkets across America. He watched the world of business and marketing evolve, as well as the attitudes of people toward vegetarianism. Spectrum interviewed him about his years as an Adventist businessman.

"Question: You began your career at Worthington Foods just after World War II. How did you get the job? What challenges did the company face in the late 1940s?

"Answer: I began my career with Worthington Foods in 1945 immediately following my discharge from active service in the U.S. Army. James Hagle was the manager of Worthington Foods at that time.

"Jim and I had known each other for a number of years prior to my four plus years in military service. We both were alumni of Andrews University (then Emmanuel Missionary College), although he graduated some four years before I did.

"Both of us were students from the community at Berrien Springs rather than dormitory students. He was president of the college senior class in 1935–the same year I was president of the academy senior class. We played ball together, as well as being involved in other activities of mutual interest.

"While I was serving as supply sergeant for the 1400-bed U.S. Army 102nd General Hospital and was stationed in England, Jim wrote to me and suggested I visit him at Worthington Foods before accepting employment anywhere else after the war was over. I responded by telling him I was interested in going back to school to pursue graduate studies leading to an MBA.

"Jim pointed out that Ohio State University was located

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in Columbus, and just a few miles from Worthington. He suggested I take a position at Worthington as assistant manager and at the same time enroll at Ohio State University.

"When I got my Army discharge my wife and I visited Worthington and decided to accept Jim's offer. We moved there in December of 1945, and I became an employee of Worthington Foods. I enrolled at Ohio State University shortly thereafter, and received my MBA degree in 1952 after working full time and attending classes part time. In 1948 Jim accepted the position of manager at Harding Hospital in Worthington and I was asked to replace him as manager of Worthington Foods.

"The big challenge facing Worthington Foods at that time was an adjustment in the mission of the company. During the war years–under meat rationing–Worthington Foods had been busy trying to meet the public demand for a non-meat protein food that could serve as a replacement for meat. There was also a need to expand facilities and to raise capital for that purpose. The big question for the company was: Can we continue to produce and market a vegetarian protein food with no government meat rationing to support the business?

"Question: How many employees did Worthington have when you joined the company, and how many does it have now?

"Answer: We had less than 30 employees when I joined the company in 1945. When we merged with the Kellogg Co. in 1999 we had more than 500.

"Question: The Morningstar Farms brand launched by Worthington in the 1970s has become very well known in supermarkets across America. How did the marketing for the Morningstar brand differ from the marketing for brands targeted at the traditional Adventist market?

"Answer: Actually the initial launch of the Morningstar Farms brand was done by Miles Laboratories, which had acquired the rights to market the meat analogs developed by Worthington, along with the technology of how to make them.

"When Worthington reacquired those rights in 1982, the product line had already been introduced into the supermarket trade. Of course Miles had to rely on advertising and sales promotion to get things started. They began by selecting the name Morningstar Farms to pique the interest of consumers. This introduction also involved persuading consumers there was a valid reason to use the products. Miles was aided in this by research that had established a link between the consumption of animal fats and the presence of cholesterol and plaque in the arteries of human beings.

"Adventist consumers were already aware of the benefits of protein from non-animal sources through the church's health education programs. So advertising to the Adventist market could be directed toward taste, economy, and convenience.

"About this same time young people of high school and college age began to sense the social and economic–as well as possible moral issues–involved in raising and killing animals for human consumption. By the end of the 20th century some 200 colleges and university cafeterias were on Worthington's customer list and moms around the country were asking: 'What can I feed my child, newly converted to vegetarianism, when he or she comes home from school for the holidays?' Mom, why not try a Morningstar Farm chicken or hot dog? They contain no animal fat, they taste good, they're good for you, and you can get them at your local supermarket!

"Question: Why did Worthington put so much effort into the Adventist market over the years? Didn't that restrict the company in some ways?

"Answer: In all the years we were in business we saw the Adventist market as our prime target. In a sense it was our raison d'être.

"We began our business with that market in mind and were committed to it from then on.

"When we merged with Miles Laboratories in 1970 a provision was included in the working agreement contract to ensure that the Adventist market would continue to be served by the company. After we reacquired the business in 1982 we continued to respect our commitment to the Adventist market. It was important to us, and we wanted our Adventist customers to know they could count on having our products available in the future even though we might merge with another company.

"I'd like to point out that during our years with Miles we insisted on maintaining our policy of avoiding the use of meat products and meat derivatives as an ingredient in our product formulations. We insisted on this even though it was pointed out to us, and we agreed, that meat extractive flavors might make our products more palatable to the public taste. This policy did restrict us in some ways, but we felt that our Adventist and other customers who were vegetarian were counting on us to make sure Worthington brand products contained no meat or meat derivatives other than milk or eggs. In this respect we felt we were adhering to the traditional lacto-ovo vegetarian diet preferred by Adventists and others. Had we compromised our position in this matter we might have increased our sales–but we might also have confused or alienated our customers.

"Question: How would you describe Worthington's connection to the Adventist church?

"Answer: As a private company and as a chartered corporation Worthington could have no direct connection with the Adventist church. But individuals who were shareholders, employees, or members of the board of directors could be, and were, members of Adventist churches nearest their homes.

"For example: George T. Harding III, MD, one of the principal founders of the company, was an Adventist, a

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graduate of Columbia Union College and the Loma Linda College of Medicine. Beginning in 1948 and continuing for several years he took a leave of absence from Harding Hospital as its President and served as President of Loma Linda.

"James L. Hagle joined Worthington Foods in 1941 as General Manager. He, too, was an Adventist and a graduate of Andrews University, as well as of Northwestern University. He was serving as President of Worthington when it merged with Miles Laboratories in 1970. While President of Worthington Foods Mr. Hagle also served as a member of the Ohio Conference of SDA Executive Committee and the Columbia Union Conference Executive Committee. Later he was elected to serve on the Kettering Hospital Board.

"For my part, I was an Adventist graduate of Andrews University. During the 50 or more years I was employed at Worthington Foods, I not only filled every corporate office of the company at one time or another, but also served on the Ohio Conference of SDA Executive Committee for 23 years and on the Columbia Union Conference of SDA Executive Committee for over 15 years.

"Most of our key employees at one time or another filled important offices in their local churches. There has clearly been a close working relationship and support to the Adventist church from people who were a key part of Worthington Foods throughout its history.

"Question: How did the market for meat analogs change over the years?

"Answer: I believe these were among the most important factors in change:

"1. A growing public awareness of the possible link between high serum cholesterol levels and the consumption of animal fats." Continued.

3581. Byrd, Alita. 2009. 50 years selling Choplets (Continued–Document part II) [Interview with Allan Buller of Worthington Foods]. *Spectrum: Journal of the Association of Adventist Forums* 37(3):36-41, 63. Summer.

• ***Summary:*** Continued: "2. A developing interest on the part of consumers, especially young people, in modifying their diets to eliminate, or at least minimize, the consumption of animal meats because of a perceived moral issue in the killing of animals for human food.

"3. As the demand for meat analogs grew so did competition. This led to a significant increase in the number of companies producing and marketing these analogs. Among the newcomers were Garden Burger made by a company in Oregon and Boca Burger made by a firm in Florida. Although Worthington Foods continued to be the leader in the industry, newcomers meant the competition grew keener and larger companies began to see potential for these products.

"Question: Did Worthington begin to put emphasis on other healthy foods as time went on?

"Answer: Yes, I would say that became of interest to us. Other products that we added to our line included Kaffree Tea–a caffeine-free tea which we imported and repackaged for retail sale. This tea, known as rooibos or red tea, had been grown and used in Africa as a beverage for decades. We also added a second beverage, Roma, which was also imported (in this case from Europe), and repackaged it as a caffeine-free alternate to regular coffee. At one time we test-marketed canned mung (soy) bean sprouts and Kel-jel made without animal ingredients as an alternate to the popular gelatin products on the market. Lack of consumer response ended the tests and we continued to place primary emphasis on meat analogs.

"Question: In the early 1980s you re-mortgaged your home, along with other Worthington executives, and took great personal risk to buy back Worthington Foods, which had been taken over by Miles Laboratories and Bayer AG, in turn. Did you take the right decision? Why did you and the other executives agree to be taken over in the first place?

"Answer: An adequate response to this question might require a rather extensive explanation of management philosophies, which could take more space than we have here. But I can say this much: I don't believe any of us who were involved in the reacquisition of Worthington Foods had any doubts about what to do when the opportunity came–even though the cost and risks involved were high.

"Former president James Hagle, George Harding IV, the son of co-founder George T. Harding III, and I were convinced we should proceed with the chance we had to reacquire the business. It was the only way the future of the company and its purposes could be met. We pooled our resources, such as they were, and moved ahead. For me the decision meant re-mortgaging my family's home and using my accumulated retirement funds. James Hagle had the foresight to make sure the name Worthington Foods had been legally safe-guarded. George Harding was willing to use his family's identity and financial resources to support the move.

"It proved to be a wise move. The company became even more successful than it had been before the merger with Miles Laboratories in 1970.

"Our merger with Miles had come about because we knew of at least four nationally known companies who were seriously exploring the possibility of entering the market with their own brands of meat analogs. A friendly merger with Miles, who agreed to continue making the Worthington brand of foods even though they anticipated establishing their own brand, seemed more promising and more prudent than trying to compete with a company with more resources and more experience in marketing than we had. James Hagle, George Harding, and I all felt we had a moral obligation to protect the interests of Adventists and other users of meat analogs.

"Question: Later, Worthington went public. What was the reason behind listing on the stock exchange? Did a new

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responsibility to shareholders hamper the company?

"Answer: When Worthington Foods merged with Miles Laboratories in 1970 both companies realized manufacturing capacity at Worthington would be inadequate to meet the needs of their expected sales volumes. Plans for a new plant at Worthington were initiated and the new factory was completed in 1972.

"As the planning and construction moved ahead it became clear that the 10 acres of land owned in Worthington did not provide for any further expansion should it be needed. Miles decided to purchase a food manufacturing facility that had become available in Schaumburg, Illinois, near to its own administrative offices located in Chicago. Miles decided to use the Schaumberg site for the production of the newly developed Morning Star Farms line of products.

"About ten years later, Miles itself became a partner in a merger with Bayer AG, a German company that was looking for an American pharmaceutical company with whom they might jointly work in expanding their markets. This newly formed company did not want to continue in the food business, which, in turn, provided an opportunity for Worthington to acquire its own meat analog business back, plus what had been launched by Miles. Worthington Foods chose not to include the Schaumberg operation in its purchase, because it believed it could meet its projected sales for a number of years with production limited to Worthington.

"Following our takeover of production and marketing of all analog products we experienced a surge in sales that created the need for additional production capacity. We were able to find land in an industrial park in Zanesville, Ohio, about 60 miles from Worthington. Because no new manufacturing businesses had come to Zanesville for a number of years, the city offered us tax incentives and other benefits to build a new plant there. However, this would have taken millions of dollars of capital, which we did not have at that time. After a review of investment potential among our Adventist acquaintances, we concluded we could not generate enough capital quickly from that resource. Accordingly we decided to explore going public with a stock offering. This proved to be successful, but it also brought new problems.

"We soon discovered that public interest in stock investment is more directed toward financial return than to better eating habits. Furthermore, publicly held companies must learn to live with financial analysts, who see their purpose as that of helping companies to maximize profitability for the benefit of investors in the company. This places pressure on company management to make decisions that don't always coincide with management's vision of what is best for their company's customers. Under this constraint we were not always able to do what we felt was best for our customers. Expecting financial analysts to understand and share these ideals was not always practical or feasible.

"Question: When did Worthington Food experience the biggest growth?

"Answer: It all depends upon what you mean by growth and how it is defined. I'll respond in general terms. When we completed our new plant in 1972 we achieved a 250% increase in production capacity. When we completed our second plant construction at Zanesville we more than doubled our 1972 capacity in the production of frozen foods. Our production of frozen foods represented the major portion of total production and sales. The total number of employees peaked by 1990 when both the Worthington and Zanesville plants were in operation. As our technology and efficiency improved, production increased without an increase in the number of employees. From 1960 to 1970 our total sales volume increased 1,000% but in real dollars the increase between 1970 and 1980 was greater than it had been in the previous decade. This was also true for the decade 1980 to 1990 over the preceding decade. In capital investment, we never stopped growing.

"In summary I would say that our history of growth was geometrical in nature, rather than arithmetic. Profitability did not keep pace with production and sales increases, but we did continue to show increases in earnings as well. The year 1945 was the only year we did not show a profit and that was due to a post-war adjustment. In 1945 when I joined the company we had annual sales of less than $200,000. By 1999 our sales volume was approaching $200,000,000.

"Question: How did the challenges the company faced in the 1990s differ from those in the 1940s?

"Answer: Challenges in the 1990s differed from those in the 1940s because we had become committed to meeting the interests and needs of the public rather than to a segment of it.

"A second area of challenge had to do with the increase of competition or possible competition from large companies who were beginning to see potential in what we were doing.

"A third area of challenge was in the field of finance. It had become necessary for us to expand in order to meet market demands. Raising capital was a real challenge. This is why we decided to go public with stock in our company. This, in turn, brought pressure from stockholders who were more interested in profit than in sound nutrition principles.

"Question: When were you the busiest? What did you enjoy most about your job?

"Answer: The most intense activity I experienced at Worthington Foods came during the time between August 15 and October 15, 1982. Those were the weeks we were preparing for the reacquisition of the company after 12 years affiliation with Miles Laboratories." Continued.

3582. Byrd, Alita. 2009. 50 years selling Choplets (Continued–Document part III) [Interview with Allan Buller of Worthington Foods]. *Spectrum: Journal of the Association of Adventist Forums* 37(3):36-41, 63. Summer.

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• ***Summary:*** Continued: "I was the Worthington representative in negotiations. It had already been decided that I would serve as the President and CEO of Worthington Foods after the company became ours again. The familiar phrase 'the buck stops here' seemed to apply. I was busy trying to raise capital while adjusting to line authority after years in a staff position. Putting together a management team for production, marketing, research, human resources, and finance took all the time and energy I could muster. There were development and communication of plans to be shared with customers, vendors, employees, prospective shareholders, etc.

"During this time my attaché case containing details of plans was stolen from my locked car. My prayers were answered in recovery of these valuable documents.

"Life was a bit hectic but with God's leading and help we began business as Worthington Foods on Monday following the closing of business as a division of Miles the previous Friday. A big factor in making this possible was a decision on the part of every employee to accept our invitation to continue working for the company vs. continuing with the former parent company. Regaining control of the company and helping it to become a private company once more and successful beyond our expectations was the biggest thrill I experienced while I was a part of Worthington Foods.

"Question: What has been Worthington Foods best selling product of all time?

"Answer: I'm not sure I can specifically answer this question because different products were leading sellers at one time or another. I can say this much: Our reputation as a vegetarian food producer began with our early product, Choplets. This was a meatless steak-like product made from wheat gluten. The name was adopted and registered as a trademark by company management after it was suggested as a name by George T. Harding IV, son of the company's co-founder and just ten years old at the time. George's family had just completed a meal at which Choplets were served and the question was asked, 'What name shall we choose for this product when we're ready to begin marketing it?' George suggested his choice of names and Choplets went on the market in health food stores, Adventist book centers and campmeetings and rapidly became a favorite of many consumers–so much so that in time it began to be used as the generic term for any wheat gluten steak made and sold by any company.

"Choplets thus became the best-selling vegetarian product made by Worthington. Even New York's Waldorf Astoria Hotel served Choplets during wartime rationing. Later when Veja-Links, a meatless 'hot dog' were introduced, they took over the number one spot for a while. In time frozen vegetarian foods came into their own, and because we were able to make them available to the public in supermarkets they took the lead in sales.

"Question: What is your own favorite Worthington food?

"Answer: My favorite Worthington food when I first joined the company was Choplets, but they are not now made the way we used to make them, so they no longer are my favorite. I guess my favorite among the products currently made would be Morning Star Farm Grillers.

"Question: When did you step down as Worthington's chief executive?

"Answer: I stepped down as President and CEO of Worthington Foods, Inc. on January 1, 1986. I was succeeded by Dr. Dale E. Twomley who had joined the company some three years earlier as the intended successor. Before that he was serving as head of the business department at Andrews University.

"Under Dale's leadership the company continued to grow at a rapid pace. He was instrumental in negotiating the acquisition of the Loma Linda Food Co. and later the purchase of land in Zanesville, Ohio, and the subsequent construction of a new plant in that area. As president and CEO he also took a lead role in negotiations with the Kellogg Co. when it acquired our business in 1999.

"Question: What kept you at the company for over 50 years?

"Answer: I enjoyed my work. I felt the company was responding to a genuine need on the part of its customers. My employer wanted me to stay. I felt the company had a promising future. Our family liked the community in which we lived. All of these had an influence in my continuing with the company for so long.

"Question: What would you say is the secret of Worthington's success?

"Answer: I believe the secret of our success is not really a secret. Founders and owners, management, and key employees all believed in the mission of the company. The principles that guided these people were (a) honesty and fairness to employees, stockholders, and vendors, (b) a commitment to our mission, and (c) a faith in God.

"Question: What do you see in the future for Worthington Foods? How can it remain competitive as so many other companies get into the meatless food market?

"Answer: From a legal point of view the future for Worthington Foods now rests in the hands of the Kellogg Co., which now owns Worthington.

"Our Worthington board members decided that the Kellogg Company is better prepared with greater resources to be competitive than we were at the time we sold the business to Kellogg.

"I will be disappointed if Kellogg management does not aggressively protect its investment in what has been a promising vegetarian food business. The fact that Worthington Foods and Morning Star brand products continue to be made available in greater variety than years ago is some assurance of this.

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"Question: Can you tell us an interesting story from your years with Worthington Foods?

"Answer: I'm sure I could identify a number of things that happened during my career that reflect human interest rather than business concern, but there is one that stands out as perhaps being a good example. I call it 'The story of the $40,000 tree.'

"When I first joined Worthington Foods in 1945 a new factory building had just been completed. In front of it stood a tall and impressive white oak tree. At the time I had no idea of its age, but it looked quite old. Obviously the tree had not been moved or damaged by any recent construction activity. It remained undisturbed for the next 27 years, generously providing squirrels with an annual supply of acorns.

"By the time we merged with Miles Laboratories in 1970, it had become obvious that a new and larger factory was needed. The Miles Company hired an architect and assigned one of its engineers to supervise construction. I was asked to serve as chairman of the building committee

"The architectural firm had a set of building plans ready for us at the first official meeting of our committee. The first thing I noted was that no white oak tree appeared on the drawings. The architect's explanation was, 'We feel it needs be removed so the main entrance to the building can be located in that spot.' When I suggested we keep the tree and change the entrance, the architect responded, 'Because of the time already spent in preparing plans, it could cost as much as $40,000 to change them.' The Miles engineer added this comment, 'I think changing anything at this stage might require approval by a higher authority than this committee has.'

"We shortly adjourned the meeting, but I didn't feel satisfied. At that time Dr. Walter Compton was President and CEO of Miles Laboratories. I had not known him before our merger with his company, but my impression of him was that he placed aesthetics above dollars. I decided to write a letter to him explaining my concern about cutting down a tree that had as much size and history as the white oak standing on property that had just become a part of Miles Lab. I explained that I had arranged for a horticulturist from nearby Ohio State University to give us an estimate on the age of the tree.

"His report stated that it in his opinion the tree was standing when George Washington and his troops were fighting the Revolutionary War. That would make it the oldest living thing in Worthington. Dr. Compton's immediate response was, 'We must save it!'

"The tree is still alive and well and stands in all its majesty where it sprang from an acorn. Lightning rods and a plaque have been installed. If the tree had a voice I'm sure it could tell us a great deal about how Worthington came to be settled and what life here was like when Indians lived here. Who knows how many Indian children might have played under this very tree?

"Allan Buller lives with his wife in Ohio. This interview was conducted via email over a number of months in 2008 and 2009."

3583. *VegeScan Notes.* 2009. Chronology of the early health foods movement in England (Overview). July 21. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** 1898 [Oct. 20]–The Pitman Vegetarian Hotel, England's first vegetarian hotel, opens on the top five stories of the building housing the restaurant. It is "named after Sir Isaac Pitman, inventor of Pitman Shorthand, who had been a vegetarian for 60 years, and at the time was the best known vegetarian in England." Customers of the restaurant "start asking for food which they could take home with them." James Cook starts to make simple, appetizing "foods from nuts, cereals, fruits and vegetables to take the place of meat, lard, butter, cheese and jelly made from animals."

1902?–"Six years before Kathleen was born the 'Health Food Store' was opened and the manufacturing side increased." James "realised it was not economic to run a factory in the centre of Birmingham, so he bought a site in Aston" where he built the first [sic] health food factory in England.

1905–The Pitman Health Food Company opens. Its most popular products are Nuto Cream Soup and Nut Cream, followed by Pitman Dandelion Coffee. All products are dairy-free.

1907 Oct. 28–The health food factory of the International Health Association Ltd. is dedicated at Stanborough Park, Watford, Hertfordshire, England. Two hundred people attend. The estate and all its buildings are dedicated to the service of God.

1926–The International Health Association Ltd. (still located at Stanborough Park) is renamed Granose Foods.

1929–A bigger and better health food factory, called Vitaland, is built in a beautiful building in green fields at Four Oaks, Sutton Coldfield Park, Warwickshire.

3584. May, Rebecca. 2009. Dale Twomley: A true investor in Adventist education. *Focus* (*The Andrews University Magazine*) 45(4):50-51. Fall.

• ***Summary:*** An excellent biography of a man of great talent and dedication, with many successful careers in education and business. In 1983, after reorganizing and revitalizing the Andrews University School of Business, Dale began a "successful career with Worthington Foods [Worthington, Ohio]. Among the company's successes during his 14 years as President / CEO, sales increased from $27 million to $185 million, and shareholders' equity increased at 31 percent compounded annual growth rate for 14 years. The business theories he'd learned, taught, and institutionalized at Andrews were brilliantly successful in the 'real world.'"

A large color photo show Dale Twomley in his later years. A smaller black and white photo shows Dale when

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he was younger. Address: Director of campus relations & events, Office of Integrated Marketing & Communication, Andrews Univ., Berrien Springs, Michigan 49104.

3585. Moncrieff, Scott. 2009. What the Sam's Chicken? The true story of the man behind the meat. *Focus* (*The Andrews University Magazine*) 45(4):20-23. Fall.

• ***Summary:*** "You go through the serving line at Dining Services, picking up mashed potatoes and gravy, salad, and a drink. Oh, and you add a portion of Sam's Chicken, along with two tablespoons of tartar sauce. It's pricey, at $3.79 a serving–and 25 cents for the tartar sauce–but it has been an irresistible favorite at Andrews University for 40 years. As you work through your five ounces of wheat gluten, soybean oil, soy flour, yeast extract, sea salt and top secret spices, you have no idea of the history of Sam's Chicken, or who Sam is, if indeed there is such a person. But as those 400 calories hurtle past your taste buds and into your bloodstream, sit back and maintain consciousness. I'm going to tell you.

"Our story starts about 6,000 miles away from Berrien Springs, Michigan, near the city of Obihiro, on the island of Hokkaido, in Japan. That is where Michihisa Yoshimura was born on March 4, 1915. His father, a well-to-do businessman, owned a coal mine and raced horses for fun. In some ways, Michihisa was a lot like your average American kid of the Post World War I era. He liked to snow ski, ice skate and play baseball (catcher and left field). As Michihisa got into his teens his mother, a Christian (his father was an atheist), wanted her son to attend a Christian school, so she sent him way down south to Saniku Gakuin, the Adventist college about 50 miles east of Tokyo on the other side of Tokyo Bay.

"There Michihisa providentially–for purposes of our story and title product–worked in the food department, helping manufacture peanut butter, grape juice and bakery products. During summer vacations he worked with his grandfather's flax company, further extending his knowledge of food production. When Michihisa turned 18, in 1933, he was required by law to apply to join the federal army. However, he was rejected because of flat feet–Japan was not yet in a large-scale war and its military was selective. This rejection prepared the way for him to gain permission to leave Japan to attend Madison College, just outside Nashville, Tenn., where he began further studies in 1937. He had been encouraged to go to Madison by Perry Webber (Emmanuel Missionary College class of 1911), a PhD in chemistry who had a special interest in soyfoods, and had spent much time at Madison College as well as in Japan. As Michihisa set off for Madison, Webber suggested he adopt the name 'Sam,' after the biblical Samuel. Thus Webber unwittingly saved us from 40 years of 'Michihisa's Chicken.' Incidentally, Sam's younger brother Zenzaburo, who remained in Japan, trained as a kamikaze pilot, and had given away his clothes preparatory to his final mission–and then, mercifully, the war ended.

"In entering Madison College, Sam had come to the school most suited to enhance his work as a food technologist with soy products. In 1904, E.A. Sutherland, having resigned as president of Emmanuel Missionary College, embarked with his colaborer Percy Magan to open a new school in the South. This institution, originally the Nashville Agricultural and Normal Institute, became Madison College (in 1937), and Sutherland served as president there for over 50 years. This school, like Andrews and Saniku Gakuin, focused on the harmonious development of body, mind and spirit. As part of the plan, students were to work off half or more of their expenses each year. Among the industries which developed on campus was a food factory which, in 1918, became Madison Foods. By the time Sam arrived in 1937, Madison Foods was a leading–probably the leading–developer of soy-based products in the United States, including soymilk, soy meat substitutes and tofu products.

However, times were hard and wages were pennies per hour. Sam's classmate Shirou Kunihira worked in the soymilk production plant, while Sam worked at the bakery, where his duties included running the bread loaves through the slicer. Shirou would get an allotment of soymilk at the end of his shift and Sam would collect the crumbs from the pan under the slicer. With these ingredients the friends would share a humble evening meal. For Japanese and Japanese-American students, there was the added challenge of the United States being at war with Japan. Despite these challenges, Sam graduated from Madison College in 1941 and worked an additional two years for Madison Foods, but now his passion for soy was balanced with a new passion for she.

Sumiko Yano, a.k.a. Sumi, was born in Japan, but grew up in Southern California. At the time the U.S. declared war on Japan, in December of 1941, her family was living in El Centro, California. Her father made his livelihood by arranging for cantaloupes and other valley produce to be shipped to market. In 1942, her family was given a one-month notice that they would be placed in a 'War Relocation Camp' in Poston, Arizona. (After relocation started, Sam and the other Japanese or Japanese-Americans at Madison would hide in the cornfields whenever immigration officials came looking for Japanese persons.) For approximately one year Sumi lived with her parents in an army barracks at the camp, eating in the communal dining area, using a latrine, and working every day in the agriculture department as a secretary, for $19 per month. One day, Sumi received a box of home-baked peanut-butter cookies from someone named Sam. Sam had sent the cookies as part of a thank you to Sumi's family, who had helped Sam's family with a financial transaction at a time when Japanese bank assets were frozen. Sumi wrote back asking for more cookies. Sam, in turn, helped arrange for Sumi to get early release from camp, in order to attend Emmanuel Missionary College, through the

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auspices of A.N. Nelson, then dean at EMC, but formerly president of Saniku Gakuin when Sam was a student there. Sumi, in turn, decided to pass through Madison on her train trip to EMC, to meet Sam. They met and got acquainted in the home of Perry Webber, and that fall of 1943 found Sam as well as Sumi enrolled for classes at EMC. Sumi worked as a reader in the home economics area for Mrs. Holquist, while Sam worked at the farm and the greenhouse.

The young couple was married on June 12, 1944, at a friend's house in Chicago, and lived in an apartment until Sam's graduation on August 1, 1945, with a BS in agriculture. Their first child, Steve, was born in June of that year. Sumi remembers that a friend drove her to Watervliet, Michigan, where the doctor, sympathizing with her state as a poor student, delivered her baby for free. Sam returned to Japan in 1947 (Sumi and infant Steve followed six months later), and spent ten years helping build up the food factory at Saniku Gakuin. The Yoshimuras returned to Tennessee in 1957, where Sam became production manager at Madison Foods. Continued. Address: M.A., Prof. of English, Andrews Univ., Berrien Springs, Michigan 49104.

3586. Moncrieff, Scott. 2009. What the Sam's Chicken? The true story of the man behind the meat. Part II. *Focus* (*The Andrews University Magazine*) 45(4):20-23. Fall.

• ***Summary:*** Continued: "Near the end of the time he worked there, he began developing Sam's Chicken '1.0,' a canned product. In 1963, Sam resigned from Madison Foods and began work as an independent consultant for Madison Hospital. He also did independent research using the hospital's facilities at night, working on, among other things, improving Sam's Chicken. As far as Sam knows, it was the first product to mix wheat gluten with soy or tofu. Sam says the product was made 'by blending tofu, wheat gluten, and other ingredients; the mixture was whipped, shaped into a loaf, baked briefly to sterilize it, torn into chunks, dipped into batter, then deep-fried to yield a delectable "meatless chicken"' (soyinfo.com).

"Sumi, who had gone on to get her BS in dietetics from Loma Linda University, was working as director of the Madison Hospital cafeteria, and used Sam's Chicken in the cafeteria with great success. What couldn't be consumed by the hospital was sent on to local self-supporting schools like Little Creek and Fountain Head.

"Around 1966, Sam went to work at Harding Hospital for Worthington Foods. While there, he developed Sam's Chicken as a frozen product, and further tinkered with the recipe, which included soaking it in a buttermilk and egg batter overnight, prior to dipping it in a bread-crumb and spice mixture and deep-fat frying it. It was shortly after this time, probably 1969 or 1970, when the Andrews cafeteria, under the leadership of Clinton Wall, began using Sam's Chicken, according to Ruth Roberts, who worked with Wall.

"Of his many accomplishments in the food technology industry, however, Sam himself was especially pleased to be loaned by Worthington Foods to help the country of Uganda with improving its food supplies for school children and women. Over a six-month period in 1969, he and his team, along with workers from UNICEF, developed porridge, roasted soybeans, and soyflour-enhanced bread for more nutritious school lunches.

"Sam and Sumi, now long retired, live in a suburb of Sacramento, California. And it appears that the ever-popular Sam's Chicken will tantalize the taste buds of new generations of Andrews students. As you wash down your last morsel with some grape juice, here are two last bits of the story to chew on. First, 'Sam's Chicken' has always been an unofficial name. The official Worthington product from which it is made is called 'Chic-ketts.' Second, Sam depended heavily on Sumi to give him feedback on the

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'meaty' taste of his product. She ate real chicken, while the only meat occasionally eaten by Sam, the Sultan of Soy and illustrious innovator in a long line of meatless meat products, was fish."

Photos show: (1) Sam Yoshimura in 1941, when he graduated from Madison College. (2) Sam and his wife in 1963 seated on a couch in Madison, Tennessee.

(3) Sam standing in Kobe, Japan, in 1976.

(4) Tearing the mixture of baked tofu and wheat gluten into chunks.

(5) Sam's Chicken, ready to eat at Andrews University, after chunks have been deep-fried in breaded batter. Address: M.A., Prof. of English, Andrews Univ., Berrien Springs, Michigan 49104.

3587. Messina, Mark J. 2010. The war has been lost: Update on research on the health benefits and risks of soy (Interview). *SoyaScan Notes*. May 31. Conducted by William Shurtleff of Soyinfo Center.

• ***Summary:*** The image of the safety or healthfulness of soyfoods, primarily on the Web, in large part due to the Weston A. Price Foundation, is getting worse and worse. Mark fears that the future of soy as a human food looks bleak, and that sales of soyfoods and ingredients will decline over the next 20 years–even though the nutritional science is making soy look better and better.

For example, the research on the safety of soy for people with thyroid problems is now solid. Soy does not cause thyroid problems in humans. Soy does cause thyroid problems in rats but rats are a bad model to use for studying this problem. Even for people living in a goiter belt–a place with iodine depleted soil–consuming soy is not a problem.

The research on the safety of soy for women with breast cancer is becoming more solid. The paper by Shu et al. is the most important development although the Guha paper is also basically supportive of safety. The paper by Messina and Wood discusses the clinical work. Add to this the fact that there is another paper albeit smaller in size that will be published soon that supports the paper by Shu and that it is now known that the animal studies aren't very relevant to humans because the amount of biologically active genistein in circulation is much higher in mice than in humans makes a pretty strong case. The editorial by Messina, Abrams and Hardy that makes the case succinctly.

It is quite clear that if a young girl has one serving of soymilk a day for life, that will reduce her risk of breast cancer. Likewise for women with breast cancer. However, nothing is clear when it comes to chronic disease and diet. The hypothesis is quite intriguing and has epidemiologic and animal data in support of it. However, without clinical data it will remain speculative. Nevertheless, because the potential benefit is so great, the amount of soy need for protection so small (one serving) and that in my view there is no disadvantage to consuming soy, it seems like a no brainer to make a recommendation for girls to consume one serving per day.

The area where we have the fewest good studies and the biggest knowledge gap is in safety of soy for young children. Seventh-day Adventist children have been consuming soymilk for more than 60 years with no reported problems, yet this needs to be studied scientifically. A good two-year study has been designed but has yet to be funded.

There has been a big decrease is sales of soy infant formulae over the past ten years due to uncertainty in this area.

The main are of concern today is with isoflavones / phytoestrogens (such as genistein), which are classified as endocrine disruptors. The anti-soy faction likes to talk about "estrogens in soy" as being risky and about feminization.

The Weston A. Price Foundation (WAPF) recently had their 10th annual conference / meeting in Chicago; 1,000 people attended. Their focus was not anti-soy, although a few such comments were made.

Note: According to Wikipedia, the organization was founded in 1999 by Sally Fallon and Mary G. Enig, PhD. Headquartered in Washington, DC, it is a "501(c)(3) non-profit organization dedicated to 'restoring nutrient-dense foods to the American diet through education, research and activism.' Its goals include disseminating the research and dietary advice of dentist and nutritional researcher Weston A. Price, who studied the foods and health of isolated non-industrialized peoples around the world, and supporting the scientific validation of traditional diets." Their anti-soy program is named "Soy Alert!" and they repeatedly refer to soy as "toxic." "In 2010 its membership numbered 13,000 and was growing at an annual rate of 10%, according to The Washington Post (6 Aug. 2008). It has more than 450 community-driven chapters across the United States, and international chapters in Australia, Canada, Finland, Germany, Pakistan, New Zealand, the United Kingdom and various other countries."

Mark regrets that he agreed to debate Sally Fallon. She made a number of false claims, such as Illinois prison inmates were being fed 100 gm of soy protein a day.

Alpro Soya recently released an excellent cartoon video commercial titled "Great Ideas Often Take a Long Time to Sink in" as part of its "Join the movement now" campaign. It encourages people to change their diet by replacing meat and dairy by an alternative just once a week.

White Wave [Dean Foods] is no longer funding scientific studies on soy–as they were a year ago. They have turned all their soy activities over to a PR firm. Mark finds this very disappointing. However the Silk Soy Nutrition Center has a good website (soynutrition.com) which focuses on the health benefits of soy.

The next soy conference will be in October. Kaayla Daniel is writing a new book of anecdotes about how she has helped people who had nutritional problems with soy.

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What evidence does Mark have that people are concerned about the safety of soyfoods? (1) The United Soybean Board (USB) has sponsored a booth at the annual meeting of the American Dietetic Association each year for at least the last 15 years. The booth is organized by Publicis, the USB's PR agency. The purpose is to provide information about soy oil and soyfoods. Materials are provided and usually a soy-related product served or handed out. It could be edamame or soynuts or chap stick made with soy oil. The ADA show attracts about 10,000 dietitians. Mark has staffed the booth every year (except one when he was unavailable) to answer questions about soy nutrition. He answers about 50 questions during the 3-day meeting. Most of the questions are about soyfoods (rather than soy oil). He has watched the nature of these questions change over the years. Initially they were about ways to incorporate more soy into the diet. Now they are about the safety of soyfoods and soy formula, and about isoflavones.

(2) He is often contacted by non-scientific journalists who want to interview him for radio, TV, or the Web / blogs. Here again he is now hearing the same safety concerns. (3) Mark gives many talks about soy nutrition each year. After a typical talk, he opens it up for questions. Here, also, he gets mostly questions about the safety of soy. (4) Mark's wife, Ginny, does a great deal of work promoting vegetarian and vegan diets. She says that support for soy is weakening among vegetarians. (5) On the Web, the number of negative stories about soy nutrition is growing. Almost all are based on hearsay rather than on science. (6) Mark increasingly hears negative comments about soy at random. In short, the climate has changed dramatically since 1990, when the trend was "straight up," to today when things are looking down. Mark has no reason to believe that this downward trend will not continue.

Twenty years ago they soy industry should have developed a long-term strategy, with adequate funding, to respond to the anti-soy faction disinformation campaign with science-based facts. But the industry was unwilling to do this. They thought it would go away, that it was just a passing fad, or that it was not important and would not have any significant effect on the market, which was growing rapidly at the time. Mark did everything he could to try to convince the soy industry that this was a real concern and that they should take action. There is still no interest in a long-term strategy, but now it is probably too late. Address: PhD, 429 Calhoun St., Port Townsend, Washington 98368. Phone: 360-379-9544.

3588. Drosihn, Bernd. 2010. Tofutown.com: Network of activities. To do list for a sustainable world. Portrait [Tofutown.com: Network of activities. To do list for a sustainable world. Portrait]. Tofutown Wiesbaum, Germany: Tofutown.com. 12 p. Illust. (all color). 30 cm. [Ger]

• ***Summary:*** Contents: Tofu is coming: In 1980 tofu was sold in about 100 Reform Houses, Bioläden, and vegetarian restaurants in Germany. In 2010 it is sold at more than 40,000 locations in a great variety of forms. Tofutown is there: Making it easy for people to eat and drink without going through the detour of animals.

After 30 years of making tofu in Germany, all is well. Photos show and earlier and present view of the company's plant.

Brands: Viana: Listen to your heart. Veggie life. Demeter (First soya sprout drink). Soyatoo whipped soy cream. Private labels. Tofu Musick.

Marketing. To youth. Quality. Customer relations.

Protecting animals and the environment, health. We believe in food democracy. Tofuismus No. 6. "In a Tofu Body lives a Tofu Spirit."

Tofu Fact No. 4. Four photos inside and outside the company's headquarters.

Nine website URLs and four photos. Very big numbers. Awards and prizes.

Milestones in the company's history / chronology: 1981/82–Founding of the tofu collective Soyastern, at the time the 3rd so-called "Tofurei" in Germany. In the 1970s and 1980s many small tofu projects were based on vegetarianism.

1988–Founding of Viana Naturkost GmbH on Cologne.

1990–Move to a larger building in Cologne.

1992.–Move to a former dairy in Euskirchen Kuchenheim.

1995. Expansion. 1997 Expansion.

1999–Move into a new building in Wiesbaum / Vulkaneifel.

2001. Detour to Wiesbaum.

2002–Develop the "Veggie Life" brand.

2003–Rename the company Tofutown GmbH.

2004–Development of the "Soyatoo!" brand.

2005–Major expansion of the cold storage area and the final packing area.

2007–Expansion of production.

2008–Start-up a Spaceshuttle Tofu- and Soymilk plant.

2009–Establish Tofutown North America LLC in San Francisco, California, for marketing the company's products in North America and Canada.

Note: During the years 2008 (*Inbetriebname*) and 2010 (Take over a modern production facility formerly owned by De-Vau-Ge Gesundkostwerk in Lueneberg) the story gets very complex, so Shurtleff writes Drosihn to please explain what it means. He kindly explains the 2010 entry in an e-mail dated 1 Nov. 2010: "I'll try to answer your questions. It is a little Gordian [knot] and complex: De-Vau-Ge in Lüneburg is a 'big city' and we did take over a 'small garage' (a small but separate building including about 60 employees) where the home of the 'vegetarian production' has been situated for years. The present owners of the 'De-Vau-Ge Dailycer Group' (50% is owned by 'One Private Equity' a

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Chase Manhattan Bank PE Company and 50% is owned by the Seventh-day Adventist Foundation 'MSP') focused the company strictly to the core business 'breakfast cereals' and carved out everything else to spin off. (Vegetarian Products) to Tofutown, Baby Food (to Sunval Company) and so on.

Already in 2007 all the health food businesses (brands for so called 'Reform Häuser' and natural food stores and supermarkets) owned by De-Vau-Ge has been carved out to a daughter company named 'Prima Vita' and moved to 'Heimertingen' in the South of Germany. So they did concentrate on the health food brands (most important one is 'Granovita,' the other ones are 'Eden,' 'Linusit,' 'Granovital' and also the smaller ones 'Martin Evers' and 'Bruno Fischer,' in total maybe 10 to 15 health food brands). Nowadays also the other European businesses are consolidated into the newly developed 'Bio Herba Group' which is beside the 'Prima Vita' in Heimertingen also Granovita UK and Granovita Spain. This health food business in total is, compared to the De-Vau-Ge Dailycer Group, of almost no economic importance and is still owned by Seventh-day Adventist money. The De-Vau-Ge Dailycer Group is a competitor of the Kellogg Co. and Nestlé in breakfast cereals and makes about 500 billion Euro turnover [sales] per year. They have several locations in Europe (France, Netherlands, UK, Switzerland).

"Tofutown is still very small compared to this big business; it has two production locations in Germany (Wiesbaum and Lüneburg) and a small bureau in San Francisco.

"A complex story and this is only the short version. Good to hear that you are well and still interested in companies and soy foods and the developments on the market.

Follow-up e-mail (Nov. 2): "There is a SoyaCow (made by ProSoya) grazing and giving milk in Tofutown. Frank Daller and Raj Gupta are both very credible people in the soy market.

"Yes, you are right with the mad accountants and also with mad consultants.

"I do use Google Books and Wikipedia as you do. In my Tofugraphy there is a scene where I tried to register a 'Tofu company' at the city hall somewhere in the beginning of the nineties and the two guys in the line before me tried to register a 'search engine.' Both were completely unknown and therefore nearly impossible to register. Now we have Tofu in every supermarket and we have Google on every computer." Address: Founder and president, Tofutown.com GmbH, Industrie und Gewerbe Park, D 54578 Tofutown Wiesbaum, Germany. Phone: 06593 9967-0.

3589. Sharma, Ratan. 2010. Re: Work with soymilk and tofu in India and worldwide. Letter (e-mail) to William Shurtleff at Soyinfo Center, Sept. 21. 2 p.

• ***Summary:*** "After completing my Ph.D. on soymilk and tofu in 1993 at Banares Hindu University in India, I started working for a Canadian non-governmental organization (NGO) named Child Haven International (CHI). Please see www.childhaven.ca. I was introduced to them by Dr. Raj Gupta of ProSoya. ProSoya had developed the SoyaCow technology and through CHI they wanted to introduce this technology to benefit the people of India and other developing countries. I started working for CHI in India after receiving intensive training in Canada on the SoyaCow technology (which was in the developing stage at that time), project formulation and other related subjects. CHI was supported by some funding from the Canadian International Development Agency (CIDA) for this project. The main objective of this project was to create employment opportunities and to provide low cost nutrition to the Indian masses. In 1994, on behalf of CHI and ProSoya, I transferred this technology to SSP Private Ltd., Faridabad, India. SSP is based near Delhi.

"It is important to mention here that in the latter part of the 1980s a few companies had tried introducing soymilk in the Indian market through large scale production (Tetra Pak, poly pack, etc.) but failed for many different reasons, so they stopped their operations. I worked hard to establish this technology in India, helping SSP in manufacturing quality machines and helping the users of this machine in product development, packaging, shelf life, marketing etc. I helped them in developing the products suited Indian tastes. Because of the previous failure of soymilk in the Indian market, I had to work very hard to introduce this product again in the Indian market and I tried to do it successfully.

"All the organisations involved in the promotion and establishment of this technology, considering its usefulness and the need for it in India and other developing countries, had no intention of making money. This was just for a noble cause and was done very successfully. We approached the Indian government and this machine was included under the Prime Minister's Employment Scheme where one can apply for a subsidised bank loan. In the meantime this machine was upgraded by ProSoya and SSP. I was involved from both the ends, coordinating between CHI, SSP and ProSoya. In the meantime SSP sold many machines to Russia and later Russians developed their own machine similar to this.

"It took time but this technology grew in many folds and Indian entrepreneurs started earning handsome money. Through this technology I promoted the small-scale soy food business in India and now close to four hundred such small factories are operating in India, producing soymilk, tofu, soy nuts, re-packaging defatted soy flour, making soy based noodles and other products. I am helping all of them. Based on the success of these small entrepreneurs a few companies started producing and selling the soymilk in Tetra Pack in India. From India these machines were sold to Nepal, Bangladesh, Pakistan, Sri Lanka and many other neighbouring countries.

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"Besides this I promoted this small scale soymilk and tofu business in Uganda, Tanzania, Kenya, South Africa, Egypt and in some other African countries with the help of Malnutrition Matters, CHI, WISHH etc. Also, I helped Dr. Steven Kwon in getting the soymilk machines from India and using them in Afghanistan. Now there are many such machines working in Afghanistan successfully.

"On average, Indian entrepreneurs are making tofu in a range of 100 to 500 kg per day. Some are making 50-100 kg per day. Large scale soymilk business is also growing in India."

Ratan visited Spicer Memorial College in Pune in about 1999 to learn about and perhaps help with their soymilk production. He recalls that they were making very sweet bottled soymilk in various flavors, as well as tofu (which was certainly not canned in a tin). They sold these products at a canteen inside the college and they had two outlets in the city of Pune; he visited one of these which was on a narrow street and was not fancy.

Ratan remembers a company that started making tofu and soymilk in Ghaziabad using a large new plant from Takai (of Japan); he does not remember the company name, but it was not Amrit Protein Foods. When he arrived in Ghaziabad, he lived with the owners of this company for a month. They had recently closed the plant and did not take him there. Later all of their equipment was sold at auction by the bank as they were not able to repay their loan. They had a very nice tofu tray packing system and were selling the tofu in water-filled tray packing only. The owner of the company was a chartered accountant by qualification.

Ratan also remembers a company in Allahabad (both he and Rajendra Gupta of ProSoya are natives of Allahabad) that purchased a large plant from Takai through an agent based in Hyderabad. This plant was purchased by a cigarette manufacturing company named Shyam Bidi. The owner of the company was a politician, who had earned lot of money from his tobacco business. They had just launched the product, which they continued for less than a month, then closed down the business before the product had a chance to become known. This company may possibly have been related to Mishra Soya Food Products, which definitely had a Takai system and which either introduced or was about to introduce "soyabean based paneer" [tofu] in the Bombay market. Address: PhD, Manager, the SoyaCow Centre, KH-177 Kavi Nagar, Ghaziabad 201 002 UP, India.

3590. Sharma, Ratan; Shurtleff, William. 2010. How soymilk came to India after 1970; fragments of a long and interesting story. Part I (Overview). *SoyaScan Notes.* Oct. 7.

• ***Summary:*** 1971–Pantnagar Soymilk Products Pvt. Ltd. launches Sipso Soymilk, made at G.B. Pant University of Agriculture and Technology, Pantnagar, Uttar Pradesh, India. This is the earliest known commercial soymilk produced in India. The equipment is imported from the USA and funded in large part by USAID. The patented "Illinois method" is used to make the soymilk, from which the okara (dietary fiber) is not removed, but is finely pulverized by a high-pressure homogenizer. The selling price (which allows some profit) is about one-third that of cow's milk. By 1978 this plant had produced nearly one million bottles of soymilk, which had been sold to the students and test marketed. A New Delhi Plant was established in 1979. In 1987 this product is still on the market, being sold in Prepac aseptic 200 ml plastic bags. By Oct. 1978 M/S Pantnagar Soy Products (the new name) in New Delhi was producing about 100,000 packets of soymilk per day. Each packet contained about 200 milliliters of soymilk.

1974–Soyghurt Food Products & Co. launches Soyamilk, made at Wardha Rd., Sitabuldi, Nagpur 440012, Maharashtra (MS), India. This company was started in about 1974 by Dr. S.L. Kothari, formerly of the Dep. of Food Science & Technology, G.B. Pant Univ. of Agriculture and Technology, Pantnagar (Nainital), UP, India.

1979–Spicer's Food Specialties of Pune / Poona launches Soyalac (canned soymilk) and Soya Soft Drink (in bottles), with a full page ad in the *Times of India.* The products are made by Spicer Health Foods, at Spicer Memorial College (a Seventh-day Adventist Organization), which started making Soyalac in 1973 for the students and for delivery to customers over a small radius, and Soya Soft Drink in 1979. The plant was started by Dr. Harry W. Miller, a great man and soyfoods pioneer, worldwide.

1979–The Institute of Buddhist Dialectics introduces Soymilk. It is made on a small scale by the Tibetan Buddhist community in exile at Dharmasala, Dist. Kangra, Himachal Pradesh, India. It is consumed mostly the monks and other members of the community, but small amounts are sold to local residents who bring their own container.

1981 May–Anuradha Industries (of Bombay, India) launches Amisoy (Spray dried soyabean milk powder) with a large ad in the *Times of India.* The product is still on the market in Jan. 1982.

1987 early–Noble Soya House (with partners Godrej, a powerful distributor, and Great Eastern Shipping) launches India's first major soymilk product (named Noble House Great Shake) and first soymilk product sold in aseptic Tetra Pak cartons. The soymilk processing plant, made by Kibun of Japan, had a capacity of 4,000 liters per hour. At this time, there were four Tetra Pak lines in the plant for this product only Targeted to youth, the product was not successful; it was more than a decade ahead of its time.

1988–Premier Industries (India) on Indore, launches Tuffy Hi-Protein Soymilk (in Malt, Orange, Banana, Mango, Strawberry, and Chocolate flavors). The soymilk equipment was from Mitsubishi in Japan. The product was discontinued in 1989.

1989 May 29–Amrit Protein Foods Ltd. (Ghaziabad, Uttar Pradesh) launches Big Sipp Soyamilk [Mango Shake,

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Banana Shake, Rose, or Pinakool (Pineapple)]. The soymilk processing plant was made by Mitsubishi of Japan. It is packaged in 200 ml aseptic, multi-layered, metalized Prepac Standi-Pak pouches. The product was discontinued in 1991.

1990 Nov.–A SoyaCow, invented by Raj Gupta (a machine that makes palatable, low-cost, high-protein soymilk) is now making soymilk in Hyderabad, India, at one of the Child Haven homes for poor children. The machine was made in Bombay, India (*Child Haven International* newsletter, fall 1990; *Toronto Star,* 19 June 1991. p. D2).

1991 May–The first SoyaCow made in Canada (Ottawa, Ontario) is sent to Child Haven in India (*Child Haven International* newsletter, spring 1991 and summer 1991).

Note: Dates and quotations from 1992 to 1996 are from the *SoyaCow Newsletter,* published by ProSoya, Ottawa, Ontario, Canada.

1992 March–"Child Haven International of Maxville, Ontario, has purchased six SoyaCow systems for their Soya Milk Cottage Industry Project in India. The project is supported by the Canadian International Development Agency [CIDA] and charitable donations from the public.

1992 June–CIDA funds Child Haven to buy seven more SoyaCows. They were shipped to India by air on 30 Nov. 1992.

1993 Sept.–Child Haven has hired Ratan Sharma, PhD, for their SoyaCow project in India.

1994 March–Child Haven has established a SoyaCow Centre in Ghaziabad, India, about 30 miles drive from Delhi to serve the growing population of SoyaCows in India. The Centre's main objective is to help women in self-employment by producing and selling soymilk and its products at affordable prices.

1995 June–SSP to manufacture SoyaCows in India. "In a recent visit to India, Frank Daller, President of ProSoya Inc., made arrangements with SSP of Faridabad, India, to develop an SC20 prototype in stainless steel. SSP is a reputable stainless steel fabricator for the dairy, food, and chemical process industries." "Earlier attempts of technology transfer to India to manufacture SoyaCows were not successful..."

1995 Dec.–Vocational training in soymilk production and use started in India at Manav Vikas Parishad of Ghaziabad in collaboration with the Government Polytechnic College and the SoyaCow Centre; they have developed a short course.

1995 Dec.–SSP gets approval from ProSoya Inc. to manufacture the first 10 SoyaCow SC20s in India.

1997–The first SoyaCow is sold commercially in India, by Dr. Ratan Sharma; it is a model SC20. This is the start of a new era for soymilk in India, as small entrepreneurs start to buy soymilk equipment.

1998–After the early success of SoyaCow in India three local companies also started producing these machines, direct imitations or "rip-offs" of the patented ProSoya technology. Their equipment is very inferior in quality and their service is poor so their sales are poor even though their price is lower than the SC20.

2000–Godrej restarts soymilk production using the brand name Staeta (pronounced STET-uh) and packaging in Tetra Pak cartons as part of a co-packing agreement initiated by ProSoya Foods India (a subsidiary of ProSoya Inc. of Ottawa, Canada, founded by Rajendra Gupta). The soymilk is made at the original Godrej soymilk plant at Mandideep, after some modification of their equipment made by Kibun of Japan. Godrej observed that ProSoya's Staeta soymilk was successful in aseptic Tetra Pak cartons–requiring no refrigeration.

2003–ProSoya Foods, India Pvt. Ltd. installs its own 2,000 liter per hour plant at the Godrej's plant in Mandideep in order to make use of their Tetra Pak facility on a co-pack basis using the brand name Staeta. ProSoya plans to launch this product in December 2003. Godrej (using a 2,000 liter per hour soymilk processing plant) launched its own Tetra Pak (Sofit) soymilk about 15-30 days after ProSoya launched its product. Godrej now has several Tetra Pak packaging lines. Staeta was actually launched in Jan. 2004 and Sofit was launched a month later.

2006 Sept. 9–SSP transfers their SoyaCow business to Pristine Plants India (PPI) Pvt. Limited. Pristine Plants is a new and independent company started by one of the relatives of SSP's managing director solely to manufacture small SoyaCows (SC20s). All these machines are based mainly on the ProSoya Technology. As of Oct. 2010 Pristine Plants is doing well financially.

2008 Oct.–ProSoya Inc. sells ProSoya Foods India to SoyaWorld of BC, Canada.

2009 Oct.–SSP starts again to make large and medium scale soymilk equipment. This is the first soymilk manufacturing equipment they have made since Sept. 2006. As of Oct. 2010 they have made one 200 liter per hour plant sold in India and one 100 liter per hour plant exported to some other country. Their designs are based on ProSoya designs but with major modifications to suit the needs of their clients. They make each these plants only after they receive an order and down payment for it. They are not marketing their soymilk machinery aggressively. Ratan Sharma works with SSP occasionally on these plants, not on the engineering but to give them ideas about the final product, product specifications, processing techniques and other details so that they can engineer each plant accordingly. Continued. Address: 1. PhD, Manager, the SoyaCow Centre, KH-177 Kavi Nagar, Ghaziabad 201 002 UP, India; 2. Soyinfo Center, P.O. Box 234, Lafayette, California 94549.

3591. *SoyaScan Notes.* 2010. Did the Chinese or Japanese or Koreans traditionally feed soymilk to infants or to recently-weaned children? No! (Overview). Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** A personal view by William Shurtleff:

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I have lived in Japan with a Japanese family for 6½ years, spoke fluent Japanese, traveled all over China, and read huge amounts of literature about soy in China and Japan.

I would say that the Japanese and Chinese do NOT feed soymilk to infants or even to weaned infants. Rather they DO feed tofu as one of the earliest weaning foods. They mash it with rice gruel, so both are very soft. Remember that traditional Asian soymilk causes infants intestinal gas which tofu generally does not, or at least much, much less.

Of course it depends partly on what age you mean by "infants." At what age does an infant cease to be an infant? Wikipedia says of "infant": "It is typically applied to children between the ages of 1 month and 12 months; however, definitions vary between birth and 3 years of age."

I have never seen or heard of soymilk used as an infant food or a weaning food, except in a few early French-language articles such as: Labbé 1911, and Beltzer 1911–and maybe a few other articles.

The statements in these two articles that soymilk is fed to infants are rare exceptions. I imagine that Beltzer learned it from Labbé and that Labbe did not know much about the subject.

Read the writings of Dr. Harry Miller (M.D., on our website, www. soyinfocenter.com) who established the first soy dairy in China in 1936, who lived in China as a missionary in China for many decades, and who introduced soymilk for infants (Soyalac) to the United States. He wrote a great deal and a biography has been written about him, yet I do not recall that he ever said that Chinese feed soymilk to infants. Address: Soyinfo Center.

3592. Gorell, Wallace. 2010. Re: Brief memoir–Interest in and involvement with macrobiotics. Letter (e-mail) to William Shurtleff at Soyinfo Center, 27 Dec. 2010 and 6 March 2011. 5 p. [1 ref]

• ***Summary:*** "I moved to San Francisco in January of 1966 at the invitation of my friend Deacon with whom I had studied acting at the Carnegie Institute of Technology, Pittsburgh, Pennsylvania (then considered to be the best theater program in the country; now Carnegie-Mellon University), and soon became a part of The Firehouse Repertory Theatre company, which up to that point had consisted of Bill Tara, director; Jean Allison, actress, George Eby and Deacon, actors, and a few others who took care of technical matters. Paul Hawken did lighting for us and co-produced (with Bill) some of the rock and roll dances we put on to make the money we needed to produce plays–such as "Endgame," a 1957 theatre-of-the-absurd play by Samuel Beckett. At this remove, I can see that the dances we produced were more culturally significant than the theatre, but we were not far from that view even then. We saw both endeavors as art making.

"Bill Tara has not been celebrated as Bill Graham and Chet Helms have, but he was really good at putting on rock and roll dances. He hired great people to do visuals for us, like Elias Romero, who invented liquid light projections, and Roger Hillyard, a talented filmmaker; he put together great bills with terrific bands–Big Brother and the Holding Company, the Amazing Charlatans [Sopwith Camel, The Wildflower, Great Society]; and he encouraged our company members to dream up performances to incorporate in the evening. He wanted our dances to be more than entertaining; he wanted them to be enlightening. We all did.

"We were intent on changing the world, nothing less, so we saw *everything* we did–eating, tripping, dancing, loving–as vitally important. Reading Timothy Leary, Jethro Kloss, Alan Watts, George Ohsawa and others, we learned that we had to change ourselves before we could change anyone else. So we determined to change ourselves, to *embody* change. It was critical.

"We tend to remember the sixties as carefree, but in fact they were fraught with anxiety. The draft had many of us in a constant state of apprehension. As President [Lyndon] Johnson heated up the war in Vietnam, we watched atrocities on TV as if we were seeing them first-hand. Life seemed nightmarish. A lot of young people, many of them flooding into San Francisco, got the idea we could turn things around–to open our hearts, to give peace a chance, to treat our brothers and sisters and the planet on which we all live with respect. The belief that we could bring peace to the world by making ourselves peaceful was, perhaps, an exuberance of youth. Most adults would say so. (I haven't reached a conclusion.) But at the time that sort of cynicism dismayed us. We believed it could be done. We believed ourselves to be the *avant garde* that would lead the way. Many of us had experiences with cannabis, LSD and mescaline that seemed to validate such a vision. We wanted to share that vision with the world. "During the so-called 'Summer of Love' (1967–the war was still raging in Vietnam) my friends Greg and Mary, with whom I was then living, famously took acid so Joan Didion, on assignment for *Look* magazine, could watch.* (See Didion's essay 'Slouching towards Bethlehem' in the collection of the same name). Meanwhile, Bill, Jean, Deacon, Paul, Roger and I were busy planning an anti-war art piece to be presented at the big dance we had scheduled for Halloween night with The Grateful Dead, Quicksilver, Mimi Fariña and other performers. We had bought every second-hand baby doll we could find in San Francisco, had taken a blowtorch to them, and planned to hang them in camouflage netting all over the hall. Roger was putting together a montage of grisly war footage, and Bill, Jean, Deacon and I had rehearsed a piece to perform over the PA system–an excerpt from Kenneth Patchen's 'Journal of Albion Moonlight.' The artistic intent was to portray war as a bad trip.

"Ken Kesey, then on the lam, announced that he would appear with the Dead at Winterland Ballroom on Halloween to tell America's youth to turn away from drugs. Hold on,

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we thought, we have The Grateful Dead under contract for our dance at California Hall. This was confusing. Some of the Pranksters were actually staying at Bill's warehouse home south of Market. (By that time we had been kicked out of the firehouse and were now called the San Francisco Calliope Company.) Could we transfer what we had planned to Winterland, a much larger venue? We decided to sit tight and wait to see what would happen. Then rumors started to circulate that Kesey actually intended to dose the punch at Winterland, thumbing his nose at the law. What would happen if we did our anti-war piece–especially with all those burned baby dolls–to an audience on acid? Not pretty. As it turned out, our dance went on as scheduled. Nothing happened at Winterland. (Another version of this story appears in Tom Wolfe's *The Electric Kool-Aid Acid Test*).

"In retrospect, I can see our bad trip war piece wasn't *just* about Vietnam. It was expressive of what was happening that summer in San Francisco. Psychedelic drugs had, for a year or two, fostered genuine camaraderie there, but other drugs that had appeared on the scene–notably crystal methamphetamine and PCP–had seriously undermined it. The vibe had changed. A lot of youths had lost faith. Some of us decided we had indeed seen the light, but needed to do more work to sustain the vision. Bill, Jean, Paul, Roger and I were interested in attaining higher consciousness through clean living. Deacon and quite a lot of others weren't.

"We had seen some issues of 'The Order of the Universe' out of Boston and wanted to know more about the Macrobiotic study center there. I wrote to the editor, assuming that English was not his first language, and offered my help. Embarrassed, Jim Ledbetter accepted my offer. My friends Mike and Jan Costello drove me across country while I read aloud to them *You Are All Sanpaku* and *The Book of Tea*. By the time I reached Boston, Paul (in his early twenties) was already there, and Aveline Kushi (then about forty) was having an affair with him." Continued. Address: Berkeley, California, and Flinders Island, Tasmania.

3593. Doblmeier, Martin. producer / director. 2010. The Adventists (Color motion picture). Alexandria, Virginia: Journey Films. 1 hour.
• ***Summary:*** In 1866, three years after the Seventh-day Adventist church was formed, it opened the Western Health Reform Center in Battle Creek, Michigan. It became an instant success. Soon, a brilliant young surgeon, John Harvey Kellogg, whose medical education was sponsored by Ellen White, became director. Kellogg changed the name to the Battle Creek Sanitarium, and over the next 50 years he built an empire around the evolving approach to medicine and healthy living. "The San" was a place where people could come to learn how to get healthy and to stay healthy. Kellogg understood the healing power of nature, but he supported it with the best of science, and the result revolutionized medicine. He developed a reputation as an eccentric who was always looking for new ways to work with nature using diet and healthy living. "Scores of celebrities came to Battle Creek including President William Howard Taft, King Edward, inventor Thomas Edison, pilot Emelia Earhart. Kellogg's sanitarium was now the largest health institution in the world." Rich people such as Mr. and Mrs. J.C. Penney also came; they simply wanted to feel better.

Contains a long segment about Florida Hospital in Orlando, Florida. People recover better when they are in a community. Adventist physicians are on the cutting edge of medicine–in many fields, and are very active in exploring new paradigms that include faith, nature and healing–and high-tech medicine.

George R. Knight, historian, says: "Deep in our history is the whole concept that our bodies are the temple of the holy spirit, and they belong to God and we ought to care for them." There is no part of human beings, such as a spirit or a soul, that lives independently from the body. "So we are physical beings from beginning to end." It is very important to take care of the body. Most Adventists don't drink alcohol.

St. Helena (in northern California) is the oldest Adventist hospital; it was established in 1878. There is a strong emphasis on the workings of the mind, and its effect on a person's overall health. There is a program to stop smoking, that began in 1969–one of the first in the United States. By doing five things, you can cut your risk of cancer by 70%: 1. Exercise regularly. 2. Maintain your idea weight. 3. Eat more fruits and vegetables. 4. Eat less red meat. 5. Do not smoke [tobacco]. Only 3% of Americans do all five. to

3594. Vegetarian and Vegan Foundation. 2010. The soya story: Everything you wanted to know about soya. The truth about how it impacts our health and the environment. Bristol, England. 60 p. Illust. 21.5 x 28 cm. [50+ ref]
• ***Summary:*** An very nice online digital book. Contents: Introduction. History. Soya: the superbean! The nutritional power of soya (by Juliet Gellatley) (7 refs).

Soya: the health protector (by Dr. Justine Butler): The health effects of soya, phytoestrogens, heart health, blood pressure, diabetes and CVD, diabetes, menopausal symptoms, bone health, breast cancer, prostate cancer, endometrial cancer, colon cancer, brain power, soya-based infant formula, thyroid function, allergies, soya production, summary, references (35 refs).

Soya: a global threat? How soya impacts the environment. Bean cuisine! An introduction to cooking with soya (by Jane Easton): Ingredients, stocklists (which soyfood products are available at the following British supermarkets: Asda, Sainsbury, Tesco, Waitrose, Independent health food shops and Oriental food markets. A good online source of soyfoods is Goodness Direct {www.goodnessdirect.co.uk}).

Soya recipes (p. 35-60).

The section on ingredients includes: Soya beans, edamame (fresh soya beans), tofu (silken tofu, firm tofu,

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flavored tofu {marinated, smoked, deep-fried, Tofu Rosso, Tofu Basil}), miso, soya sauce, soya dairy alternatives (soya milk, soy yoghurt).

Tofu manufacturers: Cauldron Foods (www.cauldronfoods.co.uk). Dragonfly (www.tofu.co.uk). Clear Spot [R & R Tofu] (www.clearspottofu.co.uk; Clearspot is the brand). Mori-Nu (www.morinu.com). Blue Dragon (www.bluedragon.com). Taifun (www.taifun-tofu.de/en).

Makers of soyfood dairy alternatives: Alpro (www.alprosoya.co.uk). Provamel (www.provamel.com). Sojasun (http://en.sojasun.com). Sojade [Triballat] (www.sojade.fr). Granovita (www.granovita.co.uk). Soyatoo [Tofutown.com] (www.soyatoo.de/us). Address: 8 York Court, Wilder Street, Bristol BS2 8QH, UK.

3595. Little, Janice. 2011. Re: What percentage of Seventh-day Adventists (SDAs) are presently vegetarians or vegans? Letter (e-mail) to William Shurtleff at Soyinfo Center, March 28–in reply to inquiry. 1 p.

• ***Summary:*** "I called our Loma Linda University School of Public Health which conducts the Adventist Health Study which has been going on for the last several decades. The answer that I got from them is the following: These are the only statistics they have. There are no worldwide figures that include all SDA's -just the ones in the Study done here in North America. These are updated to 2011. The first study done had higher figures in some area's which the person did not give me at this time.

"8% of the study group are Vegan

"28.2% are Lacto-Ovo

"9.9% are Pesto (eat some clean (Biblically approved) fish)

"5.6 are semi-vegetarian (eat some meat)

"48.3 are Non-vegetarian

"There are no exact numbers to be had. Worldwide more cultures include meat or fish as a staple diet. Worldwide SDA's reflect this also.

"What was interesting to me is that when I was a child in the 1950's & 1960's the percentage of SDA Vegetarians was much higher (at least in North America.) I remember somewhere around 50+%. How times have changed!" Address: Library Asst., Del E. Webb Memorial Library, Loma Linda Univ., Loma Linda, California 92350. Phone: 909-824-4942.

3596. *SoyaScan Notes.* 2011. What ever happened to the canned and frozen Worthington products (Overview). May 2. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** According to the manager of the Adventist Book Center in Pleasant Hill, California, about 45 of these products are still available. This is about half of the 90 that were available before the Kellogg Co. bought Worthington Foods. Among these 45 products, some have the "Loma Linda" brand. About 60% are canned and 40% are frozen. The brands are owned by the Kellogg Co. but they are made by a company somewhere in the southern part of the USA.

For more information, go to www.kelloggs.com. On the home page click "Brands." Then in the lower right click the "Worthington" logo.

Under "Kellogg" you can also click "Contact Us" and "FAQs."

3597. Davis, John. 2011. Veganism from 1808 [chronology]. *Vegsource.com.* May 25. http://www. vegsource.com/ john-davis/veganism-from-1806.html.

• ***Summary:*** "This is a brief summary of a talk I will be giving at the International Vegan Festival in Malaga, Spain, June 4-12, 2011.

"1806–Dr. William Lambe FRCP, in London, England, changed his diet at the age of 40–and gave us the first known unambiguous statement: 'My reason for objecting to every species of matter to be used as food, except the direct produce of the earth, is founded on the broad ground that no other matter is suited to the organs of man. This applies then with the same force to eggs, milk, cheese, and fish, as to flesh meat.'

"1811–John Frank Newton, a patient of Dr. Lambe, in his book 'Return to Nature' expanded Lambe's medical ideas to include ethical values towards all animals.

"1813–Percy Bysshe Shelley, poet, joined a 'vegan commune' which alternated between Newton family homes in London and Bracknell.

"1830s–Sylvester Graham, in Boston, USA, had been promoting the 'vegetable diet'–generally 'with or without' eggs/dairy. In 1837 he exchanged letters with Dr. Lambe, and his 1839 book clearly claimed that 'without' was more effective for health.

"1830s–Dr John Snow, 'vegan' since reading Newton's book when he was 17. Moved to London in 1838 and eventually achieved fame for discovering the way in which cholera was spread. In 2003 British doctors voted him the greatest physician of all time.

"1838–James Pierrepont Greaves opened 'Alcott House Academy', a school near London run entirely consistent with the ideas proposed by Lambe and Newton. It ran for the next ten years.

"1842, April–the first confirmed use of the word 'vegetarian' in the Alcott House journal. All other early uses were by people close to Alcott House, and all using it for what we now call 'vegan'.

"1842 June–Bronson Alcott, from Boston USA, already veg*n thanks to Sylvester Graham, visited Alcott House, named in honor of him and his earlier school in Boston. In 1843, with new English friends, he ran the short-lived 'Fruitlands' near Harvard, MA–again run on totally ethical 'vegan' principles. "1845-46–Henry David Thoreau lived by Walden Pond, near Concord MA, living solely on plant foods plus some fishing–but wrote about how much he regretted

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the fish.

"1846–William Horsell moved the hydrotherapy institute from Alcott House to Northwood Villa, in Ramsgate, Kent, England. This again followed Dr. Lambe's principles of plant food plus purified water.

"1847–The Vegetarian Society was founded at a meeting in Ramsgate, launched jointly by Alcott House and the (ovo-lacto) Bible Christian Church from Salford near Manchester. The compromise was to set the objective as merely 'abstaining from the flesh of animals'–and the confusion over everything else has continued ever since

"1874–Dr. Russell Trall had been running a hydrotherapy institute in New York City since 1850. This changed to exclusively plant food plus water in 1862–and in 1874 produced the first known 'vegan' cookbook.

"1887–John Harvey Kellogg privately removed eggs and dairy from his diet, though his books and sanitarium, in Battle Creek, Michigan, continued to use them. 40 years later he returned to using yogurt–but then discovered soy milk.

"1910–Rupert Wheldon in England, published 'No Animal Food', the first British 'vegan' cookbook. This was reprinted by Dr. Elmer Lee in New York. A 1910 article about Lee in the New York Times included the first known use of the phrase 'plant foods'. "1909-14–The *Vegetarian Messenger,* journal of The Vegetarian Society, carried much discussion about the use of eggs/dairy. There seemed to be a possibility of significant change, but all momentum was destroyed by the First World War.

"1931–Mahatma Gandhi spoke at a meeting of the London Vegetarian Society, making it clear that he objected to the use of milk and milk products. Such high profile support must have emboldened the minority who called themselves 'non-dairy vegetarians'.

"1944–Donald Watson and friends coined the word 'vegan' and founded The Vegan Society–the first issue of their journal [*Vegan News,* Nov.] was subtitled 'the journal of the non-dairy vegetarians'–and made it clear that they had not wanted to separate from The Vegetarian Society, they just wanted a distinct section within it. Most retained their memberships of both societies, as many do today.

"1947–Watson was a speaker at the IVU World Veg Congress–The Vegan Society had joined IVU soon after being founded, and has been a member ever since.

"1960–The American Vegan Society was founded, joining IVU from the outset. This included a smaller group started in California as far back as 1948.

"1957–The first Indian Vegan Society joined IVU. We don't know how long it lasted, but the new society is also prominent member.

"1960-1990s–Many new vegan organizations were formed, and the word gradually spread.

"1995–Records of printed media show a significant increase in the use of the word 'vegan'–this appears to have come from the rapid expansion of vegan websites, leading to a market for vegan books, especially recipes.

"1997–The IVU website started a recipe collection–agreed to be entirely vegan from the outset. We now have over 3,000 in English with more in other languages.

"1998–IVU agreed that all food at IVU Congresses would in future be completely vegan.

21st Century–Most veg organizations around the world now promote veganism as the ideal, regardless of whether they are called 'vegetarian' or 'vegan'.

"By 2009 more books had 'vegan' in the title than 'vegetarian.'

"2009/2010 surveys in the USA showed that 66% of vegetarians exclude eggs and dairy.

"By 2011 there were as many Google searches for 'vegan' as for 'vegetarian.'

"22 organizations with 'vegan' in their title are now members of IVU

"Will all vegetarians eventually be vegan? We have no way of knowing, but the continuing trend seems inevitable.

"For more details of everything above see: www.ivu.org/history/ vegan.html." Address: IVU webmaster.

3598. *Gainesville Sun.* 2011. Obituary: Harrison, Dr. David W. May 29.

• ***Summary:*** "Dr. David W. Harrison, Age 90, Retired Medical Doctor with 30+ Years of Missionary Medical Service in Africa, US Army Veteran, died Thursday, May 26, 2011, at E.T. York Care Center (Gainesville, Florida).

"Dr. Harrison, a self-supporting Seventh-Day Adventist Medical Missionary, has done pioneering work in introducing soybeans and soyfoods into Africa starting in the 1960s. Africa Basic Foods, which he founded in Uganda in 1962, was the earliest known company in Africa to make and market a line of commercial soyfoods. His work with soybeans and soyfoods in Ghana, Uganda, and Kenya affected the lives and nutritional well-being of thousands of people from government officials to school children and villagers.

"Born into a black Seventh-day Adventist family in Nebraska in 1921, the family moved to California when he was five years old. He received his B.S. Degree from Pacific Union College and attended Loma Linda University, where he earned his M.D. Degree in 1945. Dr. Harrison interned at Harlem Hospital (New York City) and began his medical career in North Carolina. From there, he was called to military service (in 1951). He earned a degree in public health in Texas in 1951 then went to Korea for a year as a Captain in the Army, working with the United Nations Civil Assistance Command. There he first began to develop an interest in nutrition to supplement the strong education he had received in nutrition at Loma Linda Medical School. Back in the United States, he was a Resident in General Surgery at a hospital connected with Duke University.

"Funeral Services will be held 11:00 AM Tuesday, May

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31, 2011, at Duncan Brothers' Chapel (Gainesville, FL) with Pastor Joseph P. Lewis officiating. Burial (with Military Honors) will follow at the Florida National Cemetery (Bushnell, FL) at 2:30 PM. Dr. Harrison will only be viewed at the Chapel 1 hour prior to the Services–And with the Processional.

"Dr. Harrison is immediately survived by: Wife–Edith Stokes-Harrison of Gainesville, FL; Sons–William Kenneth Bennett (& Janis) of Orlando, FL, David Michael Bennett of Washington, DC and David W. Harrison (& Fatima) of Upper Marlboro, Maryland; Daughters–Liza Widmer and Linda Stokes of Gainesville, FL; Grands; Great Grands; Nieces & Nephews; In-Laws; Cousins; & Friends."

"Arrangements entrusted to: Duncan Brothers' Funeral Home, 428 NW 8th Street, Gainesville, Florida."

3599. *SoyaScan Notes.* 2011. Chronology of early U.S. commercial soymilk products with the word "soy milk" or "soymilk" in the product name. June 10. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** As of today, our SoyaScan database contains 434 records for commercial soymilk products launched in the USA from 1917 to the present. Most have fanciful brand names such as VitaSoy, Soy Lac, Soya-Lac, Kreme-O-Soy, etc.

Here are the early commercial products with soymilk or soy milk in the product name as it appears on the label. Most were sold in interstate commerce. Date, product name, company name, location, number of clear documents describing product.

1929–La Sierra Soy Milk, La Sierra Industries [founded and run by T.A. Van Gundy], Arlington, California, 3 documents.

1931–Madison Soy Milk, Madison Foods, Madison, Tennessee, 5 documents.

1934–Loma Linda Soy Milk (canned), Loma Linda, California, 3 documents.

1936–Soy Milk (Canned), Battle Creek Food Co., Battle Creek, Michigan, 4 documents.

1936–Soy Milk, Soybean Health Products Co., Oakland, California, 1 document.

1937–Radcliffe's Soya Milk, Radcliffe Soya Products, San Francisco, Calif., 3 documents,... etc.

1975–Soymilk, Welcome Home Bakery and Tofu Shop, Corvallis, Oregon, 2 documents.

1975–Soymilk, American Food Co., Alhambra, California, 2 documents. incl. label.

1976–Carob Soymilk, Farm Food Co., San Rafael, Calif., 1 document (label).

1977–Laughing Grasshopper Soymilk, Laughing Grasshopper Tofu Shop, Millers Falls, Mass., 2 documents including poster.

1977–Soymilk [Honey & Vanilla, or Plain], The Soy Plant, Ann Arbor, Michigan, 4 documents including label.

1977–Fresh Joy o' Soy Soymilk, The Tofu Shop, Telluride, Colorado, 2 documents including label.

1978–Island Spring Plain Soymilk, Island Spring, Inc., Vashon, Washington, 3 documents incl. label, etc.

3600. Shurtleff, William. 2011. The word "vegetal / vegetale" (Editorial). *SoyaScan Notes.* July 2.

• ***Summary:*** How would you translate the French: "Produit 100% végétal."

Or this from a Spanish cup of soy yogurt: "100% vegetal."

This excellent word, "vegetal," is used frequently nowadays in French, Spanish, Italian, and Portuguese, plus "pflanzliches" in German.

Yet we have no corresponding word in use today in English. We might say: "100% vegan product." or "100% plant-based product."

However the word "vegetal" used to be used in English!

1896 Sept.–Dr. John Harvey Kellogg wrote in the journal *Modern Medicine and Bacteriological Review:* "In the experiments which we have made with nut milk we find it has a delicate, delightful flavor, with a suggestion of its nutty origin, but resembles cow's milk very closely indeed... Added to cow's milk in proper proportion, lac vegetal, or nut cream, prevents the formation of hard curds in the stomach, as when the cow's milk is used alone. This renders it an exceedingly valuable food for infants–vastly superior to any infant's food which has been devised."

"Nuts are unquestionably the vegetable analogue of meat and other animal foods.

1896–In a cookbook by Dr. Kellogg's wife: Sanitas Food Co. in Battle Creek, Michigan, has an ad for "Lac Vegetal, or Nut Cream: Prepared from the choicest nuts."

1927–*The Future Food Supply of the United States,* by Alonzo E. Taylor. "Vegetal oils may be expected to continue a prominent component of the diet... Americans taste seems to favor bland vegetal cooking oils over animal fats, as illustrated in the preference for vegetal lard substitutes over lard."

And many more...

Merriam-Webster's Collegiate Dictionary (1998) defines vegetal (derived from the Middle Latin *vegetare*, meaning to grow), a word first used in English in the 15th century, to mean: "1: vegetable. 2. Vegetative..."

Do you think we need to reintroduce this word into English?

Or do we presently have equally good alternatives? Address: Founder and director, Soyinfo Center, Lafayette, California. Phone: 925-283-2991.

3601. Davis, John. 2011. A history of veganism from 1806: A collection of blogs in the order they were written (Website printout). www.ivu.org/history/Vegan_History.pdf 26 p. Printed July 31. Illustrated. [3 ref]

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• ***Summary:*** Contents: 1. The Invention of the Vegans: the word 'vegan', the first Vegan Society and the development of the movement. 2. Vegetarian equals vegan!–how the first vegans invented vegetarianism. Alcott House, Fruitlands, the word 'vegetarian' and–the first Vegetarian Society. 3. Shelley: the first celebrity vegan. Percy Bysshe Shelley, Mary Shelley and Dr. Frankenstein's monster. 4. Vegans are vegetarians too: early years of the Vegan Society. 4. Gandhi and the launching of veganism: Gandhi in 1931, with Henry Salt by his side, on *The Moral Basis of Vegetarianism.* 5. Bronson Alcott: American pioneer vegan. Ethical veganism, Fruitlands, Louisa May, and the search for others. 6. Henry David Thoreau and the roots of plantism: steps towards vegan self-sufficient environmentalism and a non-violent lifestyle. Henry Salt, Gandhi, Shelley, and books that changed veg history. 7. Taking the waters: transatlantic pioneer plant-food doctors. Dr. William Lambe, Sylvester Graham, William Horsell, Dr. Russell Trall, Dr. John Harvey Kellogg, Dr. Elmer Lee–includes the first known 'vegan' cookbooks from 1874 and 1910. 8. Dr. John Snow: a vegan of genius. In a poll of British doctors in 2003 John Snow was voted as the greatest physician of all time. Though probably few of them would have known he was what we now call vegan. 9. Veganism from 1806: a brief timeline [chronology] summary of everything included here. 10 *The Truth Tester* 1846-48: a vegan journal. Edited by William Horsell, vegan recipes, the launching of the Vegetarian Society.

Note: This series of articles / blogs is about the meaning of the words "vegetarian," "vegetarians," and "vegetarianism" from the time that word first appeared in print (in July 1843) until the founding of the Vegetarian Society in England. It is not about the early history of vegan diets–which in the early years were widely called a "vegetable diet" or "Pythagorean diet." Address: IVU [International Vegetarian Union] manager and historian.

3602. Matthews, V.L.; Knutse, S.F.; Beeson, W.L.; Fraser, G.E. 2011. Soy milk and dairy consumption is independently associated with ultrasound attenuation of the heel bone among postmenopausal women: the Adventist Health Study-2. *Nutrition Research* 31(10):766-75. Oct. [28 ref]*
• ***Summary:*** Many people (such as vegans) who do not consume dairy products, use soy milk instead. Fortified soymilk provides calcium protein, and vitamin D–nutrients needed for healthy bones. Moreover, the isoflavones found in soy may offer some protection from osteoporosis. The researchers studied 377 post-menopausal women, who were asked about their diet; ultrasound measurements of bone health were made at an interval of two years. Compared with women who did not drink soy milk, women drinking soy milk once a day or more (1.3 cups of soymilk) had 56% lower odds of osteoporosis. (We do not know if the soy milk was fortified). Likewise, women who used dairy products at least once a day had an almost identical reduction of risk of osteoporosis. The results of this small study suggest that regular use of soymilk can reduce risk of osteoporosis in women. Address: Dep. of Epidemiology and Biostatistics, School of Public Health, Loma Linda Univ., Loma Linda, California.

3603. Roth, Matthew. 2012. Re: Morse correspondence at the National Archives. Letter (e-mail) to William Shurtleff at Soyfoods Center, March 9. 1 p.
• ***Summary:*** "I've had a chance to do an inventory of the Morse correspondence I took digital snapshots of at the National Archives. They are from the Morse folders from Box 92 of the General Correspondence file, which is organized chronologically, and not from the correspondence folders for the various state agricultural experiment stations.

"The Morse folders form Box 92 contained 485 letters, 395 of which dealt with named crops; 171 of these mention soybeans. You have 19 of these in your Morse book. This folder is apparently where the leftover letters went, the ones that didn't make it into any other folder. As such, many of them are short and procedural, but there are a number of longer letters from Morse's inspection tours. And some of the short ones directing Morse to send seeds to so-and-so are interesting. There's one from 1911 directing him to send soybeans to George Washington Carver, who apparently planted them in 1912. There's also a letter from 1919 mentioning a visit to Madison College.

"I've attached an Excel spreadsheet listing the letters;..."

Matt would like to look through the state folders such as North Carolina, South Carolina, and other southern states that Jacob Jones did not look through–but he may not have the opportunity to return to the National Archives.

If you look at the tabs at the bottom (of the Excel spreadsheet he sent), you'll notice one I labeled Summary Data. This has tables that attempt to draw some conclusions from the "sample" of letters–but I fear that the sample might be too small (compared to Morse's total correspondence) and arbitrary to permit any firm deductions. But I think it's safe to say that through World War I, Morse's focus was on the South, in particular as the most likely place for a crushing industry to develop; and also that, though his and Piper's enthusiasm seems to have rapidly centered on the soybean, they remained highly active in testing and advocating other forage and manure crops.

Note: The tab "summary data" has two parts: One is organized by year from 1907 to 1926, with line 1 being a summary of "all." The second is organized by state, in descending order of the number of letters total and the number of letters concerning soy for two time periods: 1907-1926 and 1907-1918. The four most important states for soy during the period 1907-1926 were North Carolina (17 letters) followed by Illinois (8), Georgia (7), South Carolina (6), New York (6), Maryland (5), Alabama (5) etc. Address: Philadelphia, PA 19123.

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3604. Palmer, Sharon. 2012. The plant-powered diet: The lifelong eating plan for achieving optimal health, beginning today. New York, NY: The Experiment. xx + 412 p. Foreword by David L. Katz, MD, MPH. [228 ref]
• ***Summary:*** A positive attitude toward traditional soyfoods is found throughout this excellent book. The traditional Japanese diet (p. 19-20)–one of the healthiest–leads to an average life expectancy of 80 years for men and 85 years for women. The Japanese diet is characterized by a "Focus on soy foods. Whole soyfoods such as edamame, tofu, and miso are regular features of the diet.

The section titled "Soy, the superfood" (p. 58-59) describes the basic types of soyfoods and their benefits. The next section is "A word about soy meat alternatives" (p. 60-61) including veggie burgers, soy meat crumbles, and vegetarian hot dogs.

The "Plant-based dairy alternatives guide" (p. 72-76) includes various types of soy milk, soy milk yogurt, and soy ice cream.

The word "soy" appears on 55 pages of this book, the word "tofu" on 54 pages, "tempeh" on 18 pages, "soy foods" on 17 pages, "seitan" on 15 pages, "edamame" on 10 pages, "soybeans" on 10 pages, "soy milk" on 8 pages, "soy sauce" on 6 pages, "miso" on 6 pages "soy milk yogurt," "soy ice cream" and "soybean oil" on 2 pages each, and "soy cheese" and "soy cream cheese" on 1 page each.

Includes "75 original plant-based recipes for every meal–all with nutritional data." "A 14-day meal plan with action alerts to get you started." "Essential information on the healthiest plant food–whole grains, vegetables, fruits, nuts, legumes, and even herbs, spices, dark chocolate (rich in polyphenol antioxidants), coffee (contains many beneficial antioxidants), tea (rich in polyphenol antioxidants, and takes the place of high-calorie, high-sugar drinks), and wine.

Virginia Messina, in her blog The Vegan RD, says this: "It's a book that makes the scientific case for eating fewer animal products and more plant foods while admitting that there is no precise definition for 'plant-based diet.' The information in the book is balanced, honest, and practical, and the recipes–which appear to all be vegan–look really nice. In the forward to the book, Dr. David Katz, of the Yale University Prevention Research Center says this about Sharon's book: 'So much of modern health advice is about marketing a particular perspective that such a balanced and moderate approach is a truly surprising and welcome departure.'

"I agree, and it's the thing that made this book stand out for me. Admittedly, I wish the book had included more perspective on making compassionate food choices. When animals are part of the discussion (and I think they should always be part of the discussion) a vegan diet is the one and only best way to eat. When the focus moves away from animals, then diet-related issues become somewhat less clear. So far, no one has proven that a vegan diet is healthier than other plant-based ways of eating, and it's unlikely that they ever will. So, this isn't a book I would use to promote veganism–it presents a vegan option, but not a vegan imperative–but, it is one I would use to promote healthy plant-based eating for those who are looking for that type of information."

About the author: "Sharon received her Bachelor of Sciences Degree with Honors from Loma Linda University, California. She enjoyed a diverse 16-year dietetics career with experiences as a clinical dietitian, wellness dietitian, chief clinical dietitian, food and nutrition services director, and consultant dietitian." Address: RD (Registered Dietitian), P.O. Box 1052, Duarte, California 91009.

3605. WhiteWave Foods Co. 2012. Saputo to buy Dean Foods Morningstar unit for $1.45 billion (News release). Broomfield, CO 80021 1 p. May 23. 28 cm.
• ***Summary:*** Saputo is the largest dairy processor in Canada. They started out as a cheese company, then got into dairy milk. Saputo acquired Dairyworld Foods in about 2001. Dairyworld owned a company named Soyaworld, which made the So-Nice brand of soymilk. Saputo spun off Soyaworld and sold it to Sanitarium Foods in Australia. After a while, Sanitarium sold it back to Agrifoods International in Calgary. It is now named Earth's Own.

Wikipedia (July 2013) says the following about Earth's Own Food Company: "Earth's Own Food Company (previously Soyaworld Inc.) is a health food manufacturing company in Canada. They are producers and distributors of the So Good, So Nice, Almond Fresh and Ryza brands within Canada.

"History: Earth's Own was founded under the name Soyaworld Inc. in 1995 by Maheb Nathoo, and soon grew with an investment from Dairyworld Foods where Mr. Nathoo held the position of Vice President of Finance.

"In 2003 Sanitarium So Good Limited purchased 100% control of Soyaworld. From 2003 onward the company was wholly owned by the Seventh Day Adventist Church, through Sanitarium So Good Limited and Canadian Nutrition Association.

"In early 2011, Soyaworld Inc. was renamed Earth's Own Food Company Inc.

"In 2012 Earth's Own ownership group was renamed to Life Health Foods, Inc. The group remained 100% owned by the Seventh Day Adventist Church. In 2012 Agrifoods International Cooperative Ltd. purchased shares of Earth's Own." Address: 12002 Airport Blvd., Broomfield, Colorado 80021. Phone: (313) 635-4000.

3606. Shurtleff, William; Aoyagi, Akiko. 2012. The book of tofu: Protein source of the future–Now! 2nd ed. Revised. Lafayette, California: Soyinfo Center / www.createspace.com. 344 p. Dec. 22. Illust. by Akiko Aoyagi Shurtleff.

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Index. 28 cm. [321 ref]
• ***Summary:*** This edition, published as a print-on-demand book by www.createspace.com, is 8 pages longer than any previous edition. The entire Glossary (with all illustrations) from the original 1975 edition is included, as is the updated Preface, the complete "Directory of Tofu Manufacturers" in the Western world (as of Feb. 2001), and the complete bibliography of 321 entries. After the Index is an updated full page of information about Soyinfo Center, then the original photo of Shurtleff and Aoyagi in 1975 from the original edition, and updated page "About the Authors," with new photos of Bill and his son Joey at Yosemite in 1994 and Akiko Aoyagi Shurtleff at the Lafayette Reservoir in 1999.

Then comes the section "Sending Tofu in the Four Directions," with a new photo of William Shurtleff with his tofu master's family at Sangen-ya Tofu Shop during his apprenticeship period, Tokyo, circa 1974. On the last page is (1) Information about the book *Tofu & Soymilk Production* and (2) about the SoyaScan database, which now contains more than 90,000 records from 1100 B.C. to the present. To order a customized search of this remarkable database, contact Soyinfo Center at 925-283-2991 or www.soyinfocenter.com.

Thanks to Akiko for redesigning the front and rear covers, and for skillfully and artistically integrating all the pieces into this newly revised edition. Address: P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

3607. Sixth International Congress on Vegetarian Nutrition held on 24-26 Feb. 2013 at Loma Linda University. 2013. http://www.vegetariannutrition.org/
• ***Summary:*** This renowned scientific conference on plant based diets is held once every five years at Loma Linda University, Loma Linda, California. This year the conference was sold out–over 700 attended. It offeres an exciting opportunity for health professionals, researchers, students and the public to advance their knowledge in vegetarian nutrition. A multitude of plenary sessions, workshops, poster presentations and social gatherings make this event engaging and enjoyable for all who attend!

As of 21 Dec. 2013 the proceedings of this conference have not yet been published.

The 7th ICVN will be held in Feb. 2018.

3608. Messina, Virginia. 2013. Notes from the 6th International Congress on Vegetarian Nutrition. *The Vegan Dietitian* (*blog*). Feb. 28. [25 ref]
• ***Summary:*** "I spent 3 days at the 6th International Congress on Vegetarian Nutrition this past week in Loma Linda, California. Held every five years or so, the event is hosted by the School of Public Health of Loma Linda University and is considered the premiere conference on plant-based nutrition. It brings experts and researchers together from all over the world and its proceedings are published in the *American Journal of Clinical Nutrition*, the most prestigious of all nutrition journals. I was honored this year (and a bit terrified, since I felt very much out of my league) to be a speaker."

"The conference gave me confidence that the themes that come up often on this blog are well supported by the evidence. That is, vegans do need to pay attention to certain nutrients. And, there are no plant foods that need to be avoided completely on a healthy vegan diet. And finally, while there is abundant evidence supporting health benefits of a plant-based diet–i.e., a diet that contains mostly plant foods–it's difficult to build the case for veganism without bringing ethics into the picture." Address: R.D., Port Townsend, Washington.

3609. Tantamango-Bartley, Y.; Jaceldo-Siegl, K.; Fran, J.; Fraser, G. 2013. Vegetarian diets and the incidence of cancer in a low-risk population. *Cancer Epidemiology, Biomarkers, and Prevention* 22(2):286-94. Feb. Epub 2012 Nov. 20. *
• ***Summary:*** Cancer is the second leading cause of death in the U.S. Dietary factors account for at least 30% of all cancers in Western countries.

This study examined the association between dietary patterns and overall cancer incidence among the 69,120 participants in the Adventist Health Study-2. 2,939 cancer cases were identified. The multivariate HR [hazard ratio] of overall cancer risk among vegetarians compared to nonvegetarians was statistically significant (HR=0.92; 95%Cl; 0.85,0.99 for both genders combined).

"Conclusion: Vegetarian diets seem to confer protection against cancer. Impact: Vegan diet seemed to confer lower risks for overall and female-specific cancer compared to other dietary patterns. The lacto-ovo-vegetarian diets seem to confer protection from cancers of the gastrointestinal tract."

Note: This is an epidemiologic study, and as such the findings are suggestive only.

Letter (e-mail) from Mark Messina, an expert on the subject. "The cancer incidence was reduced by 8%. Not very impressive. Comment: So for vegans, cancer incidence was reduced by 16%. That is nice but not overwhelmingly impressive. I am intrigued by the 34% reduction in female specific cancers. That is a curious finding. I assume that is due to a reduction in breast cancer primarily but I would have thought the authors would have said so if that was the case. But again, not sure whether or not drinking, weighing less or not smoking contributed to this protective effect. Also, it appears that veganism was not protective against prostate cancer, colon cancer, etc. etc." Address: 1. Epidemiology and Biostatistics, Loma Linda Univ.

3610. Shurtleff, William; Aoyagi, Akiko. comps. 2013. History of tofu and tofu products (965 CE to 2013): Extensively annotated bibliography and sourcebook (Continued–Document part II). Lafayette, California: Soyinfo Center. 4004 p. Subject/geographical index. Printed

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20 May 2013. 28 cm. [13302 ref]

• ***Summary:*** Continued: 1906–Quong Hop & Co. starts making tofu in San Francisco, California. Until Sept. 2010, when it declared bankruptcy, Quong Hop was the oldest existing Chinese-American tofu manufacturer in the USA.

1910–Europe's first commercial soyfoods manufacturer, named Caséo-Sojaïne, is founded by Li Yu-ying, a Chinese citizen, biologist and engineer, at 46-48 Rue Denis Papin, Les Vallées, Colombes (near Asnières), a few miles northwest of Paris. By May 1911 he was making and selling tofu, and by August 1911 he had added smoked tofu, pressed tofu sheets, fermented tofu cheese (in Gruyere, Roquefort, and Camembert flavors), and soymilk.

1911–Ohta Tofu-ten (Ota Tofu Shop) is now making tofu at 266 Davis St., Portland, Oregon. As of 2013 Ota Family Tofu is still making tofu in Portland, Oregon, making it the oldest existing tofu maker in the United States.

1923–The two 2nd oldest existing Japanese-American tofu companies (House Foods & Yamauchi Inc. of Los Angeles and Aala Tofu Co. of Honolulu) are founded in Hawaii. They both began as H. Iwanaga Daufu at 1031 Aala St. in Honolulu. In 1926 the company was renamed Shoshiro Kanehori Tofu, and in 1937 Haruko Uyeda Tofu, still at the same address. In about 1939 the company was purchased by Mr. and Mrs. Shokin Yamauchi, who later renamed it Aala Tofu Co. Their son, Shoan Yamauchi, made tofu at the family company until 1946, when he went to Los Angeles, purchased the Hinode Tofu Co., and began making tofu there in 1947. After becoming Matsuda-Hinode Tofu Co. in 1963, the company was renamed House Foods & Yamauchi Inc. in 1983.

1929 Nov.–T.A. Van Gundy, a Seventh-day Adventist and founder of La Sierra Industries in Arlington, California (near Riverside), becomes the first Westerner to make tofu commercially when he introduces La Sierra Soya Cheese. This tofu was canned and pimiento was added to prevent graying after canning.

1930–Azumaya Tofu Seizo-sho (later renamed Azumaya Co.) starts making tofu, yaki-dofu (grilled tofu), and ganmodoki (fried tofu patties) in San Francisco at 1636 Post St. between Buchanan and Laguna streets. The company is owned by Mr. Teranishi, who may have started it as early as the early 1920s. In Feb. 1937 it was sold to George and Jack Mizono, and their mother and father (Saichi Mizono).

1932 Dec.–Madison Foods, part of Madison College in Madison, Tennessee, is making Soy Cheese, then by 1939 they had launched Cheze-O-Soy (seasoned tofu), and by 1940 they were making a canned tofu bologna named Yum.

1934–By this year Loma Linda Food Co. (Adventist) in Loma Linda, California, is making Loma Linda Vege-Cheese (canned tofu with pimiento).

1939–Paris Tofu, founded by Joe Gon Fung, starts making tofu at 237 Powell St., Vancouver, BC, Canada. In 1957 the name was changed to Sunrise Market Ltd. and Leslie Joe became the owner.

1942 Sept.–Dr. Harry Miller, a Seventh-day Adventist doctor who had worked for many years in China as a medical missionary, begins making Miller's Soya Cheese (tofu) at Mt. Vernon, Ohio.

1944 Sept.–Butler Food Co. in Cedar Lake, Michigan, introduces Butler's Soynut Cheese. Note that the first five Caucasian-run tofu companies in the Western World were all founded and run by Seventh-day Adventists. Note also that each of these five Seventh-day Adventist tofu products used the word "cheese" in the name and that each was canned.

1957 Aug.–Shizuka Hayashi, head of the Japanese-American Soybean Institute in Tokyo, publishes (in Soybean Digest) the earliest English-language statistics on tofu in Japan. "There are approximately 45,000 tofu manufacturers in Japan, of which about 23,000 are members of the Tofu Association. There is one large factory in Osaka, the largest in Japan, which consumes 2 tons of soybeans a day." In 1957 Japan will use somewhere between 160,000 and 308,000 tons of soybeans to make tofu.

1958–The world's first packaged tofu is sold in Los Angeles, California, by Matsuda Hinode Tofu Co. Mr. Shoan Yamauchi, owner, conceived of the idea of putting individual cakes of tofu each in a plastic bag with water, sealing the bag with a heat sealer, placing the bag in a stiff paper deli carton with a wire handle, then folding over the top. The process was labor intensive. This happened at about the same time that a letter from journalist George Yoshinaga had led the city to pass a new regulation requiring tofu to be packaged in individual containers.

1958–Tofu is first sold in a U.S. supermarket, Boys Markets, a supermarket chain which had about 12 stores at the time in Los Angeles. The tofu was sold in individual packages (see above) and made by Matsuda Hinode Tofu Co., whose owner, Mr. Shoan Yamauchi was responsible for this major innovation, and for seeing the mainstream potential of tofu.

1965–The Library of Congress establishes the subject heading "Tofu" as the official name for that food in cataloging books for libraries across America. However, in the mid-1970's disputes arose there about the proper form of Romanization of that term. The dispute was resolved by the decision to use the common English term "Bean Curd" instead.

1966–Tofu is first packaged in plastic trays/tubs, the type so widely used today. Again, Mr. Shoan Yamauchi conceived of the idea. He went to the Sealright Company in Los Angeles that made Sealright trays and asked them to make a waterproof plastic tray for his tofu. Mr. Yamauchi created three specific early innovations in tray packaging: (1) A very deep tray, holding 26-28 ounces; (2) A method for heat sealing a plastic film to the flange of a tray which had cold water flooding over the flange; (3) High-speed sealing machines to pack and seal the tofu in his plant.

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1975 March–Alec Evans, owner of first of the new breed of Caucasian-run tofu shops, starts to make "Tofu" in Corvallis, Oregon. His Welcome Home Bakery and Tofu Shop is the sixth Caucasian-run tofu company in America.

1975 Dec.–*The Book of Tofu*, by Shurtleff and Aoyagi, is published by Autumn Press. This book, which had sold more than 618,000 copies in English-language editions by April 2013, played a major role in introducing tofu to the Western World. Tofu came to the Western world from 1975 on as part of a new wave of interest in vegetarianism.

1976 Jan.–Swan Gardens starts making tofu in St. Ingatius, Montana. Founded by Dick & Jocelyn McIntyre. In 1979 they moved the company to Miami, Florida.

1976 Aug.–Larry Needleman introduces The Learning Tree Tofu Kit (Bodega, California).

1976 Sept.–Farm Food Company starts making tofu as part of their Soy Deli at 820 B. St., San Rafael, California. Robert Dolgin and David Sandler are key figures.

1976 Nov.–Island Spring, Inc. begins making tofu on Vashon Island, Washington state, founded by partners Lukoskie and Sylvia Nogaki.

1977 Jan.–Laughing Grasshopper Tofu Shop starts making tofu in Millers Falls, Massachusetts, founded by Richard Leviton and Kathy Whelan. In Feb. Tom Timmins joined as a partner and by August of that year so did Michael Cohen. In Nov. 1977 Laughing Grasshopper moved to Greenfield, Massachusetts, was renamed New England Soy Dairy, and before long was the largest of the new wave of tofu makers in the United States.

1977 Jan.–The Soy Plant (a worker-owned collective) starts making tofu in Ann Arbor, Michigan. Steve Fiering is a key figure.

1977 March to Oct.–Bean Machine, Inc. (BMI) is established by Larry Needleman with headquarters in northern California. Initially, BMI Orders most of its equipment from Takai Tofu & Soymilk Equipment Co. in Kanazawa, Japan. New tofu companies can order specialized tofu equipment they need from BMI.

1977 May–Flying Cloud Tofu (later renamed The Tofu Shop, then Northern Soy) starts making tofu in Rochester, New York. Greg Weaver, Greg Mello, and Andy Schecter are key figures.

1977 July–The Tofu Shop starts making tofu in Telluride, Colorado. In 1980 Matthew Schmit moves this tofu shop and soy deli to Arcata, California.

1977 Aug.–Takai Tofu & Soymilk Equipment Co. publishes its first English-language equipment catalog, which helps many American and European tofu shops to get started. Most order their equipment through Bean Machines, Inc.

1977 Sept.–White Wave, founded by Steve Demos, starts making tofu at 1738 Pearl St., Boulder, Colorado.

1977–Morinaga Milk Industry Co., Ltd. in Japan introduces the world's first aseptically packaged tofu in a Tetra Brik carton (see U.S. Patent No. 4,000,326 of 28 Dec. 1976). It is named "Morinaga brand Tofu. Soybean Curd." In 1978 the name was changed to "Morinaga brand Ever-Fresh Silken Tofu." In 1981 the product was first imported into the United States,

1977–Swan Foods Corporation, owned by Robert Brooks and Mary Pung, starts making "Tofu–Organic" at The Soybeanery, 5758½ Bird Rd., Miami, Florida. This is the first tofu in the Western World labeled "Organic." Swan Foods is also the first American company to make a wide variety of soyfoods, and the second to open a soy deli–which had a take-out menu. Continued. Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

3611. Shurtleff, William; Aoyagi, Akiko. comps. 2013. History of soy fiber and dietary fiber (1621 to 2013): Extensively annotated bibliography and sourcebook. Lafayette, California: Soyinfo Center. 832 p. Subject/geographical index. Printed 7 June 2013. 28 cm. [2004 ref]
• ***Summary:*** This is the most comprehensive book ever published about the history of soy fiber. It has been compiled, one record at a time over a period of 35 years, in an attempt to document the history of these interesting soyfoods. It is also the single most current and useful source of information on this subject.

Contents: Search engine keywords. Dedication and acknowledgments. Introduction: Brief chronology / timeline of soy fiber and dietary fiber. About this book. Abbreviations used in this book. How to make best use of this digital book–Search it. Nine pages of color photos. Contains 103 photographs and illustrations. http://www.soyinfocenter.com/books/163.

Brief chronology of soy fiber and dietary fiber:

1621–In the *Qunfang Pu* [The assembly of perfumes, or Monographs on cultivated plants], Wang Xiangjin, of China, after discussing tofu, remarks that the residue (*zhi*, Jap: okara) from the tofu can be used to feed pigs. In times of famine, people also eat this residue.

1692–The *Haikai, Zôdanshû* [Comic / unorthodox, collections of various topics] is the earliest known Japanese work to mention okara, which it calls kirazu (meaning "cannot be cut").

1772–The word "okara" is first used in Japan in the *Gakutaiko*. The Japanese, in line with their ancient tradition of honoring even the simplest and most humble of foods, place the honorific prefix o before the word kara, which means "shell, hull, or husk." Thus o-kara means "honorable shell."

1847–The word "unohana" is first used in Japan to mean okara in the *Honzô kômoku keimô*. "Unohana" also refers to a small white flower (Deutzia scabra) that grows in thick clusters on briar bushes and blooms in the spring.

1867–Okara is first mentioned in English by James C. Hepburn in *A Japanese and English Dictionary.* Under

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Kiradz [Kiradzu, Kirazu] he writes: "The refuse left in making tôfu."

1869–Okara is first mentioned in French in *Fabrication du fromage de pois en Chine et au Japon* [Production of tofu in China and Japan], by Paul Champion and M. Lhôte. They refer to it as *la pulpe égouttée* (the drained pulp).

1874–Okara is first mentioned in German by H. Ritter in "Tofu, Yuba, Ame," an article published in *Mittheilungen der Deutschen Gesellschaft fuer Natur- und Voelkerkunde Ostasiens* (Yokohama) 1(5):3-5. July. They refer to it as *Der Pressrueckstand* (The pressed residue).

1903 Jan.–Dr. John Harvey Kellogg writes an editorial titled "Constipation" in his periodical *Good Health* (Battle Creek, Michigan). A Seventh-day Adventist and vegetarian, he is a pioneer in emphasizing the importance of roughage / bulk / dietary fiber in the human diet. He writes: "It is necessary that the food should have a certain bulk in order that intestinal activity may be normally stimulated. Fruits, wholemeal bread" and vegetables "are highly conducive to intestinal activity."

1917–In his book *Colon Hygiene* (417 p.) Dr. J.H. Kellogg states (p. 11-12): "Forty years' experience and observation in dealing with chronic invalids, and careful study of the results of the modern X-ray investigations of the colon, together with observations made at the operating table in many hundreds of cases, has convinced the writer -

"1. That constipation with its consequences is the result of the unnatural habits in relation to diet and colon hygiene which prevail among civilized people."

This is the earliest document seen that links constipation and human diets in civilized countries.

1919 Aug.–William G. Bowers, in "Some studies on the nutritive value of the soy bean in the human diet," coins the term "soy bran" to refer to soybean hulls (*North Dakota Agricultural Experiment Station, Special Bulletin, Food Department*).

1920s–McCance and Lawrence are instrumental in developing the concept of unavailable carbohydrate; this was a stepping stone to the modern concept of dietary fiber–plant substances not digested by human digestive enzymes.

1958–Central Soya Co. of Fort Wayne, Indiana, launches Soybean Flakes, made by steaming soybean hulls then running them through flaking rolls.

1972–Poly-Soy, a soy cotyledon/soy isolate fiber, is launched by Ralston Purina Co. of St. Louis. Missouri. "Poly" is an abbreviation of "polysaccharides." This is the first product of its kind.

1973-1974–Prior to the early 1970s, most of the soy fiber used in human diets was okara, and it was used mostly in East Asia. The rise of the modern interest in key role of dietary fiber in the prevention of disease dates from the years 1973 and 1974, when Denis P. Burkitt, a British physician who had done extensive research on traditional diets in Africa, began to argue convincingly, based on studies of traditional diets, that the lack of fiber in modern Western diets was a major cause of disease. Foods of animal origin (such as meat, eggs. and dairy foods) contain no fiber, whereas most foods of plant origin (and especially those from grains, legumes, and vegetables) are excellent sources of fiber.

1974 Oct.–The terms "soy pulp" and soypulp," which refer to okara, first appear in the very creative booklet "Yay Soybeans! How You Can Eat Better and for Less and Help Feed the World," by The Farm in Summertown, Tennessee. This is also the earliest document seen that that uses the word "soysage" to refer to a meatless sausage-like food in which soy pulp (okara) is the major ingredient. It also contains recipes for Soysage and Soyola (soy pulp granola).

1975 Dec.–*The Book of Tofu* (and its companion, *Tofu & Soymilk Production,* 1979) are largely responsible for the word "okara" becoming widely used in English.

This book contains an entire chapter about okara with the most information about okara and the most okara recipes of any book published in English to date.

Before publication of this book, okara was very difficult to obtain in the West, except directly from Asian tofu shops. Soon, however, people started making their own tofu at home (often using tofu kits) and many new tofu shops sprang up and became sources of fresh okara.

Within 5 years after the book's publication the importance of fiber in the diet began to be widely publicized.

1980–A growing body of medical research, especially that published since 1980, has demonstrated that fiber plays a host of valuable roles in human diets: it aids bowel function (decreasing mouth to cecum transit time, increasing fecal bulk and moisture), lipid metabolism (lowering serum cholesterol), and diabetic control (reducing hypoglycemic rebound in normal individuals, improving glucose tolerance in obese diabetics).

In 1962 there were only 10 scientific papers about fiber; in 1980 there were 500.

By the late 1980s Americans were being advised by dietitians to consume 20-35 grams of fiber daily. In fact, eating more fiber had almost become a dietary fad.

1986–Fibrim, a soy cotyledon / isolate fiber, is launched by Ralston Purina Co. (renamed Protein Technologies International in July 1987) of St. Louis. Missouri–accompanied by extensive scientific data and a strong marketing program. Fibrim played a leading role helping to document the importance of dietary fiber, and to create new markets from which all soy fiber products could greatly benefit.

1986–Gene A. Spiller, in *CRC Handbook of Dietary Fiber in Human Nutrition,* coins the term "Soybean isolate fiber (p. 71, 445) to refer to the fiber resulting from the manufacture of soy protein isolates.

1990–Grace Lo, in "Physiological effects and physico-chemical properties of soy cotyledon fiber," a conference

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paper, coins the term "soy cotyledon fiber" (see Furuda and Brine 1990, p. 49-66). Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

3612. Shurtleff, William; Aoyagi, Akiko. comps. 2013. History of whole dry soybeans, used as beans, or ground or flaked (240 BCE to 2013): Extensively annotated bibliography and sourcebook (Continued–Document part II). Lafayette, California: Soyinfo Center. 950 p. Subject/geographical index. Printed 2 July 2013. 28 cm. [2337 ref]
• ***Summary:*** 1917 May 19–An article titled "Soybeans for Human Food, by Kay B. Park, published in *Ohio Farmer* is the first to recommend that soybeans not be cooked in the water in which they are soaked. "One result of the work is that an exceedingly simple household method has been found by which soybeans can be made as palatable as navy beans. The process consists merely in soaking the beans overnight in a large excess of hot water or until the bad flavor has disappeared, which can be determined by tasting. The water should be poured off and the beans rinsed. When the strong flavor has been removed the beans can be cooked like navy beans."

1917 Sept.–The term "soy-bean pulp" is first used in the popular *Good Housekeeping* magazine in an article titled "Soy: The Coming Bean," by William Leavitt Stoddard. Eight soy recipes are given; six call for whole "soy beans" and two for "soy-bean meal"–full-fat soy flour. The term soy-bean pulp probably refers to whole soybeans that have been baked then ground or mashed to a pulp.

The term is next used (very clearly) on 2 Jan. 1918 in several recipes in the *Boston Daily Globe.*

1918 Feb.–Dr. John Harvey Kellogg, in an article titled "The Soy Bean" published in *Good Health magazine*, describes an ingenious way to pressure cook soybeans without using a pressure cooker and with no concern about stirring or burning.

1918 Feb.–The term "whole soy-beans" first appears in the *Journal of Home Economics* (p. 64-70).

1918 July 30–The *Boston Daily Globe* writes: "Odd as it may seem, and incredible as it may appear, the Boston baked bean of today is almost invariably the soya bean, which is imported from China and grown on Southern estates, from Virginia to the Mississippi."

1918–During the season of 1916 about 100,000 bushels of American-grown soy beans were packed as baked beans by several canning companies in the Central and Eastern States" (W.J. Morse, *Yearbook of the USDA*).

1921 April 27–The term "canned soybeans" is first used by J.C. Hackleman of the University of Illinois, in a letter to W.J. Morse.

1926–Hain Health Foods (Los Angeles, California) begins selling "Canned Soy Beans."

1929 Nov.–La Sierra Industries (Arlington, California; founded and run by T.A. Van Gundy) starts selling "La Sierra Soy Beans" (Canned; Unseasoned Green-Seeded Type, or With Tomato Sauce) and "La Sierra Soy Cereal"–a toasted and shredded all-soy product. The latter was the company's best-seller in the early 1930s.

1929-1930–During their 2-year expedition to East Asia, Dorsett and Morse (USDA agricultural explorers) find many commercial products in Japan (Tokyo) containing whole soybeans–many of them treats or sweets for children. In Korea they find no food products but several uses of cooked whole soybeans as feed (as for an ox). In China they find no uses for food or feed.

1933–California Food Kitchens (Los Angeles, California) launches a line of whole soybean products–the earliest such products for which we have an advertisement. These include Gud Fud Soya Beans, Soya Loaf, Soya Rice Lunch, Soya Sandwich Spread, etc.

1934 June–La Sierra Industries launches La Sierra Soy Breakfast Food (Ready to Serve Cereal). The company advertised it in Health magazine as "Perfect Protein, High Alkaline Ash, Low Starch."

1941-1945–During World War II, soybeans again return to prominence just as they did during World War I.

1945–The Kellogg Co., famous maker of breakfast cereals (Battle Creek, Michigan), introduces Kellogg's Corn Soya Shreds, and advertises them widely–including two full-page color ads in *Life* magazine. They were made from "soya flakes."

1960–The influential book *Zen Macrobiotics*, by George Ohsawa, contains many recipes for soybeans (including black soybeans) served as beans, often with Japanese seasonings–such as soy sauce or miso.

This is the earliest macrobiotic document seen that gives a recipe for whole soybeans served as beans.

1965–In his work "Soybean Utilization in Japan," William Brandemuhl has a section on Soybean tsukudani and nimame. He says a very large maker might use 300-350 kilograms of soybeans per day for soybean tsukudani.

This is the earliest document seen that contains the term "Soybean tsukudani."

1971–Arrowhead Mills (Hereford, Deaf Smith County, Texas) uses a unique process that involves infrared heat to make Soybean Flakes. This type of heat plasticizes the soybeans so that they become cohesive flakes rather than grits and flour.

1992–In *The Zen Monastic Experience: Buddhist Practice in Contemporary Korea*, Robert Buswell, Jr. states: "Bean products constitute one of the largest components of the monastic diet during all seasons. Cooked black [soy] beans, seasoned with soy sauce, sugar, and white sesame, are served at least once a day." Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

3613. Orlich, M.J.; Singh, P.N.; Sabaté. J.; Jaceldo-Siegl, K.; Fan, J.; Knutsen, S.; Beeson, W.L.; Fraser, G.E. 2013.

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Vegetarian dietary patterns and mortality in Adventist Health Study 2. *JAMA Internal Medicine* 173(13):1230-30. July 8. * Address: School of Public Health, Loma Linda University, Loma Linda, California 92350, USA.

3614. Messina, Virginia. 2013. Calcium and protein and bone health in humans. *The Vegan Dietitian* (*blog*). Aug. 20. [10 ref]

• ***Summary:*** "There is good evidence that vegan diets can prevent heart disease and they are likely to lower risk for cancer as well. But does going vegan improve your bone health? I see some post or infographic in social media nearly every week claiming that a vegan diet protects against osteoporosis.

"The theory is that animal protein, through its acidifying action, 'leaches' calcium from bones, eventually weakening them and causing bone fractures. If that's true, it means that those of us who eat no animal protein are likely to have better bone health. And maybe even lower calcium needs.

"Unfortunately, it's not true. Or at the very least, the evidence in support of this relationship has fizzled over the years. I've written about this before, but it remains such a pervasive and potentially harmful belief that it deserves an occasional revisit.

"The theory has its roots in research published in 1992 showing that hip fractures were more common in countries with high animal protein intakes. The simplistic interpretation of this is that people who eat more animal protein have more osteoporosis. But hip fractures don't equal osteoporosis. For example, in some countries where hip fracture rates are low, rates of spinal fractures are actually higher. (1)

"In fact, it appears that the factors protecting against hip fracture often have little to do with diet or with bone health. They are more about ethnic differences in bone anatomy and also in cultural habits that affect the risk of falling. (2,3) In contrast, spinal fractures are likely to reflect bone health. So if low-protein consumers are more likely to suffer from spinal fractures, this tells us that protein might actually be a protective factor in bone health.

"In fact, quite a bit of research shows this to be true. In the Iowa Women's Health Study for example, older women with higher protein intakes were less likely to fracture a hip. (4) In the Adventist Health Study, women eating more protein from either plants or animal foods were less likely to fracture their wrists. (5) In other studies, older women who ate more protein had better bone mineral density. (6,7)

"It shouldn't be surprising. Protein is an integral part of bones and it also improves calcium absorption. (8) It's also important for maintaining muscle strength with aging, which in turn helps to support healthy bones.

"And it seems that protein's acidifying effects may not even be relevant to bone health. A 2009 meta-analysis found that acid production (measured by acid compounds in the urine) was not associated with calcium balance or with bone loss. (9) A 2012 review of studies on protein, calcium and bone health concluded that high-protein diets did not impair calcium balance or bone health. (10)

"So, based on what we know right now, vegans don't appear to have any particular advantage when it comes to bone health. Instead, it's important for us to give some attention to both calcium and protein in our diets. Vegans have been slow to accept this, in part because there is such a wealth of misinformation about it on the internet and in popular books. And, of course, it's hard to let go of these concepts when we want to paint the most enticing picture possible of vegan diets.

"As always, though, bad nutrition information for vegans can't have a happy outcome. I hear from those who have bought into the outdated science on protein and bone health and ended up with osteoporosis. They took a casual approach to calcium in their diet, believing that they were protected by their lower protein intake. Maybe they would have gotten osteoporosis anyway, of course. It's a complex disease that involves a host of risk factors. But at the very least, we should promote information that minimizes that risk.

1. Bow CH, Cheung E, Cheung CL, et al. Ethnic difference of clinical vertebral fracture risk. Osteoporosis Int 2012;23:879-85.

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3615. Johnson, Juliette. 2013. Re: All existing issues of the *Madison Survey* (1919-1963, Madison, Tennessee) have been scanned and are available online free of charge. Letter (e-mail) to William Shurtleff at Soyinfo Center, Aug. 22. 1 p. • ***Summary:*** "Hello Bill, Thank you for contacting the Center for Adventist Research. I have some good news for you! We recently completed the full digitization of the Madison Survey and they are available free of charge on our website. You can reach them at this link: http://jewel.andrews.edu/record=b1671061 (email me if this link doesn't work). Click on the link that says 'Full Text, Complete Holdings.' You will see a directory of all issues by volume and number. If you need information on the year, you can see this on the main view before clicking into the full text. The PDFs are searchable as well.

"We also have these scanned in a higher resolution if you have trouble reading any of the text. Just let me know.

"The Madison College Alumni group has been in negotiation with us to be the repository of their archives. We have received a large amount of materials from them, and are in negotiations to get the remainder of the collection. I am confident in saying that the Center will be the future home of the Madison College materials.

"Let me know if you need more information!" Address: Digitization Manager, Center for Adventist Research, Andrews University, Berrien Springs, Michigan 49104.

3616. Shurtleff, William; Aoyagi, Akiko. comps. 2013. History of soymilk and other non-dairy milks (1226-2013): Extensively annotated bibliography and sourcebook. Lafayette, California: Soyinfo Center. 2,972 p. Subject/geographical index. Printed 30 Aug. 2013. 28 cm. [8761 ref] • ***Summary:*** This is the most comprehensive book ever published about the history of soymilk and other non-dairy milks. It has been compiled, one record at a time over a period of 35 years, in an attempt to document the history of these interesting beverages. It is also the single most current and useful source of information on this subject.

Contents: Search engine keywords. Dedication and acknowledgments. Introduction: Brief chronology / timeline of soymilk and other non-dairy milks. About this book. Abbreviations used in this book. How to make best use of this digital book–Search it. Eight pages of color photos. Contains 233 photographs and illustrations. http://www.soyinfocenter.com/books/166.

Contents: Scope for Soymilk: This book focuses on the use of soymilk as a beverage. Soymilk has long been the most widely consumed non-dairy milk worldwide. Soymilk also appears as a step in the process for making tofu, yuba, soy yogurt, soy ice cream, soy cheese, fermented soymilk (incl. soy acidophilus milk), etc. Each of these soy products is or will be the subject of a separate book.

Amazaké, a thick fermented non-dairy rice beverage from Japan, usually served hot, topped with a dab of grated gingerroot, is also the subject of a separate book.

Use in East Asia: Only in China has soymilk (*doujiang*) long been used as a beverage. Traditionally it was been served hot, ladled from a caldron for breakfast, at the place where it was made either sweetened or as the base of a salted soup served with deep-fried crullers. It was not used to feed infants or as an infant formula.

Starting in the 1920s, a small number of companies in China started to make and sell bottled soymilk.

In Hong Kong, Vitasoy was launched in 1940 by K.S. Lo as a nutritious food for refugees fleeing during World War II. By 1968 it had captured 25% of the Hong Kong soft drink market, second only to Coca-Cola.

In Japan, bottled soymilk arrived in about 1957. The first soymilk boom started in about 1980; the many brands of soymilk were all sold in 180 ml aseptic cartons.

In the United States and Europe, soymilk started to become popular in the 1980s. The first two brands sold nationwide were Vitasoy and Edensoy, both aseptically packaged so they did not need refrigeration. The first superstar of soymilks, Silk, was launched by White Wave of Boulder, Colorado, in early 1996. It was sold in the dairy case in gable-top cartons that looked like typical milk cartons.

The first widely popular rice milk was Rice Dream, launched in June 1990 by Imagine Foods of Palo Alto, California

Brief chronology of soymilk and other non-dairy products.

1226–Kitab al-tabik [A Baghdad Cookery Book], by al-Baghdadi et al. is the earliest document seen that mentions a non-dairy milk–almond milk.

1365?–Yiya Yiyi [Remnant Notions from I Ya], by Han Yi is the earliest document seen that mentions soymilk, which it calls doufujiang.

1390–"Almond milk" is first mentioned in English in The Forme of Cury. It came to be widely used in Europe during Lent–the first popular non-dairy milk in the Western world.

1640 ca.–Soymilk is probably in use in China by the beginning of the Qing dynasty (H.T. Huang 2006).

1704–Soymilk is first mentioned in English by Domingo Fernandez Navarrete in his book A Collection of Voyages and Travels. Navarrete served as a Dominican missionary in China.

1790?–An undated painting of hawkers selling soymilk (doujiang) in China, by Yao Wenhan, is from the Qing dynasty.

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1790–Soymilk is mentioned by Juan de Loureiro in his book The Flora of Cochin China. Loureiro was a Portuguese Jesuit missionary who lived in what is now Vietnam. He notes that soymilk is part of the process for making tofu.

1866–Soymilk is first discussed as a drink in its own right by the Frenchman Paul Champion, who traveled in China. In a French-language article he stated that the Chinese had taken their cups to tofu shops to get hot soymilk, which they drank for breakfast.

1896 June–Soymilk is first referred to in the United States by Henry Trimble in the American Journal of Pharmacy.

1897 July 7–The term "soy-bean milk" (or any cognate / relative thereof) first appears in a USDA or U.S. government publication: C.F. Langworthy. 1897. "Soy beans as food for man." USDA Farmers' Bulletin No. 58. p. 20-23. July 7. The table, titled "Comparison of the composition of soy-bean milk and cows' milk," gives the nutritional composition of the two liquids. The same term next appeared in Dec. 1916 in a USDA Bulletin by Piper & Morse, and then on 7 Feb. 1917 in a USDA Weekly News Letter.

1897 Nov. 16–Peanut cream and peanut butter are now being made in Kokomo, Indiana by Lane Bros. (Kokomo Daily Tribune, p. 4). This is the earliest document seen that contains the term "peanut cream."

1899–Almeda Lambert of Battle Creek, Michigan, in her book Guide for Nut Cookery, describes how to make "peanut butter, peanut cream, peanut milk, raw peanut milk and cream, almond milk, hickory milk, pine-nut milk, chufas milk and cocoanut milk" at home. This is the earliest document seen that contains the term "peanut milk" or the term "cocoanut milk."

1906 April–Katayama, in Japan, reports that he has made "A condensed vegetable milk" from soy-beans.

1909–The first soy-based infant formulas and soymilk made from full-fat soy flour are developed in the United States by John Ruhräh, a pediatrician. He reports his results in the Archives of Pediatrics (July 1909).

1910–The world's first soy dairy, named Caséo-Sojaïne, is founded by Li Yu-ying, a Chinese citizen, biologist and engineer, at 46-48 Rue Denis Papin, Les Vallées, Colombes (near Asnières), a few miles northwest of Paris. In December 1910 he applies for the world's first soymilk patents (British Patents No. 30,275 and 30,351). The first patent is titled "Vegetable milk and its derivatives." He is issued both patents in Feb. 1912.

1913 June 13–Li Yu-ying is issued the first U.S. soymilk patent (No. 1,064,841), titled "Method of manufacturing products from soja." He filed the application on 10 Oct. 1911.

1914–Maria M. Gilbert, in her book Meatless Cookery, gives a recipe for "Rice milk."–the earliest know use of this term.

1917–Soymilk is being produced commercially in the U.S. by J.A. Chard Soy Products in New York City.

1921 Sept. 23–Vita Rice Products plans to build a factory to make "rice milk products," including Vita Rice Milk, in San Francisco (San Francisco Business, p. 20).

1921–Leon Rouest of France gives the first detailed discussion (in French) of calf-milk replacers based on soymilk.

1929 Nov.–T.A. Van Gundy, founder of La Sierra Industries in Arlington, California, launches La Sierra Soy Milk, and becomes the first Seventh-day Adventist worldwide to make soymilk commercially. The product was canned and the beany flavor removed by live steam processing.

1929 Dec.–Bottled soy bean milk is now widely made and sold in China. "One large factory in Peking now makes and distributes over a thousand bottles of [soy] milk daily; in Shanghai two factories each meet an even greater daily demand. The industry is bound to grow rapidly to greater dimensions" (Adolph and Wang 1929).

1931–Madison Foods of Madison, Tennessee, introduces Madison Soy Milk–the world's earliest known soymilk to be fortified with calcium and the second commercial soymilk product made by Seventh-day Adventists in the USA. Madison Foods is a company run by students and faculty within Madison College, a pioneering work/study school.

1936 Jan.–Dr. Harry W. Miller and his son, Willis, start making Vetose Soya Milk, sold in natural or chocolate flavors in sterilized half pint or quart bottles at their Vetose Nutritional Laboratories in Shanghai, China. Dr. Miller is a Seventh-day Adventist physician, a student of Dr. John Harvey Kellogg, and a medical missionary living in China. The world's first "soy dairy," this company also made soy ice cream and Acidophilus Vetose (a cultured soya milk)–both launched in Jan. 1936. But Japan was invading China. Within months after the soy-milk business began booming, a Japanese bomb blew up the soy dairy.

1936 April–The earliest known English-language document to contain the modern word "soymilk" is: Miller, Harry W.; Wen, C. Jean. 1936. "Experimental nutrition studies of soymilk in human nutrition." Chinese Medical Journal 50(4):450-59. April. Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

3617. Shurtleff, William; Aoyagi, Akiko. comps. 2013. History of soymilk and other non-dairy milks (1226-2013): Extensively annotated bibliography and sourcebook (Continued–Document part II). Lafayette, California: Soyinfo Center. 2,972 p. Subject/geographical index. Printed 30 Aug. 2013. 28 cm. [8761 ref]

• ***Summary:*** Continued: 1936 June–Sobee, the world's earliest known branded soy-based infant formula, is launched by the American Soya Products Corp. of Evansville, Indiana.

1939 autumn–Dr. Harry W. Miller, forced by the war in China to return to the USA, starts making soymilk at Mt.

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Vernon, Ohio, in a large brick plant which he and coworkers built from the ground up. The first two products are canned liquid soymilk (made in a pressure cooker and fortified with vitamins and minerals) and malted soymilk (Soy-A-Malt). Pressure from the powerful U.S. dairy industry and the USDA convinced Miller not to call his product 'soymilk,' so he latinized the name to Soya Lac. This term was first used in late 1939 for Miller's first American soymilk.

1940 March–K.S. Lo, founder and managing director of the Hong Kong Soya Bean Products Co. Ltd. starts to make soymilk in Hong Kong. His product, originally named Vita Milk (Wai-ta-nai in Chinese) was fortified with calcium, cod-liver oil, and vitamins, and sold in milk bottles, primarily as a nutritious, affordable beverage for refugees. In June 1940 the product was renamed Sunspot, and in 1953 it was renamed Vitasoy.

1943–Bob Rich first learned about soymilk from employees of Henry Ford, who were making soymilk at the Carver Laboratory in Dearborn, Michigan, for use in the Ford Hospital. In April 1945 Rich Products Corp. launched Whip Topping–a non-dairy product. The first lawsuit against Whip Topping (1949) charges that this is an imitation dairy product–and thus illegal. Bob Rich and Rich Products (Buffalo, New York) mount an aggressive defense, contending that their product is not an imitation (which implies inferiority to the real product) but a replacement. By 1974 Rich Products (which now also made non-dairy Coffee Rich–a coffee whitener or creamer) had won 40 cases. That year the Kansas Supreme Court declared Coffee Rich "a new and distinct food" and the dairy lobby gave up. Were it not for Bob Rich and his lead attorney, Ellis Arnall (former attorney general and governor of Georgia, 1943-47), non-dairy products might still be illegal in the USA!

1950s–Soymilk enters the modern era as it begins to be marketed in bottles like soft drinks, largely due to work by K.S. Lo of Vitasoy in Hong Kong and Yeo Hiap Seng in Singapore.

1956 Dec.–The Plantmilk Society has its first annual general meeting in London. Mr. C.A. Ling is in the chair. This report in The Vegan is the earliest English-language document seen that uses the word "plantmilk" to refer to soymilk and other non-dairy milks–a nice short word.

1957–Japan's first commercial soymilk, sold in bottles, named Tônyu, is introduced by the Ueda Tofu Shop in Hachioji, Tokyo. Dr. Harry Miller was the inspiration for and helped to establish the shop.

1960s–In Japan, soymilk slowly increases in popularity. New manufacturers are: Nihon Tanpaku Kogyo (1962). College Health Foods (later renamed San-iku Foods) in Chiba prefecture with its Soyalac (1969, also inspired and aided by Dr. Harry Miller). Luppy Tanpaku (House Shokuhin) in Saitama prefecture with its Luppy soymilk (1969).

1965–ProSobee, the world's earliest known non-dairy infant formula based on soy protein isolates, is launched by Mead Johnson & Co. of Evansville, Indiana.

1966–The enzyme lipoxygenase is discovered by scientists at Cornell University [Ithaca, New York] to be responsible for the "beany" flavor in soymilk. They develop a process which can be used to help eliminate this "beany" flavor.

1967–Soymilk begins to be packaged aseptically in Tetra Pak cartons. This allows it to be sold without refrigeration for six months or more. The first such product was Beanvit, made by Yeo Hiap Seng Ltd. in Singapore and packaged in a disposable tetrahedron-shaped container.

1970s and 1980s–Soymilk becomes a popular beverage throughout Asia, spreading to Europe, Australia and the United States.

1979–Hong Kong Soya Bean Products Co. Ltd. starts to export Vitasoy, packed in Tetra Brik cartons, to selected countries throughout the world. By the early 1980s exports were going to over 20 countries, both developed and developing. Exports to the USA began in 1980.

1980 Jan.–DE-VAU-GE Gesundkostwerk, a Seventh-day Adventist food company near Hamburg, Germany, launches GranoVita Soja Drink in 500 ml Tetra Brik cartons; this soymilk product is made by N.V. Vandemoortele (one of Europe's largest oilseed crushers, founded in 1934) in Izegem, Belgium.

1980 June–N.V. Alpro is founded by Vandemoortele to take over production of this soymilk. Inspired and headed by Philippe Vandemoortele, Alpro purchased the land on which it was located from Vandemoortele, and became an independent manufacturer. Alpro quickly became Europe's leading producer of soymilk, making private-label brands for scores of companies.

1983 July–Edensoy brand soymilk is launched by Eden Foods of Clinton, Michigan. Imported from Japan (where it is made by Marusan-Ai Co.), it is sold in plain and carob flavors in stand-up foil retort pouches.

1984 Feb.–The first comprehensive study of the soymilk market in the U.S. is published by Soyfoods Center of Lafayette, California. It estimates that total soymilk consumption in the U.S. in 1983 (not including soy-based infant formulas) was 2.68 million gallons (26% of this was imported), and total production of soy-based infant formulas was 32 million gallons.

1984 March–Vitasoy (USA) introduces the first soymilk whose flavor is described as "Original"–meaning dairylike or resembling (as much as possible) dairy milk.

1984 Aug.–Westsoy Natural brand soymilk is launched by Westbrae Natural Foods of Emeryville, California. Imported from Japan (where it is made by San-Iku Foods), it is sold in one flavor in stand-up foil retort pouches.

1984 Oct.–Westbrae Natural Malted's, a thick soymilk resembling a milk shake, are launched in many flavors by Westbrae Natural Foods, imported from Japan.

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1986 Nov.–Edensoy starts to be made in America by American Soy Products (ASP) at a large, modern plant in Saline, Michigan, and sold in Tetra Brik aseptic cartons. ASP is a joint venture of 4 Japanese companies and Eden Foods.

1986–Raj Gupta (of ProSoya Foods International, Ottawa, Ontario, Canada) applies for two patents on the oxygen-free, cold-grind process and equipment that he has invented. The first U.S. patent is issued on 17 May 1988. This process soon becomes widely used to make good-tasting soymilk. ProSoya becomes a major manufacturer of systems used to make soymilk worldwide.

1988 Nov.–Pacific Foods of Oregon launches its first soymilk product, Naturally Northwest Soy Beverage [Plain], in a 1-quart Tetra Brik Aseptic carton. The company's new factory is in Tualatin, Oregon.

1990 April–WestSoy Lite, America's first "lite" soymilk, with a low fat content, is introduced in plain, vanilla, and cocoa flavors by Westbrae Natural Foods. Made by adding water to regular soymilk, the product is less expensive to make, but also contains less nutrients.

1990 June–Alpro opens a new soymilk plant at Wevelgem, Belgium. Costing about US$15 million and having a capacity of 45 million liters a year, it is reputed to be the largest in the world. Alpro now makes about 70% of the soymilk in Europe.

1990 June–Rice Dream, a non-dairy beverage, is launched in a Tetra Pak aseptic carton by Imagine Foods of Palo Alto, California. It is made by California Natural Products of Manteca, California, using an innovative patented process, in which the ground rice is digested by enzymes. Many prefer its flavor to that of soymilk. Continued. Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

3618. Shurtleff, William; Aoyagi, Akiko. comps. 2013. History of soy ice cream and other non-dairy frozen desserts (1899-2013): Extensively annotated bibliography and sourcebook. Lafayette, California: Soyinfo Center. 782 p. Subject/geographical index. Printed 1 Oct. 2013. 28 cm. [1838 ref]

• ***Summary:*** This is the most comprehensive book ever published about the history of soy ice cream other non-dairy frozen desserts. It has been compiled, one record at a time over a period of 35 years, in an attempt to document the history of these interesting desserts. It is also the single most current and useful source of information on this subject.

Contents: Search engine keywords. Dedication and acknowledgments. Introduction: Brief chronology / timeline of soy ice cream and other non-dairy frozen desserts. About this book. Abbreviations used in this book. How to make best use of this digital book–Search it. Seven pages of color photos. Contains 203 photographs and illustrations. http://www.soyinfocenter.com/books/167.

Contents: Background and context: Soy ice cream is largely a United States phenomenon. This is not surprising. The USA has the world's largest per capita consumption of (dairy) ice cream. As a result of the U.S. counterculture and vegetarian movements of the 1960s and 1970s, America was home to a large number of entrepreneurs with new ideas. And the number of Americans who keep a kosher diet has long been very large. Kosher rules say that one cannot eat meat and dairy products at the same meal; hence an interest in developing non-dairy products.

Moreover, the soyfoods movement originated in the United States in the early 1970s, and by the end of this decade was steadily developing momentum. Many of the entrepreneurs who developed soy ice creams were involved with other soyfoods before they branched out into soy ice creams and other non-dairy frozen desserts.

Brief chronology of soy ice cream and other non-dairy frozen desserts.

1899–Almeda Lambert, a Seventh-day Adventist of Battle Creek, Michigan, in her *Guide for Nut Cookery* (452 p.), publishes the world's earliest known recipes for non-dairy ice creams: Ice cream (made of almond or peanut cream). Ice cream made of peanut milk. Almond ice cream.

1918 March–Arao Itano of Japan is the world's first person to conceive of making an ice cream from soy. In an article titled "Soy beans as human food, in the *Massachusetts Agricultural Experiment Station Bulletin* No. 182 he states "Vegetable butter, ice cream, oil (table use) and lard (cooking): The manufacture of these articles from soy beans further investigation."

1921 April–At a meeting of the Ways and Means Committee of the U.S. House of Representatives, George Washington Carver, a professor at the Tuskegee Institute, "astonished both the members and spectators with visible proof that he can manufacture one hundred and forty-five different foods and useful articles, including milk and cream, from peanuts." From it he has also made ice cream, which he says was the finest he ever tasted (St. Louis Globe Democrat, April 3, p. 3).

1922 Nov. 28–Lee Len Thuey, a citizen of the United States and a resident of Indianapolis, Indiana, is the world's first person to be issued a patent for a soy ice cream. Titled "Frozen confection and process of making same," he filed the application on 18 Oct. 1920. It was made from tofu, flavoring, and a sweetener.

1930 Sept.–The term "soybean ice cream" first appears in the Proceedings of the American Soybean Association (p. 3-6). At 12:00 noon a "special soybean lunch" was served at the University of Illinois South Farm, prepared by ladies of the First M.E. Church. The desserts were "soybean ice cream, and soybean ice."

1930–The world's first commercial soy ice cream is introduced by Jethro Kloss, a Seventh-day Adventist, at Takoma Park Station, Washington, DC. Named Soy Ice Cream and honey sweetened, it is sold in strawberry,

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chocolate, and vanilla flavors. He named his company the Scientific Food & Benevolent Association. By 1934 he was serving his soy ice cream at his lectures in Florida (Miami Daily News, 1934, April) and in 1935 he included a recipe for soy "Ice cream" (non-dairy; made with "4 qts. Soy bean milk") in his herbal classic Back to Eden (p. 105).

1930s early–Henry Ford's soy researchers, Robert Boyer and Edsel Ruddiman, develop an experimental soy ice cream at Greenfield Village in Detroit, Michigan. It is based on fresh tofu curds and soy protein isolates. By August 1935 Henry Ford was serving soy ice cream for dessert at VIP and press luncheons held at the Ford Engineering Laboratory in Dearborn (Literary Digest 1935 July 27; Simonds 1938; Strother 1961).

1936–Vetose Nutritional Laboratories in Shanghai, China (run by Dr. Harry W. Miller and his son, Willis, both Seventh-day Adventists), starts to sell soy ice cream in small quantities (Raymond Moore, 1961, p. 182).

1945 April 16–The term "frozen dessert" is first used in connection with soy in an article titled "Who's who and why" (about Herbert Marshall Taylor and Delsoy), by Fred L. Olmsted, published in the Detroit News (p. 4).

1945–The modern term "soy ice cream" first appears in that remarkable book *The Useful Soybean: A Plus Factor in Modern Living,* by Mildred Lager of Southern California. In her "recipe" for "Soy ice cream" (p. 250) she notes that "Soy milk may be used in place of regular milk in ice-cream recipes."

1946 March–The word "dairylike" first appears in connection with soy in an article titled "Imitation or improvement? Dairy `replacement' products widening market, seeking to equal margarine's success," by Lawrence E. Doherty in Food Business (p. 22-23, 56).

1951–Robert Rich, founder of Rich Products Corporation of Buffalo, New York, introduces Chill-Zert–a non-dairy soy ice cream (Buffalo Evening News, 1952). Rich had learned how to make soymilk from Henry Ford's researchers. The U.S. Food and Drug Administration (FDA) seized the product, claiming that it should be labeled "imitation chocolate ice cream." Rich Products fought back, in state after state, and eventually won. All subsequent makers of non-dairy ice cream owe Robert Rich a huge debt of gratitude.

1968 May–In their classic vegan cookbook, *A Good Cook–Ten Talents,* Frank and Rosalie Hurd (both Seventh-day Adventists; he is a Doctor of Chiropractic) have five recipes for non-dairy ice creams, one in which "rich soy milk" is an ingredient and four in which "soy milk powder" is an optional ingredient.

1969 Aug.–The term "non-dairy frozen dessert" first appears in an article titled "How to make parevine," by Wendell S. Arbuckle in the American Dairy Review.

1971–Heller Enterprises of New York launches Heller's Non-Dairy Frozen Dessert, perhaps the first commercially successful non-dairy frozen dessert based on isolated soy proteins.

1976 Aug.–A new wave of interest in soy ice creams begins with the introduction of Ice Bean by Farm Foods in San Rafael, California. Developed at The Farm in Summertown, Tennessee, it was soon sold nationwide.

1979 summer–Pesach Lazaroff introduces David Mintz to tofu. That summer Lazaroff spent more than 100 hours working with Mintz as a consultant.

1980 July–Jolly Licks Ice-C-Bean is introduced by Mark Brawerman of San Francisco, California. Marketed and distributed by Jolly Licks, it is sold in six flavors. Later that month the product name is changed to simply Jolly Licks and the name of the marketer-distributor is changed to Pacific Trading Co. In Nov. 1982 Pacific Trading Co. was renamed Living Lightly.

1980 Dec.–Farm Foods starts a national ad campaign for Soy Ice Bean with full-page color ads in national magazines: *New Age, Whole Foods, East West Journal,* and *Vegetarian Times.*

1981 Aug.–Tofutti is first sold at Mintz's Buffet, a kosher Jewish deli on Third Ave. in Manhattan's chic Upper East Side. Developed by David Mintz (and Pesach Lazaroff) this was the product that made soy ice creams famous and attracted huge amounts of free media publicity. Tofutti was first sold in this deli as a soft-serve non-dairy frozen dessert in 9 flavors. During the previous two months it had been sold in the deli under other names: Tofu Time Non-Dairy Frozen Dessert (the first flavor was carrot-raisin), then Tofu Time Tofu Ice Kream.

1982 June–Farm Foods presents Ice Bean at the American Booksellers Convention in Anaheim, California.

1982 July–The term "Dairy free" first appears in a leaflet titled "Tofutti: Dairy free," created by Mintz's Buffet of New York City.

1982–Tofutti begins to be sold outside Mintz's deli in New York City, including at a number of the city's most stylish eateries–such as Bloomingdale's and Zabar's.

1983 April–Rice Dream, a non-dairy frozen dessert based on amazake (cultured rice) in launched in 3 flavors in pints by Gloria Gilbert, owner of Fresh Foods, in Boulder, Colorado. The product had been developed in 1980 (non-commercially) by Barbara Svenning and Marty Roth in Santa Fe, New Mexico. They sold their business, Community Kitchens, to Gloria. Steve Demos of White Wave in Boulder made Gloria's Rice Dream. It was on the market for only 3-6 months. On 10 Feb. 1984 Robert Nissenbaum (who was already making amazake) purchased the name Rice Dream from Gloria for $2,000.

1983 June–The world's first non-dairy ice cream sandwich is launched by Farm Foods of Summertown, Tennessee. Made of Ice Bean (soy ice cream) sandwiched between two carob coated honey wafers, it comes in three flavors: Honey Vanilla, Carob, or Peanut Butter. Continued.

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3619. Shurtleff, William; Aoyagi, Akiko. comps. 2013. History of cheese, cream cheese and sour cream alternatives (with or without soy) (1896-2013): Extensively annotated bibliography and sourcebook. Includes tofu cheesecakes and cheesecake alternatives. Lafayette, California: Soyinfo Center. 567 p. Subject/geographical index. Printed 22 Oct. 2013. 28 cm. [8761 ref]

• ***Summary:*** This is the most comprehensive book ever published about the history of cheese, cream cheese and sour cream alternatives (with or without soy). It has been compiled, one record at a time over a period of 35 years, in an attempt to document the history of these interesting foods. It is also the single most current and useful source of information on this subject.

Contents: Search engine keywords. Dedication and acknowledgments. Introduction: Brief chronology / timeline of cheese, cream cheese and sour cream alternatives. The many names of soy cheese, soy cream cheese, tofu cheesecake, and soy sour cream (helpful for digital searching). About this book. Abbreviations used in this book. How to make best use of this digital book–Search it. Nine pages of color photos. Contains 104 photographs and illustrations. http://www.soyinfocenter.com/books/169.

Introduction: This industry was born and raised largely in the United States. Its history, like that of other dairy alternatives, is fairly short.

Cheese alternatives are Western-style cheeselike products that contain a significant amount of non-dairy protein, typically from soybeans, nuts, or seeds. They may or may not contain casein or caseinates (the main protein found in milk, which causes cheese to melt and stretch). No one has yet figured out how to make soy protein melt or stretch. The hard cheese alternatives that contain casein typically melt, stretch, and shred in much the same way as dairy cheeses. We distinguish cheese alternatives from imitation cheeses and cheese substitutes in which the butterfat is typically removed and replaced by vegetable oil or by no fat at all.

The world's first non-dairy cheeselike products were the various types of fermented tofu made in China (where they are called doufu-ru, fuyu, or sufu). Said to have been developed 1,400 to 1,500 years ago, they were first mentioned in documents during the Ming dynasty in China in the 1500s (Chin Kan. 1534. Messenger to Ryukyu; Li Shih-chen. 1578-1597. *Bencao Gangmu*). Since we consider fermented tofu (formerly sometimes called "soy cheese") to belong to a different category of foods from cheese alternatives (in part since the former do not melt), we discuss them in a separate book titled *History of Fermented Tofu.*

The main benefits of cheese alternatives: Dairy cheeses contain lactose (a major problem for those suffering from lactose intolerance) and are high in cholesterol and generally high in total fat, saturated fat, calories and salt. Cheese alternatives (even if they contain casein or caseinates) are free of lactose and cholesterol, low in fat, low in calories, and relatively low in salt. Those which contain casein or sodium caseinate are unacceptable to vegans (vegetarians who eat no dairy products, eggs, or other animal products), and to those keeping kosher, but those which do not are a welcome innovation. Sour cream, cheesecake, and sour cream alternatives never contain casein or caseinates.

Perhaps most important is that true cheese alternatives do not involve the exploitation of animals or the wasteful feedlot system.

The main disadvantage of cheese alternatives is their somewhat higher price than dairy cheese.

1896–Nuttose, the first commercial cheese alternative in the Western world, is invented and made by Dr. John Harvey Kellogg, the famous Seventh-day Adventist physician and vegetarian. Made largely from peanuts, it was a true non-dairy product that was also used as a meat alternative.

1910 Dec. 30–Li Yu-ying (a Chinese national, scientist and engineer, residing north of Paris, France), in British Patent No. 30,275 states: "For obtaining fermented cheese such as roquefort, parmesan [Parmesan], romatour [Rahmatour; Bavarian cream cheese], camambert [Camembert], and gruyere, suitable ferments are employed."

1911–The next commercial soy cheeses in the Western world are developed and made Li Yu-ying. At his modern soyfoods factory near Paris, Li manufactured Fermented Tofu Cheese in Gruyère, Roquefort and Camembert flavors (Scientific American Supplement. 1911. Aug. 19. p. 115).

1934 April–The idea of cream cheese alternatives is first conceived of by Seventh-day Adventist, Jethro Kloss. The Miami Daily News reported how approximately 6,000 people had recently heard him speak about dairylike foods made from soy beans at Bayfront Park. He exhibited 21 foods made from soy beans (including cream cheese, yellow cheese, and cottage cheese) and invited the public to taste them.

Between 1911 and 1970 most of the commercial cheese alternatives in the USA were made by Seventh-day Adventist (SDA) companies; although called "soy cheese" and the like, and often used them like cheese, they were actually tofu. Though we know the names of these early products, their ingredients and properties are not always clear.

1936 Dec.–Soy sour cream (*Sojasauerrahm*) is first mentioned by Glassman and Gologarskaja in Odessa, USSR.

1938 Nov.–The Wigmore Health Shop in London is now making the world's first Soya Cream Cheese.

1939–Madison Foods (SDA, Madison, Tennessee) introduces Cheze-O-Soy, based on tofu.

1942–Butler Food Co. (SDA, Cedar Lake, Michigan) launches ViM-eat Soy-Nut Cheese and in 1944 Butler's Soynut Cheese.

1948 or 1949–Casein becomes classified as a chemical

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and a non-dairy product by the U.S. government (not the Federal Trade Commission), at about the same time that price supports for dairy products begin. At the time it is used almost exclusively for industrial applications (such as adhesives and sizings) rather than in foods. Today about 80% of the casein in America is used for foods–mainly imitation cheeses, whip toppings, and other imitation dairy products, plus medical and nutritional products prescribed by doctors. The remaining 20% is used for industrial purposes–mainly adhesives and sizings.

As of 1992 there are no companies in the USA that make casein; government price supports for milk price it out of the world market. The last U.S. manufacturer, Land O'Lakes, stopped in the 1970s. All casein used today in America is imported, mainly from New Zealand, Ireland, France and the Netherlands (Petka 1992).

1951–Loma Linda Foods (SDA, Arlington, California) rolls out Vege-Chee (canned, based on tofu).

1961–Worthington Foods (SDA, Worthington, Ohio) introduces Kreem-Chee, the world's second commercial non-dairy cream cheese.

1971–The first two commercial tofu cheesecakes are created by students of macrobiotics: One by Marcea Newman is sold at her Souen restaurant in New York; the other by David Kalan (named Tofu Blueberry Pie) is sold at his Crane's Call Bakery in Boston.

1974–The first two recipes for a soy cheesecake appear. One by Marcea Newman (made with tofu) in her book *The Sweet Life: Marcea Newman's Natural Food Dessert Book;* the other by The Farm in Summertown, Tennessee (made with soy cheese, from naturally fermented/soured soymilk) in their booklet *Yay Soybeans!*

1975–The term "Tofu Cheesecake" (with a recipe) first appears in *The Book of Tofu*, by Shurtleff and Aoyagi.

1976–Howard Grundland of Sprucetree Baking Co. (near Baltimore, Maryland) introduces Tofu Creme Pie (with Blueberry or Strawberry Topping). With improvements by Louis Fellman it becomes perhaps the most delectable tofu cheesecake ever made.

1985 March–The modern category of commercial soy cheeses and cheese alternatives is born under a bad sign (Medoff 1986). It begins in America in March 1985 with the introduction of Soyarella–probably the most deceptive soyfood product ever launched in America. Although extremely popular for about a year, it was unfortunately mislabeled to deliberately deceive consumers. Though marketed as a "non-dairy soy product" which contained no casein yet melted like cheese, it was later found to contain about 15% casein.

The "source" of Soyarella (not to be confused with TofuRella) is thought to have been Nature's Best in Osseo, Michigan. But the name of the manufacturer was not given on the label–and it remains a mystery to this day. Continued. Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

3620. Shurtleff, William; Aoyagi, Akiko. comps. 2013. History of non-dairy whip topping, coffee creamer, cottage cheese, and icing/frosting (with and without soy) (1900-2013): Extensively annotated bibliography and sourcebook. Lafayette, California: Soyinfo Center. 295 p. Subject/geographical index. Printed 7 Nov. 2013. 28 cm. [528 ref]
• ***Summary:*** This is the most comprehensive book ever published about the history of non-dairy whip topping, coffee creamer, cottage cheese or icing / frosting (with or without soy). It has been compiled, one record at a time over a period of 35 years, in an attempt to document the history of these interesting foods. It is also the single most current and useful source of information on this subject.

Contents: Search engine keywords. Dedication and acknowledgments. Introduction: Brief chronology / timeline of non-dairy whip topping, coffee creamer, cottage cheese or icing / frosting. The many names of non-dairy whip topping, coffee creamer, cottage cheese or icing / frosting (helpful for digital searching). About this book. Abbreviations used in this book. How to make best use of this digital book–Search it. Five pages of color photos. Contains 80 photographs and illustrations. http://www.soyinfocenter.com/pdf/170/whip.pdf.

Brief chronology of non-dairy whip topping, coffee creamer, cottage cheese, and icing/frosting (with or without soy):

Overview: This may seem like a very narrow and perhaps uninteresting subject–but it definitely is not. For with the advent of the first commercial whip topping, created near the end of World War II by Bob Rich in Buffalo, New York, the entire category of non-dairy products was born. But it was not an easy birth.

The basic lineage of the U.S. non-dairy industry is: Henry Ford > George Washington Carver Laboratory (established by Henry Ford in Ford's Greenfield Village in Dearborn, Michigan) > Bob Rich and Rich Products, Inc. > Holton W. "Rex" Diamond and Frank S. Mitchell (both employees of Rich Products, Inc.) > 40 lawsuits against Rich's non-dairy products by individual states trying to keep these products off the market; Rich Products won all of the suits but one, and paid more than $600,000 in legal fees in the process > The U.S. non-dairy industry is born.

The first wave: The early interest in these non-dairy products took place starting in the late 1800s as urbanization was increasing, ice was still used for refrigeration, and milk–unless consumed fresh on the farm–was a source of pathogens and infectious diseases. Seventh-day Adventists, many of whom consumed no dairy products, were among the pioneers in developing non-dairy products.

Henry Ford disliked cows–and horses: As early as 1921, in an interview published in the New York Tribune (Feb. 9, p. 1, 4), Ford predicted that horses would be replaced by

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automobiles and tractors. The horse is a "twelve-hundred-pound 'hay motor' of one horse power," he quipped. The milk and meat from cows will be replaced by man-made products. Ford notes: "It is a simple matter to take the same cereals that the cows eat and make them into a milk which is superior to the natural article and much cleaner. The cow is the crudest machine in the world. Our laboratories have already demonstrated that cow's milk can be done away with and the concentration of the elements of milk can be manufactured into scientific food by machines far cleaner than cows and not subject to tuberculosis." [Note: This article was written 10 years before Ford discovered soybeans and soymilk!]

In the mid-1930s Henry Ford built a soymilk plant in Greenfield Village (Dearborn, Michigan). It was just a demonstration plant that made several hundred gallons of soymilk a day. The plant was part of the larger research effort; none of the milk was sold commercially. With the arrival of World War II, the process was taken by Bob Smith, one of the men who developed it, and used as the basis for a private plant [Delsoy Products] in Dearborn where he sold a lot of soymilk for use in whipped toppings, baked goods and frostings. It was quite successful (Source: Robert Boyer).

In about July 1942, during World War II, Henry Ford created the George Washington Carver Laboratory in Greenfield Village (Dearborn, Michigan), in honor of George Washington Carver (who shared many of Ford's beliefs, including those about cows; Carver made milk from peanuts). There Ford assembled a team of scientists to intensify his research on alternatives to dairy products–including soymilk and "soy whip topping." He served this soymilk to patients in the nearby Ford Hospital, and he offered to give the soymilk recipe to anyone who was interested. Bob Rich was one of the first to accept this offer.

Whipping cream and World War II: During World War II, whipping cream had not been available to typical American consumers. It was reserved for use by our troops and allies. The dairy industry fought in state after state to prevent "imitations" from gaining a commercial toehold. And Bob Rich fought back, refusing to give up and mounting an aggressive defense, all the while maintaining that his new products were a superior replacement!

Because cream was such a hugely important product for the dairy industry, the test product soon became Coffee Rich, a non-dairy coffee creamer–which Bob Rich sensitively referred to as a "coffee whitener" in an attempt not to step on the toes of dairy interests. But the dairy industry went to court to enforce the laws in state after state where it was illegal to sell imitation dairy products.

As recently as the 1970s it was illegal to sell imitation dairy products (such as soymilk, whip topping, or coffee creamer/whitener) in some U.S. states, especially those having a large dairy industry. But today, non-dairy products can be sold freely throughout the United States, so long as the label states clearly that it is not a dairy product.

Moreover, the market for non-dairy products is growing much faster than the market for dairy products.

1900–*In Every-day Dishes and Every-Day Work*, Ella Kellogg, a Seventh-day Adventist and wife of the famous Dr. John Harvey Kellogg, discusses her system of meatless cookery. She notes (p. 166-70) that either peanut butter or almond butter work well as an ingredient in the icing for peanut cake or in almond pound cake.

1904–In *Healthful Cookery: A Collection of Choice Recipes for Preparing Foods, with Special Reference to Health*, Ella Kellogg has the earliest known recipe for a non-dairy whipped cream–Almond Whipped Cream (p. 246). She again uses almond butter in the icing of Almond Pound Cake (p. 231).

1919 March 22–The first recipe for a non-dairy frosting (the British word for "icing"), Peanut Butter Frosting, appears in an article titled "Peanut butter in the diet," by Mrs. Escoe Ervin (Ohio Farmer, p. 490).

1934 April 8–Non-dairy "cottage cheese" is first mentioned in the Miami Daily News. Seventh-day Adventist Jethro Kloss (in Miami, Florida) exhibits 21 foods made from soy beans including soy cottage cheese.

1939–In his classic book Back to Eden, Jethro Kloss has recipes for "Soybean cottage cheese" (made from fermented soybean milk, p. 608) and Soybean cottage cheese loaf.

1941 Dec. 7–World War II begins for the United States. A War Food Administration (WFA) is created at the federal level and rationing of certain foods (especially meats, dairy products, and oils and fats) begins in late 1942. For example, in Nov. 1942 the WFA issued an order prohibiting the sale of whipping cream in America. This leads to a nationwide push to find nutritious and tasty alternatives.

1942–The first recipe for a non-dairy soy frosting, Soy Bean Chocolate Frosting (with "2 squares soy bean chocolate," p. 116) appears in a book titled Vegetarian Cookery, by Pietro Rotondi.

1943–One day the chief purchasing agent of Detroit's Ford Hospital came into Bob Rich's office at the War Food Administration in Detroit in search of additional butter ration points. Rich explained that his job was concerned solely with the diversion of non-essential civilian milk supplies into the production of dry and condensed milk for the U.S. armed forces and for Lend Lease. The purchasing agent replied that the Ford Hospital was not in need of milk. The entire supply of milk and cream was produced in Dearborn, Michigan, by Henry Ford's Carver Laboratory (named after Dr. George Washington Carver)–from soybeans! Those last words sparked what was to become a lifelong interest for Bob Rich. He had never heard of soymilk before–and like Henry Ford, he disliked cows. Rich soon visited the Carver Lab, where he met Rex Diamond.

1943 Dec. 4–An article titled "Soybean curd makes good cottage cheese substitute" appears in Science News

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Letter (p. 360).

1944 Aug.–Delsoy, a soymilk-based non-dairy whipped topping is launched by Russell-Taylor Inc. of Dearborn, Michigan. The world's earliest known whip topping, it had been developed at the Henry Ford's Carver Laboratory, largely by Bob Smith and Holton W. "Rex" Diamond. The key man behind the new business is Herbert Marshall Taylor. The company, which was renamed Delsoy Products, Inc. by July 1945, did not last long (Detroit News. 1945. April 16).

1945 Jan.–Whip Topping starts to be sold commercially by Rich Products. It was developed by Frank Mitchell of Spencer Kellogg & Sons, with financial backing from Bob Rich. In the early years, when Rich Products Corp. used soy protein as the protein source in its non-dairy products, it obtained the protein from defatted soybean flakes purchased from the Archer-Daniels-Midland Co. (ADM). In 1945, Rich Products did $28,000 worth of business, selling only non-dairy products.

1945 April–The term "Whip Topping" is first used (in a document) in a contract between Frank S. Mitchell and Robert E. Rich. The contract begins: "Whereas Mitchell has invented and owns a certain secret formula for the preparation of a substance for human food called 'Whip Topping,' and..." Continued. Address: Soyinfo Center, P.O. Box 234, Lafayette, California 94549. Phone: 925-283-2991.

3621. Dittes, Albert. 2013. Three Adventist titans: The significance of heeding or rejecting the counsel of Ellen G. White. Ringgold, Georgia: Teach Services, Inc. 103 p. No Index. 25 cm. [346 ref]

• ***Summary:*** The three titans are John Harvey Kellogg (founder and head physician of the Battle Creek Sanitarium), Arthur G. Daniells (president of the General Conference), and Percy Magan (co-founder of Madison College and later president of the College of Medical Evangelists, later renamed Loma Linda University). The story of each man's relationship with Ellen G. White is carefully documented using a treasure trove of letters penned by Percy T. Magan. Magan followed the counsel of Ellen G. White; Kellogg and Daniells did not. Edward A. Southerland, for 60 years a friend of Percy T. Magan, is also an important character in this book.

In this book we find many new insights into the personal struggles of Dr. Kellogg. Address: Author, Portland, Tennessee.

3622. *SoyaScan Notes.* 2013. Soyfoods success stories in developing countries (Overview). Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** Public sector with outside funding: 1. Sri Lanka, Thriposha program (Cereal-soy blends, started 1976. Thriposha itself started in 1973). 2. Mexico (Chihuahua) program selling PADSA, Soyaven / Soyavena, Albachisa, and Almesa (Cereal-soy blends, 1978-80). 3. Thailand, ASEAN full-fat soy flour project (1978). 4. Guatemala, Plenty Soy Dairy (Tofu, soymilk, soy ice cream, 1980)

Private sector, largely self sufficient: 1. Uganda, Africa Basic Foods (Dr. D.W. Harrison. Roasted whole soy flour, cereal soy blends, 1966-69). 2. India. Ruchi's Products (TVP, 1980).

3623. *SoyaScan Notes.* 2013. Europe's biggest international food fairs / shows and expositions: ANUGA, SIAL, Helfex, and CIBUS (Overview). Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** ANUGA and SIAL are held in Cologne (Germany) and Paris (France) respectively on alternating years in October. Each fair lasts for about 6 days, and tickets cost about $20. Food people and companies come from all over the world to exhibit and see the latest in all kinds of foods and food equipment. ANUGA is held on odd numbered years (1987, 1989, 1991, etc.) and SIAL on even numbered years (1986, 1988, 1990).

ANUGA (pronounced uh-NEW-guh) stands for *Allgemeine Nahrungs und Genussmittel Ausstellung* ("General exhibition of food and food adjuncts {stimulants / enjoyables"}). Billed as the "World Food Market–Consuma–Gastroma–Tecnica," it is held at the Cologne Messe (Exhibition Center) and is sponsored / produced by Messe und Ausstellungs Ges. mbH, P.O. Box 210760, D-5000 Cologne, West Germany. Phone: 221-8210. The first ANUGA fair was held in 1929. Statistics at ANUGA in 1986 were mind-boggling: 200,000 visitors; 5,201 companies exhibiting, from 86 different countries; and what seemed like 50 miles of exhibit space (actually 227,000 square meters).

SIAL (pronounced see-AL) stands for "Salon International de l'Alimentation," and is also called the 'International Food and Dairy Exhibition'. The first SIAL was held in Nov. 1964. The permanent address of SIAL is 39 rue de la Bienfaisance, 75008 Paris.

The 'SIAL d'Or' (also called 'Golden SIAL' or Food Oscar') gold medal awards, first presented in Oct. 1986, are given for the best new food products in each food category at the AIDA-SIAL International competition judged in Paris in June. The Oscars are a bi-annual competition between 16 nations, including Canada, Great Britain, Italy and the USA. Each country presents products in 7 food and beverage categories: Grocery, alcoholic drinks, non-alcoholic drinks, dairy, deep-frozen, meat / poultry and delicatessen. The retail trade in each country nominates the representative products. At least one soy product, So Good, a soymilk produced by Sanitarium Foods in Australia, has been awarded the Golden SIAL.

Helfex, the International Health Food Trade Exhibition and Convention, is much smaller than the two fairs mentioned above and its scope is much more limited. Held biannually in the spring in the United Kingdom on even numbered years, it is sponsored by the British Health Food

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Manufacturers Association and the British Health Food Trade Association. The Foreign Agricultural Service (FAS) of the USDA typically has a large pavilion featuring booths representing U.S. health / natural food manufacturers. In 1988 at least 8,000 visitors came to Helfex from 25 countries. About 600 exhibitors were there and the U.S. Pavilion was the biggest booth at the entire show. About 88% of the natural foods products at Helfex '88 came from the U.K. The first Helfex was held on 17-19 March 1974 at the Bloomsbury Centre Hotel in London. The tenth Helfex was held on 8-9 April 1990 in Birmingham, England; over 200 companies exhibited in Birmingham. For more information contact the British Health Food Trade Assoc., Angel Court, High Street, Godalming, Surrey, GU7 1DT, England. Phone: 0483-426450. Fax: 0483-426921.

CIBUS (pronounced CHI-bus), the biggest food fair in Italy, is held in Parma in about May each year.

3624. *SoyaScan Notes.* 2013. The best libraries and centers in the USA for doing research on Seventh-day Adventist work with health reform, vegetarianism, and soyfoods (Overview). Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** 1. The large collection of Ellen G. White's unpublished manuscripts and letters housed in the vault of the Ellen G. White Estate, Inc., in Washington, DC. Many of these documents are restricted and may be used only with the permission of the trustees. Fortunately, however, some of the following collections have duplicate copies of these documents.

2. The C. Burton Clark Collection, acquired in the 1970s and now housed in the Heritage Room, Vernier-Radcliffe Library (Loma Linda University Library / Del E. Webb Memorial Library), Loma Linda, California. This collection is especially strong in medical and health-related documents. Jim Nix, an archivist at the library until early 1993, knows the collection intimately. In addition the Heritage room has microfilmed all the Kellogg papers at the University of Michigan (Ann Arbor) and Michigan State University (East Lansing). The Vernier-Radcliffe Library is an excellent source of information. The library is willing to try to answer written questions as long as they do not require too much research time; the staff is limited. Visiting researchers are welcome to visit the library for as much as 3 weeks. There are hotels within 2 miles.

3. The Adventist Heritage Room in the James White Library at Andrews University, Berrien Springs, Michigan. Has a good collection on the history and development of the SDA church. 4. Michigan Historical Collections, University of Michigan, Ann Arbor, Michigan; contain the John Harvey Kellogg Papers. 5. Michigan State University Archives and Historical Collections, East Lansing, Michigan; Contains the John Harvey Kellogg Collection.

6. The Ballenger-Mote Papers, a private collection in the possession of Mr. Donald F. Mote, Riverside, California; especially rich in documents relating to dissident Seventh-day Adventists. 7. As of 1991 the Adventist church has a functioning archives department at their new General Conference headquarters in Silver Spring, Maryland. This denominational collection is pretty much open to the public. It is in the same building as the Ellen G. White Estate with its vault.

8. The best early periodicals are *Advent Review and Sabbath Herald, Health Reformer,* and *Good Health.*

3625. *SoyaScan Notes.* 2013. The visionary work of Henry Ford and his researchers with soyfoods–then and now: Popularized the use of soybeans as foods in America (Overview). Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** Before Henry Ford began his pioneering work with soybeans in the early 1930s, most American consumers and farmers thought their only use was as feed for animals. Ford and his researchers and chefs played a major role in developing a remarkable variety of tasty and nutritious American-style foods from soybeans, and in publicizing these foods and their health benefits nationwide.

Prior to 1934 (according to records in the SoyaScan database) only about 188 commercial soyfood products had been introduced in America. Of these, 78 had been launched in the Hawaiian Islands, so only 110 had been introduced on the American mainland. Of these 110, at least 46 were made by Asian-American companies primarily for Asian-Americans (such as Chinese-Americans, Japanese-Americans, etc.). Thus only 70 products were made by Caucasian-American companies, and, of these, 27 products were made by Seventh-day Adventist companies and sold mostly to other Seventh-day Adventists. In short, between 1766-1767 (When Samuel Bowen launched America's first two commercial soy products–Soy-based Vermicelli Noodles and Bowen's Patent Soy [Sauce]) and 1934, only 43 commercial soy products had been introduced by Caucasian-American companies, not including Seventh-day Adventists.

Henry Ford's ideas about introducing American-style soyfoods took their first clear form on August 13, 1934, when he presented an all-soy gala dinner banquet for the American media at the immensely popular Ford Exhibit in the Century of Progress World's Fair in Chicago, Illinois. Note first that he chose a world-class event to introduce the little-known Cinderella crop. Now listen to the names of dishes on the menu: "Tomato juice seasoned with soy bean sauce. Salted soy beans. Celery stuffed with soy bean cheese [tofu]. Puree of soy bean. Soy bean cracker. Soy bean croquettes with tomato sauce. Buttered green soy beans. Pineapple ring with soy bean cheese [tofu] and soy bean dressing. Soy bean bread with soy bean relish. Soy bean biscuit with soy bean butter. Apple pie (soy bean crust). Cocoa with soy bean milk. Soy bean coffee. Assorted soy bean cookies. Soy bean cakes. Assorted soy bean candy."

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This menu represented a fresh, new vision of soyfoods in America! Note the creative use of tofu in a pineapple ring and as a celery stuffing, and of soymilk with cocoa.

But this was just the beginning. By Aug. 1935 Ford was serving soy ice cream for dessert at VIP and press luncheons held at the Ford Engineering Laboratory. In about 1936 Ford's Edison Institute published a 19-page booklet titled "Recipes for Soy Bean Foods," which contained 58 innovative American-style preparations including: Soy bran bread. Cinnamon buns. Muffins (for diabetic patients). Waffles (with soy flour). Scalloped green soy beans. Omelette (with tofu). Salad soy bean sprouts. Gingerbread. Honey soy bean ice box cookies. Macaroons. Coconut balls (with chopped soynuts). Lady fingers. Soy bean chocolate bars. Apple sauce cake. Doughnuts. Soy bean custard (with soymilk).

In 1938, when Ford researcher Bob Smith invented a new and greatly improved type of soymilk (based on soy protein isolates), Ford and his researchers focused on developing new dairylike products based on this soymilk, including a non-dairy whipped cream, and an improved soy ice cream. The soymilk itself was widely served at Ford institutions in and around Dearborn, Michigan.

Indeed a strong case can be made that Henry Ford and his coworkers played the leading pioneer role in developing American-style soyfoods and introducing them in a big way to America. In so doing, they set the stage for the rapid rise of soyfoods consumption among typical Americans that began in a small way during World War II, and in a big way starting in the 1970s and continuing into the 1990s.

3626. *SoyaScan Notes.* 2013. The visionary work of Henry Ford and his researchers with soyfoods–then and now: Invented meat alternatives based on spun soy protein fibers (Overview). Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** One day in 1942 at the Ford plant, Robert Boyer, while sampling fibers of his "soybean wool," realized that these same soy protein fibers, if made tender by omitting the protein denaturation, hardening, and insolubilization, could be used as a basic ingredient in making meatlike textured soy protein foods. He had already developed an analog for the protein fibers that grow on the *outside* of a sheep (wool), why not develop an analog for those on the *inside*, a meatless meat or meat analog? In 1949 Boyer left his job at The Drackett Co.

He devoted all his energy to developing food uses of edible products made from spun soy isolates. His first patent for edible soy fibers was applied for in 1949; It was rewritten and applied for in May 1952 and issued in June 1954 (No. 2,682,466). In 1956 Worthington Foods purchased a license from Boyer and began to develop the world's first meatlike meatless products based on these soy protein fibers. In Oct. 1962 Ralston Purina Co. began to produce the world's first food-grade spun soy protein fibers–named Textured Edi Pro–at its plant in Louisville, Kentucky. Worthington Foods purchased these fibers and used them as key ingredients in a new generation of meatlike products. The first of these were on the market by 1963, with names like Worthington Soyameat–Fried Chicken Style, Chicken Style Roll, Prosage (like pork sausage), White-Chik, Soya Meat–Beef Like; The Soyameat–Fried Chicken style was canned whereas the other products were frozen. The flavor and texture were better than any meatlike product ever made in America. Initially these products were sold in health food stores but in late 1965 they started to be sold in supermarkets. In 1966 Worthington started to spin its own soy fibers, and the next year Ralston Purina stopped spinning.

Other companies also licensed the rights to spin soy protein fibers from Robert Boyer. In December 1965 General Mills introduced its Bontrae line of spun soy protein fiber products, starting with Bac-O*s (imitation bacon bits). By May 1966 General Mills was making analogs for ground beef, diced ham, and diced poultry–all from spun soy protein fibers. So successful were these products (they also won several prizes) that in June 1969 General Mills broke ground for a multi-million dollar state-of-the-art fiber spinning plant at Cedar Rapids, Iowa. It began making Bontrae products in later 1970. By 1975 Cortaulds in England had launched Kesp, based on spun soy protein.

Today about 15-20% of Worthington's meat alternatives contain spun soy protein fibers. These products have a retail value of about $8.8 million. Worthington's Morningstar Farms line of meat alternatives, some of which contain spun soy protein fibers, is sold in the frozen foods section of about 95% of all supermarkets and grocery stores in America.

3627. *SoyaScan Notes.* 2013. Chronology of soymilk worldwide–1500 A.D. to 1949. Part I. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** 1500 A.D.–The earliest known written reference to soymilk appears in China in a poem titled "Ode to Tofu," written by Su Ping

1665–Soymilk is first mentioned by a Westerner, Domingo Fernández de Navarrete, in his book *A Collection of Voyages and Travels.* Navarrete served as a Dominican missionary in China.

1790–Soymilk is mentioned by Juan de Loureiro in his book *The Flora of Cochin China.* Loureiro was a Portuguese Jesuit missionary who lived in what is now Vietnam. Note that each of these and many other early references mentioned soymilk as part of the process for making tofu.

1866–Soymilk is first discussed as a drink in its own right by the Frenchman Paul Champion, who traveled in China. In a French-language article he stated that the Chinese had taken their cups to tofu shops to get hot soymilk, which they drank for breakfast.

1896 June–Soymilk is first referred to in the United

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States by Henry Trimble in the *American Journal of Pharmacy.*

1909–The first soy-based infant formulas and soymilk made from full-fat soy flour are developed in the United States by John Ruhräh, a pediatrician. He reports his results in the *Archives of Pediatrics* (July 1909).

1910–The world's first soy dairy, named *Caséo-Sojaïne*, is founded by Li Yu-ying, a Chinese citizen, biologist and engineer, at 46-48 Rue Denis Papin, Les Vallées, Colombes (near Asnières), a few miles northwest of Paris. In December 1910 he applies for the world's first soymilk patents (British Patents No. 30,275 and 30,351). The first patent is titled "Vegetable milk and its derivatives." He is issued both patents in Feb. 1912.

1913 June 13–Li Yu-ying is issued the first U.S. soymilk patent (No. 1,064,841), titled "Method of manufacturing products from soja." He filed the application on 10 Oct. 1911.

1917–Soymilk is being produced commercially in the U.S. by J.A. Chard Soy Products in New York City.

1929 Nov.–T.A. Van Gundy, founder of La Sierra Industries in Arlington, California, launches La Sierra Soy Milk, and becomes the first Seventh-day Adventist worldwide to make soymilk commercially. The product was canned and the beany flavor removed by live steam processing.

1931–Madison Foods of Madison, Tennessee, introduces Madison Soy Milk–the world's earliest known soymilk to be fortified with calcium and the second commercial soymilk product made by Seventh-day Adventists in the USA. Madison Foods is a company run by students and faculty within Madison College, a pioneering work/study school.

1936 Jan.–Dr. Harry W. Miller and his son, Willis, start making Vetose Soya Milk, sold in natural or chocolate flavors in sterilized half pint or quart bottles at their Vetose Nutritional Laboratories in Shanghai, China. Dr. Miller is a Seventh-day Adventist physician, a student of Dr. John Harvey Kellogg, and a medical missionary living in China. The world's first "soy dairy," this company also made soy ice cream and Acidophilus Vetose (a cultured soya milk)–both launched in Jan. 1936. But Japan was invading China. Within months after the soy-milk business began booming, a Japanese bomb blew up the soy dairy.

1936 June–Sobee, the world's earliest known branded soy-based infant formula, is launched by the American Soya Products Corp. of Evansville, Indiana.

1939 autumn–Dr. Harry W. Miller, forced by the war in China to return to the USA, starts making soymilk at Mt. Vernon, Ohio, in a large brick plant which he and coworkers built from the ground up. The first two products were canned liquid soymilk (made in a pressure cooker and fortified with vitamins and minerals) and malted soymilk (Soy-A-Malt). Pressure from the powerful U.S. dairy industry and the USDA convinced Miller not to call his product 'soymilk,' so he latinized the name to Soya Lac. This term was first used in late 1939 for Miller's first American soymilk.

1940 March–K.S. Lo, founder and managing director of the Hong Kong Soya Bean Products Co. Ltd. starts to make soymilk in Hong Kong. His product, originally named Vita Milk (*Wai-ta-nai* in Chinese) was fortified with calcium, cod-liver oil, and vitamins, and sold in milk bottles, primarily as a nutritious, affordable beverage for refugees. In June 1940 the product was renamed Sunspot, and in 1953 it was renamed Vitasoy. Continued.

3628. *SoyaScan Notes.* 2013. Chronology of soymilk worldwide–1950 to present. Part II. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** 1950's–Soymilk enters the modern era as it begins to be marketed in bottles like soft drinks, largely due to work by K.S. Lo of Vitasoy in Hong Kong and Yeo Hiap Seng in Singapore.

1957–Japan's first commercial soymilk, sold in bottles, named *Tônyû*, is introduced by the Ueda Tofu Shop in Hachioji, Tokyo. Dr. Harry Miller was the inspiration for and helped to establish the shop.

1960s–In Japan, soymilk slowly increases in popularity. New manufacturers are: Nihon Tanpaku Kogyo (1962). College Health Foods (later renamed San-iku Foods) in Chiba prefecture with its Soyalac (1969, also inspired and aided by Dr. Harry Miller). Luppy Tanpaku (House Shokuhin) in Saitama prefecture with its Luppy soymilk (1969).

1965–ProSobee, the world's earliest known non-dairy infant formula based on soy protein isolates, is launched by Mead Johnson & Co. of Evansville, Indiana.

1966–The enzyme lipoxygenase is discovered by scientists at Cornell University [Ithaca, New York] to be responsible for the "beany" flavor in soymilk. A process is developed which could be used to help eliminate this flavor.

1967–Soymilk begins to be packaged aseptically in Tetra Pak cartons. This allows it to be sold without refrigeration for six months or more. The first such product was Beanvit, made by Yeo Hiap Seng Ltd. in Singapore and packaged in a disposable tetrahedron-shaped container.

1970's and 1980's–Soymilk becomes a popular beverage throughout Asia, spreading to Europe, Australia and the United States.

1979–Hong Kong Soya Bean Products Co. Ltd. starts to export Vitasoy, packed in Tetra Brik cartons, to selected countries throughout the world. By the early 1980s exports were going to over 20 countries, both developed and developing. Exports to the USA began in 1980. 1980 Jan.–DE-VAU-GE Gesundkostwerk, a Seventh-day Adventist food company near Hamburg, Germany, launches GranoVita Soja Drink in 500 ml Tetra Brik cartons; this soymilk product is made by N.V. Vandemoortele (one of Europe's largest oilseed crushers, founded in 1934) in Izegem, Belgium.

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1980 June–N.V. Alpro is founded by Vandemoortele to take over production of this soymilk. Inspired and headed by Philippe Vandemoortele, Alpro purchased the land on which it was located from Vandemoortele, and became an independent manufacturer. Alpro quickly became Europe's leading producer of soymilk, making private-label brands for scores of companies.

1983 July–Edensoy brand soymilk is launched by Eden Foods of Clinton, Michigan. Imported from Japan (where it is made by Marusan-Ai Co.), it is sold in plain and carob flavors in stand-up foil retort pouches.

1984 Feb.–The first comprehensive study of the soymilk market in the U.S. is published by Soyfoods Center of Lafayette, California. It estimates that total soymilk consumption in the U.S. in 1983 (not including soy-based infant formulas) was 2.68 million gallons (26% of this was imported), and total production of soy-based infant formulas was 32 million gallons.

1984 Aug.–Westsoy Natural brand soymilk is launched by Westbrae Natural Foods of Emeryville, California. Imported from Japan (where it is made by San-Iku Foods), it is sold in one flavor in standup foil retort pouches.

1984 Oct.–Westbrae Natural Malted's, a thick soymilk resembling a milk shake, are launched in many flavors by Westbrae Natural Foods, imported from Japan.

1986 Nov.–Edensoy starts to be made in America by American Soy Products (ASP) at a large, modern plant in Saline, Michigan, and sold in Tetra Brik aseptic cartons. ASP is a joint venture of 4 Japanese companies and Eden Foods.

1988 Nov.–Pacific Foods of Oregon, launches its first soymilk product, Naturally Northwest Soy Beverage [Plain], in a 1-quart Tetra Brik Aseptic carton. The company's new factory is in Tualatin, Oregon.

1990 April–WestSoy Lite, America's first "lite" soymilk, with a low fat content, is introduced in plain, vanilla, and cocoa flavors by Westbrae Natural Foods. Made by adding water to regular soymilk, the product is less expensive to make, but also contains less nutrients.

1990 June–Alpro opens a new soymilk plant at Wevelgem, Belgium. Costing about US$15 million and having a capacity of 45 million liters a year, it is reputed to be the largest in the world. Alpro now makes about 70% of the soymilk in Europe.

1990 Sept. 24–The company name is changed to Vitasoy International Holdings Ltd. from Hong Kong Soya Bean Products Co. Ltd.

1991–There are at least 35 processors or marketers of soymilk in the U.S., increasing production to approximately 9.8 million gallons. Consumption is estimated to be growing at between 15 and 20% per year since 1984.

1993–More than 200 scientific journal articles about soymilk have been published in English, and at least 80 English-language patents on soymilk have been issued between 1912 and 1993.

1994 Jan.–Soy-Um, a low-priced and attractively packaged soymilk, is launched by J&G Inc., a product developer and distributor in Chicago, Illinois. The product is made in Oregon by Pacific Foods.

1995–A market study is published, estimating that $108 million of soymilk was sold in the U.S. in 1994. This equates to approximately 13.5 gallons of soymilk. By 1995 sales are projected to have risen to over $130 million, or approximately 16.3 million gallons.

3629. *SoyaScan Notes.* 2013. Chronology of tofu worldwide–965 A.D. to 1929. Part I. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** 965 A.D.–Tofu is first mentioned in China in a document, the *Qing Yilu* (Wade-Giles: *Ch'ing I Lu*) [Anecdotes, Simple and Exotic], by Tao Ku. It states: "In the daily market were several catties of doufu. People of the region called doufu the 'vice mayor's mutton.'" It goes on to tell the story of a vice mayor named Jishu, who was so poor that he couldn't afford to buy mutton. Instead he bought a few pieces of tofu every day and ate them as a side dish with rice. Soon people in the area came to call tofu the "vice mayor's mutton." The story implies that tofu was widely consumed in China in those days and that it was less expensive than mutton.

1183 A.D.–Tofu is first mentioned in Japan in the diary of Hiroshige NAKAOMI, a Shinto priest of the shrine at Nara; the tofu was used as an offering at the shrine's altar.

1489–The word "tofu" is first written in Japan with the characters used today.

1603–The word "tofu" is first mentioned in a European-language (Portuguese) document, *Vocabulario da lingoa de Iapam...* [*Vocabulary of the language of Japan*], the earliest dictionary of the Japanese language compiled by Europeans (Jesuits living in Nagasaki, Japan). Tofu is referred to as *Cabe, Tôfu,* or *Taufu.*

1613–The word tofu is first referred to (though indirectly) for the second time by a Westerner, Captain John Saris, in the log of his trip to Japan. He wrote "Of Cheese [probably tofu] they haue plentie. Butter they make none, neither will they eate any Milke, because they hold it to bee as bloud [blood], nor tame beasts." This is the earliest English-language document that mentions tofu in connection with Japan.

1665–Tofu is first mentioned specifically by a Westerner, Domingo Fernández de Navarrete, in his book *A Collection of Voyages and Travels.* Navarrete, who served as a Dominican missionary in China, wrote: "Before I proceed to the next chapter, because I forgot it in the first book, I will here briefly mention the most usual, common and cheap sort of food all *China* abounds in, and which all men in that empire eat, from the emperor to the meanest *Chinese,* the emperor and great men as a dainty, the common sort as necessary sustenance. It is call'd *teu fu,* that is, paste of

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kidney-beans. I did not see how they made it. They draw the milk out of the kidney-beans, and turning it, make great cakes of it like cheeses, as big as a large sieve, and five or six fingers thick. All the mass is as white as the very snow, to look to nothing can be finer. It is eaten raw, but generally boil'd and dressed with herbs, fish, and other things. Alone it is insipid, but very good so dressed and excellent fry'd in butter. They have it also dry'd and smok'd, and mix'd with caraway-seeds, which is best of all. It is incredible what vast quantities of it are consum'd in *China*, and very hard to conceive there should be such abundance of kidney-beans. That *Chinese* who has *teu fu*, herbs and rice, needs no other sustenance to work; and I think there is no body but has it, because they may have a pound (which is above twenty ounces) of it any where for a half-penny. It is a great help in case of want, and is good for carriage. It has one good quality, which is, that it causes the different airs and seasons, which in that vast region vary much, to make no alteration in the body, and therefore they that travel from one province to another make use of it. *Teu fu* is one of the most remarkable things in *China*, there are many will leave pullets for it. If I am not deceiv'd, the *Chineses* of *Manila* [Philippines] make it, but no *European* eats it, which is perhaps because they have not tasted it, no more than they do fritters fry'd in oil of *Ajonjoli* ([sesame seed] a very small seed they have in *Spain* and *India*, which we have not) which the *Chineses* make in that city and is an extraordinary dainty."

1704–Friar Domingo Navarrete's book is published in English. This is the earliest English-language document that mentions tofu in connection with China.

1770 Jan. 3–James Flint in Capringe writes Benjamin Franklin in London (in response to an inquiry from Franklin) a detailed description of how the "Chinese convert Callivances into Towfu" (soybeans into tofu).

1770 Jan. 11–The earliest document seen in which an American mentions tofu is a letter written by the famous Benjamin Franklin (who was in London) to John Bartram in Philadelphia, Pennsylvania. He sent Bartram some soybeans (which he called "Chinese caravances") and with them he sent "Father Navarrete's account of the universal use of a cheese made of them in China, which so excited my curiosity, that I caused enquiry to be made of Mr. [James] Flint, who lived many years there, in what manner the cheese was made, and I send you his answer. I have since learned that some runnings of salt (I suppose runnet) is put into water, when the meal is in it, to turn it to curds."

1821–The second earliest reference seen to tofu in America, and the first to be published in the USA, appeared when A.F.M. Willich of Philadelphia mentioned it in *The Domestic Encyclopedia.* Speaking of soybeans (which he called "the seeds of the Chinese plant *Dolichos soja"*), he wrote: These *seeds* are used in China and Japan as food; they are made into a kind of jelly or curd, which is esteemed very nutritious, and which is rendered palatable by seasonings of different kinds."

1870 Dec.–The term "Bean curd" is first used by Emil V. Bretschneider, writing in English in the *Chinese Recorder and Missionary Journal* (Foochow, p. 173). He said: "Bean-curd is one of the most important articles of food in China." Then he gave an accurate description of how it was made.

1880–Tofu is first made in Europe by Paillieux, in France, for the Society for Acclimatization (but not on a commercial scale).

1878–The earliest tofu company in the USA, Wo Sing & Co., is in business at 708½ Dupont St. in San Francisco, making both fermented and regular tofu.

1895–Hirata & Co. in Sacramento, California, the earliest known Japanese-American company in the USA, starts making tofu.

1896 June–Tofu first appears in print in an American scientific journal (*American Journal of Pharmacy*), in an article by Henry Trimble, a pharmacist, titled "Recent Literature on the Soja Bean."

1906–Quong Hop & Co., the oldest existing tofu maker in America today, starts making tofu in San Francisco, California.

1910–Europe's first commercial soyfoods manufacturer, named *Caséo-Sojaïne*, is founded by Li Yu-ying, a Chinese citizen, biologist and engineer, at 46-48 Rue Denis Papin, Les Vallées, Colombes (near Asnières), a few miles northwest of Paris. By May 1911 he was making and selling tofu, and by August 1911 he had added smoked tofu, pressed tofu sheets, fermented tofu cheese (in Gruyere, Roquefort, and Camembert flavors), and soymilk.

1923–The two oldest existing Japanese-American tofu companies (House Foods & Yamauchi Inc. of Los Angeles and Aala Tofu Co. of Honolulu) are founded in Hawaii. They both began as H. Iwanaga Daufu at 1031 Aala St. in Honolulu. In 1926 the company was renamed Shoshiro Kanehori Tofu, and in 1937 Haruko Uyeda Tofu, still at the same address. In about 1939 the company was purchased by Mr. and Mrs. Shokin Yamauchi, who later renamed it Aala Tofu Co. Their son, Shoan Yamauchi, made tofu at the family company until 1946, when he went to Los Angeles, purchased the Hinode Tofu Co., and began making tofu there in 1947. After becoming Matsuda-Hinode Tofu Co. in 1963, the company was renamed House Foods & Yamauchi Inc. in 1983.

1929 Nov.–T.A. Van Gundy, a Seventh-day Adventist and founder of La Sierra Industries in Arlington, California (near Riverside), becomes the first Westerner to make tofu commercially when he introduces La Sierra Soya Cheese. This tofu was canned and pimiento was added to prevent graying after canning. Continued.

3630. *SoyaScan Notes.* 2013. Chronology of tofu worldwide–1930 to present. Part II. Compiled by William Shurtleff of Soyinfo Center.

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• ***Summary:*** 1930s early–Azumaya Tofu Seizo-sho (later renamed Azumaya Co.) starts making tofu, *yaki-dofu* (grilled tofu), and *ganmodoki* (fried tofu patties) in San Francisco at 1636 Post St. between Buchanan and Laguna streets. The company is owned by Mr. Teranishi, who may have started it as early as the early 1920s. In Feb. 1937 it was sold to George and Jack Mizono, and their mother and father (Saichi Mizono).

1932, Dec.–Madison Foods, part of Madison College in Madison, Tennessee, was making Soy Cheese, then by 1939 they had launched Cheze-O-Soy (seasoned tofu), and by 1940 they were making a canned tofu bologna named Yum.

1934–By this year Loma Linda Food Co. (Adventist) in Loma Linda, California, was making Loma Linda Vege-Cheese (canned tofu with pimiento).

1942 Sept.–Dr. Harry Miller, a Seventh-day Adventist doctor who had worked for many years in China as a medical missionary, begins making Miller's Soya Cheese (tofu) at Mt. Vernon, Ohio.

1944 Sept.–Butler Food Co. in Cedar Lake, Michigan, introduces Butler's Soynut Cheese. Note that the first five Caucasian-run tofu companies in the Western World were all founded and run by Seventh-day Adventists. Note also that each of these five Seventh-day Adventist tofu products used the word "cheese" in the name and that each was canned. 1957 Aug.–Shizuka Hayashi, head of the Japanese-American Soybean Institute in Tokyo, publishes (in *Soybean Digest*) the earliest English-language statistics on tofu in Japan. "There are approximately 45,000 tofu manufacturers in Japan, of which about 23,000 are members of the Tofu Association. There is one large factory in Osaka, the largest in Japan, which consumes 2 tons of soybeans a day." In 1957 Japan will use somewhere between 160,000 and 308,000 tons of soybeans to make tofu.

1958–The world's first packaged tofu is sold in Los Angeles, California, by Matsuda Hinode Tofu Co. Mr. Shoan Yamauchi, owner, conceived of the idea of putting individual cakes of tofu each in a plastic bag with water, sealing the bag with a heat sealer, placing the bag in a stiff paper deli carton with a wire handle, then folding over the top. The process was labor intensive. This happened at about the same time that a letter from journalist George Yoshinaga had led the city to pass a new regulation requiring tofu to be packaged in individual containers.

1958–Tofu is first sold in a U.S. supermarket–Boy's Market supermarket chain (which had about 12 stores at the time) in Los Angeles. The tofu was sold in individual packages (see above) and made by Matsuda Hinode Tofu Co., whose owner, Mr. Shoan Yamauchi was responsible for this major innovation, and for seeing the mainstream potential of tofu.

1965–The Library of Congress establishes the subject heading "Tofu" as the official name for that food in cataloging books for libraries across America. However, in the mid-1970's disputes arose there about the proper form of romanization of that term. The dispute was resolved by the decision to use the common English term "Bean Curd" instead.

1966–Tofu is first packaged in plastic trays/tubs, the type so widely used today. Again, Mr. Yamauchi conceived of the idea. He went to the Sealright Company in Los Angeles that made Sealright trays and asked them to make a waterproof plastic tray for his tofu. Mr. Yamauchi created three specific early innovations in tray packaging: (1) A very deep tray, holding 26-28 ounces; (2) A method for heat sealing a plastic film to the flange of a tray which had cold water flooding over the flange; (3) High-speed sealing machines to pack and seal the tofu in his plant.

1975 March–Alec Evans, owner of first of the new breed of Caucasian-run tofu shops, starts to make "Tofu" in Corvallis, Oregon. His Welcome Home Bakery and Tofu Shop is the sixth Caucasian-run tofu company in America.

1975 Dec.–*The Book of Tofu,* by Shurtleff and Aoyagi, is published by Autumn Press. This book, which had sold about 550,000 copies by 1997, played a major role in introducing tofu to the Western World.

1977 Aug.–Takai Tofu & Soymilk Equipment Co. publishes its first English-language equipment catalog, which helps many American and European tofu shops to get started.

1977 Sept.–White Wave, owned by Steve Demos, starts making tofu at 1738 Pearl St., in Boulder, Colorado.

1977–Morinaga Milk Industry Co., Ltd. in Japan introduces the world's first aseptically packaged tofu in a Tetra Brik carton. It is named "Morinaga brand Tofu. Soybean Curd." In 1978 the name was changed to "Morinaga brand Ever-Fresh Silken Tofu."

1977–Swan Foods Corporation, owned by Robert Brooks and Mary Pung, starts making "Tofu–Organic" at The Soybeanery, 5758½ Bird Rd., Miami, Florida. This is the first tofu in the Western World labeled "Organic." Swan Foods is also the first American company to make a wide variety of soyfoods, and the first to open a soy deli–which had a take-out menu.

1978 April–Nasoya Foods, owned by John Paino and Bob Bergwall, starts making Nasoya Organic Tofu (water pack) at Mechanic Street Exit, Leominster, Massachusetts.

1978 Dec.–*The Book of Tofu,* by Shurtleff and Aoyagi, is published by Ballantine Books in a mass-market edition that retails for $2.95.

1979 July–*Tofu & Soymilk Production,* by Shurtleff and Aoyagi, is published by Soyfoods Center in California. This book is used to start hundreds of tofu manufacturing companies throughout the Western World and in some Third World countries.

1982 April–There are 242 tofu manufacturers in the Western World, including 173 in the United States.

1985 June–The Library of Congress decides to change its subject heading from "Bean curd" back to "Tofu." This,

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perhaps more than any other single thing, makes the word tofu "official."

1983–House Food Industrial Co., Ltd. of Japan purchases 50% ownership in Yamauchi Enterprises (formerly Hinode Tofu Co., owned by Mr. Shoan Yamauchi) in Los Angeles. The company is renamed House Foods & Yamauchi, Inc.

1989 Dec.–Sixty-five books (each more than 48 pages long) on tofu have been published in the Western World since 1970. Each one has the word "tofu" or its equivalent in the title. Forty of these books were published in the United States, 6 in Canada, 5 in Switzerland, 5 in Japan (but written in English for sale primarily outside of Japan), 3 in West Germany, 3 in France (but 2 of these were published simultaneously and primarily in Quebec, Canada), 2 in England, and 1 each in Italy, Sweden, and Brazil.

1990 Aug. 3–Hong Kong Soya Bean Products Co. Ltd. (makers of Vitasoy) acquires Nasoya Foods of Leominster, Massachusetts.

1993 June–Vitasoy purchases Azumaya Inc. (America's largest tofu manufacturer, and the low-price leader) in California for an estimated $4-$5 million.

1993–House Foods Corp. of Japan purchases the remaining 50% of House Foods & Yamauchi, Inc. from Mr. Shoan Yamauchi. The new company is renamed House Foods American Corporation.

1997 March 12–House Foods America Corporation holds the opening ceremony for America's largest tofu factory, in Garden Grove, California; the company closes its tofu plant in central Los Angeles.

3631. *SoyaScan Notes.* 2013. Chronology of green vegetable soybeans and edamamé (incl. maodou) worldwide–A.D. 1275 to 1939. Part I. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** First a few basic definitions: (1) "Vegetable-type soybeans" refers to certain large-seeded soybean varieties developed for use as a vegetable crop. (2) "Green vegetable soybeans" refers to vegetable-type soybeans harvested at the green stage for use as a vegetable. The beans can be cooked and served in or out of the pods. (3) "Edamamé" is the Japanese term for green vegetable soybeans cooked and served in the pods, often as a snack–like peanuts in the shell. The green beans are popped out of the pods directly into the mouth of the person eating them.

Before 7th century BC–The *Shijing* (*Book of Odes*) is China's earliest classic and the earliest document seen worldwide that mentions the soybean, which it calls *shu.* It does not mention green vegetable soybeans. Zheng Xuan (Wade-Giles: Chêng Hsüan), the most important commentator of the 2nd century AD, confirms that *shu* refers to the soybean and that soybean leaves, called *huo,* can be pickled–presumably when green, then presumably eaten.

AD 100–The term *Sheng dadou* [Chinese characters: raw / fresh + large + bean] appears in both *Shennong bencao jing* (*Classical pharmacopoeia of Shen Nung*) and later (about AD 450-500) in the *Mingyi bielu* (*A critical record of famous doctors. A materia medica*). However a careful analysis of the context by a Chinese scholar who is an expert in the history of Chinese foods and of soybeans (H.T. Huang, PhD) indicates that this term refers to raw soybeans rather than fresh green soybeans. Therefore, surprisingly, we know of no early reference to green vegetable soybeans in China.

1275 July 26–The word "edamamé" first appears in Japan when the well-known Buddhist saint Nichiren Shônin writes a note thanking a parishioner for the edamamé he left at the temple. In: In: *Nichiren Shonin Gosho Zenshu* (*The Collected Writings of Saint Nichiren*).

1406–The Ming dynasty famine herbal titled *Jihuang bencao,* by Zhu Xiao is the earliest Chinese document seen that describes: (1) eating the tender leaves of soybean seedlings (*doumiao*)*;* (2) eating the whole pods of young soybeans, (3) eating green vegetable soybeans; (4) or grinding the green beans for use with flour. The last three uses are recommended for times of famine only.

1620–*Maodou* (Chinese characters: hairy + bean) are first mentioned in the *Runan pushi* [*An account of the vegetable gardens at Runan*], by Zhou Wenhua. *"Maodou* has green, hairy pods. It is also called *qingdou* ('green beans).' It is mentioned in the *Bencao* [materia medica] literature [we are not told which book], which states that it has a sweet flavor, is neutral, and nontoxic. It can be used medicinally mainly to 'kill bad / evil chi.' It stops bodily pain, eliminates water [reduces edema], dispels heat in the stomach, reduces bad blood, and is an antidote to poisonous drugs... Boil the beans in the pods until done, then remove the beans from the pods and eat them. The flavor will be sweet and fresh. Or you can remove the beans from the pods before cooking, then cook the beans in lightly salted water. Or the beans can be placed on a metal screen over a charcoal fire to roast or dry them... They can be served with tea or fruits, as a snack." This is also the earliest document seen that gives medicinal uses for green vegetable soybeans.

1855 April 12–T.V. Peticolas of Mount Carmel, Ohio, is the first Westerner to mention green vegetable soybeans. In an article on soybeans in the *Country Gentleman* (p. 12) he writes: "They are inconvenient to use green, being so difficult to hull."

1856–Only a year later, at least two Americans have apparently figured out how to shell them with ease, and to enjoy them. Thomas Maslin of Virginia writes: "They are fine for table use, either green or dry..." Abram Weaver of Bloomfield, Iowa, praises them in the *Report of the Commissioner of Patents, Agriculture* (p. 256-57). "I had some of them cooked, while green, at their largest size, and found them delicious."

1890 Dec.–The first large-seeded vegetable-type soybean variety arrives in America. Named Edamame, it was

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introduced from Japan by Charles C. Georgeson, who had been a professor of agriculture in Japan. Other early large-seeded varieties included Easycook (introduced in 1894 from Shandong Province, China) and Hahto (1915, from Wakamatsu, Japan).

1915 Jan.–William J. Morse (of USDA's Office of Forage Crop Investigations), the man most responsible for introducing green vegetable soybeans and vegetable type soybeans to the United States, mentions them for the first time in a USDA special publication titled "Soy beans in the cotton belt": "The green bean when three-fourths to full grown has been found to compare favorably with the butter or Lima bean."

1917–During World War I, USDA researchers conduct cooking tests on many soybean varieties in search of an inexpensive source of protein that lacks the typical unpleasant beany flavor and will cook quickly. Only two such varieties are found–Hahto and Easy Cook; both are large-seeded. Some progress is made in convincing Americans to eat these varieties–but only as whole dry soybeans.

1923 March–*The Soybean*, by Charles V. Piper and William J. Morse, published by McGraw-Hill (329 p.), is the first major book written about this plant in the United States. It contains a long section titled "Immature or Green Soybeans" (p. 221-22) that includes a description, nutritional analysis, recipe ideas. It also includes the first photograph in a U.S. publication of green vegetable soybeans, showing many cooked, open pods on a white plate. The caption reads: "Seeds and pods of the Hahto variety of soybeans, the seeds being especially valuable as a green vegetable." Between 1915 and 1929 Morse mentioned green vegetable soybeans in more than 20 publications.

1929-32–During the USDA sponsored Dorsett-Morse Expedition to East Asia, William J. Morse (now a soybean expert) and P.H. Dorsett were surprised to learn that: (1) Soybeans are widely "used as a green vegetable" or as "green vegetable beans," served in the pods. (2) The seeds for these soybean varieties are sold by horticultural seed companies, are listed with the garden beans in their seed catalogs, and are larger and sweeter than regular soybeans. On 24 April 1929, while in Tokyo, Dorsett made the first edamamé purchases, seven varieties with "Edamame" in the varietal name from T. Sakata & Co. They eventually collected more than 100 varieties of large-seeded vegetable-type soybeans (other suppliers included Yamato Seed Co. in Tokyo) and had them grown for a year at USDA's Arlington Farm in Virginia. (3) Edamamé account for less than 1% (actually 0.8%) of all the soybeans used in Japan. (4) Green soybeans are salt-pickled in the pod in Hokkaido, the northernmost main island. (5) The soybean seeds are planted at intervals of several weeks in the same field, then, when ready, the plants are uprooted and sold in bundles. On 15 July 1929 Morse wrote: "Saw many plantings of soybeans from just coming up to ready to pull for market. It is extremely interesting to note how they are planted for succession. We saw many plantings of beans ready for pulling for market with rows interplanted as seedlings or transplants just coming into bloom." Near Tokyo, three crops of vegetable soybeans are grown during the season–early, medium and late season. The 8,000-page typewritten report is interspersed with many photos of green vegetable soybeans at various stages from the farm to the table.

1929 July 20–A letter from William Morse in Tokyo is read before the attendees at the Tenth Annual Meeting of the American Soybean Association in Guelph, Ontario, Canada, and later published in the *Proceedings of the American Soybean Assoc.* (Vol. 2., p. 50-52). It is the first publication in which Morse describes his many new discoveries concerning vegetable soybeans.

1931 Jan. 3–Morse writes in his log in Tokyo: "At one of the department stores, in the vegetable market section, we found small bundles of soybean sprouts and also some bundles of green vegetable soybean plants." This is the earliest document seen that contains the term "green vegetable soybean(s)."

1934–Vegetable-type soybean varieties that yielded well at Arlington Farm are sent to many state agricultural experiment stations for further trials. In addition, extensive investigations of the cooking qualities and composition of the green shelled and dry edible soybeans are conducted at various departments of home economics. The green beans are found to be one of the most nutritious vegetables ever analyzed.

1935 Dec.–Dr. John Harvey Kellogg of Battle Creek, Michigan, is the first person on record to can green vegetable soybeans, or to consider harvesting them mechanically. In a letter dated Dec. 9 he writes to William Morse at USDA. "We have been doing some experimenting this year with growing and canning shell soy beans. I am having a couple of cans sent you so you can see what our product is like. We think it is very fine. The few thousand cans we put up went off like hot cakes... One of the difficulties in the way of the soy shell bean business is the expense of picking from the vines and shelling the pods. Do you know of any machinery that is used for either of these purposes?"

1935 Aug.–Rokusun, the first vegetable-type soybean is mentioned in a U.S. publication–followed in March 1936 by Bansei, and Chusei. These soybeans are now publicly available in the U.S.

1936 April–A 2-page leaflet titled "Soybean introductions named in January 1936" is published by the USDA, Bureau of Plant Industry, Div. of Forage Crops and Diseases. It is the first official publication in which varietal names are given to the new vegetable type soybeans introduced by Dorsett and Morse from Japan and tested at USDA's Arlington Farm. Twenty varieties suitable for use as a "green vegetable" are listed, together with their seed

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color, days to maturity, and region of the USA best suited for production. This is the earliest English-language document seen that mentions the following vegetable-type varieties–all with Japanese names: Chame, Fuji, Goku, Hakote, Higan, Hiro, Hokkaido, Jogun, Kanro (in USA), Kura, Nanda, Osaya, Sato, Shiro, Sousei, Suru, Toku, and Waseda. It is also the earliest document seen in which soybeans are classified by use as "green vegetable" or "dry edible bean" or both.

1936 July–Green Shelled Soy Beans (canned) are first sold in the USA by Dr. John Harvey Kellogg's Battle Creek Food Co. in Battle Creek, Michigan. This is the earliest known commercial green vegetable soybean product in the USA.

1936 Oct. 30–A long article titled "Canning green soy beans," by Corinne Loskowske, appears in the *Herald,* published by the students of Henry Ford's Edison Institute. They have mechanized the canning process. They canned and sold 500 cans in 1935 and 1,000 cans in 1936. Similar canned green soybean products soon follow: 1939–Mother's Choice Brand Green Vegetable Soybeans (Canned), by the Fox Valley Canning Co. of Hortonville, Wisconsin.

1939 March–"Eighteen Varieties of Edible Soybeans," by J.W. Lloyd and W.L. Burlison is published at the *University of Illinois Agricultural Experiment Station, Bulletin* No. 453. The 58-page report is the most detailed and interesting to date, being based in part on comments received from 1935 to 1938 from more than 685 home gardeners, market gardeners, and canners in Illinois. The university offered to send free seed and growing instructions to any gardener who would test the green soybeans and submit frank comments in writing. The new way of growing and eating soybeans got rave reviews. For example: "Fresh soybeans had a satisfying flavor... They were delicious... We like them better than peas or beans... I served soybeans to all guests this summer and most everyone liked them... Everyone who tried them said they were splendid... We have never eaten beans as good... The beans were delicious to eat and were universally liked by my family and guests. In fact it took persuasion to leave any for seed."

During the 1930s William Morse and the University of Illinois took the lead in popularizing both green-vegetable soybeans and vegetable-type soybeans in the USA. Continued. Address: Lafayette, California. Phone: 925-283-2991.

3632. *SoyaScan Notes.* 2013. Chronology of green vegetable soybeans and edamamé (incl. maodou) worldwide–1940 to 2001. Part II. Compiled by William Shurtleff of Soyinfo Center.

• ***Summary:*** Continued: 1940 Dec.–Vegetable-type soybeans (Bansei and Jogun) are first offered for sale in the USA, by Strayer Seed Farms of Hudson, Iowa (Ad in *Soybean Digest,* p. 12).

1941-1945–During World War II, green vegetable soybeans are grown in Victory Gardens in the Midwest and at least six new canned products are introduced. By 1945 some 44 large-seeded vegetable-type soybean varieties have been named and released in the USA.

1944 Sept.–The first English-language advertisement for green vegetable soybeans appears in *Soybean Digest* (p. 61). Titled "Meet the vegetable cow," it is a full-page, black-and-white ad run by Dr. Harry Miller of the International Nutrition Laboratory, and a former student of Dr. John Harvey Kellogg. It shows the head of a cow made entirely from soybeans. The horns, forelock, parts surrounding the eyes, nostrils, and mouth are made of soybeans in their [green] pods.

1946–The Japanese government (*Norinsho* or Ministry of Agriculture, Forestry, and Fisheries) starts keeping statistics on domestic edamame area, production (weight including pods), and yield. In 1946 these figures were about 7,000 ha and 30,000 metric tons (tonnes). Yields peaked in 1969 at almost 10 tonnes/ha. In about 1982 both area (14,000 ha) and production (122,000 tonnes) peaked, then began a very slow decline as imports rose dramatically (Lumpkin & Konovsky 1991, p. 123).

1950s early–Varietal improvement of vegetable-type soybeans starts in Taiwan.

In the United States, the period from 1935 to 1947 saw the first wave of interest in green vegetable soybeans and vegetable-type soybeans. But after World War II, interest almost disappeared. A second and even larger wave of interest began in the late 1960s and has continued to grow.

1966 July–Mr. Noritoshi Kanai, President of Mutual Trading Co. (MTC, Los Angeles, California), imports the first edamame and the first frozen edamame to the United States. They are imported from Japan and sold under Mutual's Miyako brand to local restaurants. Initially only two cases of 30 x 10.5 oz bags/case are imported as a trial. The company next imports frozen edamame on 1 July 1970; during 1970 MTC imports 70 cases from Japan and again sells them to restaurants (Personal communication with Atsuko Kanai of MTC, June 2001).

1972–Taiwan exports 472 tonnes of green vegetable soybeans, yet total area and production of these soybeans are negligible. By 1989 that figure had jumped 77-fold to 34,821 tonnes, with Japan buying 99% of the exports in frozen form. Japan's total consumption that year was about 160,000 tonnes–by far the largest in the world.

1980 Sept.–The sushi "boom" in California begins when the very popular TV miniseries and epic drama *Shogun,* based on the novel by James Clavell, created a great interest in traditional Japanese culture among Americans. With the sushi, they drank Japanese beer and saké. In America, beer is usually served with peanuts. But, true to tradition, Japanese restaurants served edamamé, free of charge, with the beer. Atsuko Kanai of Mutual Trading Co. recalls: "It was a mass

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sampling of the edamamé without people having ordered it! So the success of sushi, Japanese beers, Japanese saké, and edamamé, are all tied in together."

1982 April–Researchers at AVRDC in Taiwan [Shanmugasundaram et al.] publish their first two investigations on "immature green soybeans."

1982–Rodale Research Center in Kutztown, Pennsylvania, publishes as excellent 25-page report titled "Fresh green soybeans: Analysis of field performance and sensory qualities," based on two years of research [May 1980 to Dec. 1981]. It identifies eight varieties found to be exceptional in both field and sensory qualities and gives the address of the seed company from which each can be purchased. Rodale Press (publisher of *Organic Gardening & Farming* magazine) also did pioneering work in introducing green vegetable soybeans to Americans, with at least 23 articles or books on the subject between 1962 and the present.

1985–AVRDC in Taiwan starts research on mechanical harvesting of vegetable soybeans.

1987–Reiko Weston, a Japanese woman who owns Fuji-Ya, a Japanese restaurant in Minneapolis, Minnesota, decides she wants to try growing edamame in Minnesota rather than paying more for an imported product. The same business savvy that earned her the titles of U.S. and Minnesota 'Businesswoman of the Year' sparked research in 1987 by Jim Lambert of the Jameson-Williams Company into the viability of raising this new crop. Unfortunately, Weston died shortly before the first year's crop was harvested." Jameson-Williams steadily increases their production of edamame from 7,000 pounds in 1988 to the 350,000 pounds in 1990. In Nov. 1990 Lambert describes Jameson-Williams as "the only commercial producer of edamame in the U.S." He has experimented with hundreds of edamame varieties.

1991 June–Yamato Flight Kitchen of Burlingame, California, starts serving edamame on Japan Airlines flights from San Francisco to Japan.

1991 Aug. 5–An article in the *St. Paul Pioneer Press* (Minnesota) states that Jameson-Williams' company name has been changed to Minnesota Edamame Co. The Nishimoto Trading Co. of Tokyo likes the taste and look of these green soybeans so much that they decided last week to place more than $100,000 worth of their bagging and packaging equipment in the Minnesota Edamame plant. In September, Minnesota Edamame will start using Nishimoto's equipment to ship 1 million pounds of partially processed immature soybeans to Japan. That's a big jump from the 7,000 pounds shipped in 1988. Minnesota Edamame has contracts to supply Nishimoto with 3 million pounds of the soybeans from the 1992 Minnesota crop, 6 million pounds in 1993 and 15 million pounds by 1996. Unfortunately, quality problems in Minnesota prevented these rosy predictions from coming true.

1991 June–Yamato Flight Kitchen starts serving edamame on United Airlines flights from San Francisco to Japan.

1991 April 29 to May 2–The first international workshop / symposium on green vegetable soybeans is held at Kenting, Taiwan. The excellent proceedings, titled *Vegetable Soybean: Research Needs for Production and Quality Improvement,* were edited by S. Shanmugasundaram of the Asian Vegetable Research and Development Center (AVRDC) in Shanhua, Tainan, Taiwan. These are the first English-language proceedings and the first English-language book devoted to green vegetable soybeans. AVRDC has become a leader in research on green vegetable soybeans in Asia–in part because this crop has now become Taiwan's leading agricultural export, with most of the sales going to Japan.

In these proceedings is an especially interesting paper titled "A critical analysis of vegetable soybean production, demand, and research in Japan," by Thomas A. Lumpkin and John Konovsky of Washington state; it contains extensive new information on the history of edamame plus a superb bibliography of 187 references. In about 1986 Lumpkin founded the East Asian Crop Development Program at Washington State University (WSU), in Pullman, Washington. In the summer of 1989 he first grew a trial crop of edamame (20 varieties); this was reported in a 1989 publication. By 1991 he is full-time head of a team of 12 people in this program, all of whom except himself are working part-time, developing East Asian plants–including edamamé–to be grown in Washington state. Lumpkin is interested (among other things) in documenting the history of various East Asian crops. He has collected about 400 varieties of edamamé; the germplasm is maintained at Pullman.

1994 April–The first bibliography devoted to green vegetable soybeans, with 489 references, compiled by Shurtleff and Aoyagi, is published by Soyfoods Center in Lafayette, California.

1994 May 27–Tak Kimura ("Mr. Edamamé"), a food broker from Concord, California, introduces Eda Mame, America's first refrigerated, ready-to-eat edamamé–first sold at Whole Foods Market in Berkeley, California. 8 ounces of precooked, lightly salted green soybeans are packed in a plastic tray with a clear film lid by Yamato Flight Kitchen of Burlingame, California. In Oct. 1994 the first local supermarket to carry Tak's product was Mollie Stone's, an upscale supermarket with six stores in the San Francisco Bay Area. In Feb. 1998 Safeway supermarkets in Northern California become the first large supermarket chain to carry this product, again with Tak Kimura as the broker. By Jan. 2000 this edamamé product was served on United Airlines. Wholesale sales grew from $18,000 in 1994 to more than $540,000 in 1998. In 1998 the market for edamame in the USA (especially on the West Coast) exploded!

1994 July 1–Minnesota Edamame is renamed SunRich Foods. Their 1994 edamame crop is a record 750,000 lb–but

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still not enough to meet demand.

Other important "firsts" among commercial products after 1990: 1995 Jan.–Sweet Beans (SunRich Inc., Minnesota). 1996 Jan.–Freshlike Baby Broccoli Blend (with 40% green soybeans; Dean Foods Vegetable Co.). 1996 Dec.–Frozen Organic Sweet Beans (Sno Pac Foods, Inc.). 1997 June–Birds Eye Baby Broccoli Blend (Dean Foods Vegetable Co.). 1997 Sept.–Trader Joe's Edamame (frozen in the pods, imported from China by Seaside Farms). 1998 Feb.–Cold Mountain Eda-Mame (Mutual Trading Co., Inc., frozen). 1999 April–Edamame–Blanched Soybeans (retail or foodservice; Seapoint Farms, formerly Seaside Farms). 1999 Aug.–Melissa's Soybeans (Edamame) (Melissa's World Variety Produce). 1999 Oct.–Edamamé (Frieda's, Inc.). 2000 May–Freeze-Dried Green Soybeans in Salsa, Indian Spice, and Sweet & Sour flavors (Eat Your Heart Out, New York; the first freeze-dried and the first flavored or spicy edamame).

In 1999 at least 8 new edamame products were introduced, followed by 9 in the year 2000, and 5 more by May 2001.

2001–The U.S. company with the most innovative and extensive line of edamame products, the best and most colorful graphics (labels and ads), and the most extensive advertising, is Seapoint Farms of Huntington Beach, California, founded in 1997 by soyfoods pioneer Kevin Cross.

2001 July–At least 70% of the green vegetable soybeans consumed in the USA are imported, mainly from China or Taiwan. The two main U.S. growers are SunRich in Minnesota and Cascadian Farms in Washington state. Address: Lafayette, California. Phone: 925-283-2991.

3633. *SoyaScan Questions.* 2013. Questions about the life and work of Theodore A. Van Gundy and his children. Compiled by William Shurtleff of Soyinfo Center.
• ***Summary:*** What year did La Sierra Industries start making foods (about 1927 or 1928)? What was the company's address in Arlington, California? Try to get some land or tax records concerning the business. What Seventh-day Adventist church did the Van Gundy family attend?–Probably La Sierra University Church. Does that church have any records concerning the family? What is the true story about Ransom Brown and Loma Linda's soymilk? When (between April 1934 and Sept. 1935) did La Sierra Industries move to Ontario, California? What was their physical address in Ontario?

Do any of the following have information: La Sierra University? Riverside Public Library? Riverside Chamber of Commerce–Small Business Section? Riverside County tax office? Riverside Historical Society?

3634. *SoyaScan Questions.* 2013. Questions about the life and work of Mildred Lager. Compiled by William Shurtleff of Soyinfo Center.
• ***Summary:*** We need a better relative chronology and absolute chronology of Mildred's life, both before and after she arrived in California; after she started the House of Better Living in Oct. 1933, our knowledge of her life and work is quite good.

Was her middle name Mathilda?

When did Mildred enter college and when did she graduate? From when to when, and at what schools did she teach in Wisconsin and Michigan? Why did she change schools?

When did she start work at The Family Shoe Store in Superior? Why? When did she become a co-owner of the store?

When did Mildred arrive in California? Why did she come to California? Was she influenced primarily by her doctor or by Frank McCoy? If by McCoy, how? By reading his column in her local newspaper or otherwise? Did she first meet McCoy in Michigan or in California.

Where did Mildred first live in California and what did she do to earn a living?

How and when did she meet Frank McCoy? What was the name of his institute? When did Mildred enter that institute, what did she learn, and how long did she stay? How and when did McCoy get his column in the Superior newspaper? When did Mildred start to travel around the United States teaching about and demonstrating foods? How often and for how long did she so this?

When and how did Mildred first meet Gilbert Thayer? Was he in Indiana or southern California at the time? What did he do to help her and her work?

Add to history chapter the 3 key dates related to her two radio programs.

Try to get a marriage certificate for her marriage to Ed Jones. Exactly when in 1946 were they married? Who was present?

The California Marriage Index states that Martha D. Van Gundy married Edwin S. Jones on 7 Aug. 1960 in Riverside, California. He was age 69 (born about 1891) and she was age 57 (born about 1903); Dorothea's formal first name was Martha.

Try to get a death certificate for Mildred Lager.

3635. *VegeScan Notes.* 2013. Major trends and events influencing the rise and fall of the second wave of vegetarianism in the Western world from the mid-1800s until World War I (Overview). Compiled by William Shurtleff of Soyfoods Center.
• ***Summary:*** The first wave of vegetarianism in the Western world began in Greece starting with Pythagoras (about 530 B.C.) and lasted until about 150 A.D. For almost 700 years many of the most prominent Greek philosophers believed that it was morally wrong to eat animals. The idea then died out for almost 1,700 years.

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The second wave of vegetarianism began in England in the mid-1800s. Why did it begin at that time? And why in England? The 19th century in the West was one characterized by the widespread idea of progress, social reform movements, and a utopian vision of the future for human beings and their *perfectibility.* Starting in about 1840, the idea that continual growth and improvement was the usual state of human and natural life resulted from the cumulative scientific, technological, economic, and political changes of the previous eras.

The steady rise of scientific thought and the rapid growth in population gave birth to the industrial revolution, which began in England in about 1760, and radically altered Europeans' view of the world and the future. It had seemed that the amount of food and natural resources available to the rapidly growing number of human beings was steadily shrinking. Between 1700 and 1800 the population of Europe grew by 50% or 60 million people, from 120 to 180 million. Then from 1800 to 1900 it grew by another 47% or 125 million people, from 180 million to 265 million. Population pressure during the 1800s caused millions of Europeans to emigrate, largely to America. Yet population pressure also stimulated invention, starting with the mechanical revolution. As it began, pessimism about people's material future gradually began to be replaced by optimism. The sowing drill (invented in 1701) began the mechanization of agriculture. The Newcomen steam pump (1712) aided coal mining and coal fueled the revolutionary new steam engines patented by James Watt in 1769. Coke smelting and rapid strides in metallurgy produced cheap, sturdy iron for machinery by the 1730s. The flying shuttle (1733) and spinning jenny (1764) replaced hand labor in England's large new cotton textile factories.

By the early 1800s a mighty revolution had come upon England and parts of western Europe. Now it began to gather steam. In 1804 the locomotive was invented by Trevithick, and by 1825 this was translated into a steam-powered train on tracks by Stephenson. Railroad tracks began to spread; over 150,000 miles had been laid worldwide by 1880. In 1807 the steamboat was invented by Fulton, and in 1819 the S.S. Savannah became the first steamship to cross the Atlantic ocean. The telegraph, perfected in 1844 by Samuel Morse, connected the Old and New worlds by transatlantic cable in 1866, quickening the pace of international commerce and politics. In 1851 London hosted the first "World's Fair"–the Great Exhibition at the Crystal Palace, whose theme was universal prosperity. In 1856 the invention of the Bessemer furnace made possible the mass production of steel.

The field of agricultural chemistry, started in about 1840 by Justus von Liebig in Germany, revolutionized agricultural productivity in Europe. The use of mineral or chemical fertilizers steadily increased the yield per acre, allowing agricultural production to grow faster than population. It led to a better diet for most people, but it also allowed ill-nourished livestock, which had formerly been kept as a source of manure, to be increasingly slaughtered for meat.

The chemical revolution began with the discovery by Kekulé in 1865 of the structure of the first organic compound–the benzene ring. Chemists in Germany and England began to create the first synthetic dyes such as mauve (from analine), alizarin, and synthetic indigo.

The rapid growth of population, and the attendant industrial revolution and the revolution in agricultural chemistry, brought many human beings to a new and higher plane of material well being. This led to a social revolution–which also started in England. This decentralized and populist revolution consisted of various reform movements whose goal was to create a more humane and just society for humans and animals alike. In England successive reform bills (1832, 1867, 1884) gave political representation to the new industrial towns, and extended the right to vote to the middle and lower classes, and to Catholics, Dissenters, and Jews. But the largest and most successful reform movement was the antislavery movement that aimed to abolish slavery.

1833–Slavery is prohibited by law in the British Empire; in 1838 all slaves in the British West Indies were emancipated. The growing success of the anti-slavery movement gave encouragement to other reformers working to prohibit or limit the sale of alcoholic beverages (temperance movement in the UK, prohibition in the USA), secure basic rights for women (including the right to vote), prevent cruelty to animals, reform prisons and improved women's clothing, etc.

1847 Sept.–The Vegetarian Society, world's first such society and an offshoot of the Bible-Christian Church (founded 1809), is established at Ramsgate, Kent, in southeast England. James Simpson is elected the first president.

1849 Sept.–*The Vegetarian,* the world's first vegetarian periodical, begins publication in Manchester, England, by The Vegetarian Society (UK). The title is changed in 1860 to *The Vegetarian Messenger.*

1850 May–The American Vegetarian Society is founded in New York. Leaders are William Metcalfe (pastor of the Bible-Christian Church, founded 1817 in Philadelphia), Dr. William Alcott, and Sylvester Graham.

1850 Nov. Publication of America's first vegetarian periodical, the *American Vegetarian and Health Journal* begins in Philadelphia under the direction of William Metcalfe.

1859–*The Origin of the Species* by Charles Darwin is published. This landmark book presents Darwin's theories of evolution and natural selection, which come to form the basis of the modern life sciences. It also discusses Survival of the Fittest (a term previously often used by Mr. Herbert Spencer) and the Struggle for Existence. Upon publication, it provokes great controversy; by casting doubt on the historical accuracy

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of the biblical account of creation, it caused many believers to question their faith in Christianity. At the same time, it provides a great stimulus to the nascent vegetarian and animal rights movements by showing scientifically the kinship of all creatures. Darwin, a British naturalist, lived 1809-1882.

1863 Jan. 1–President Abraham Lincoln issues the Emancipation Proclamation freeing "all slaves in areas still in rebellion." The biggest victory yet for American social reformers.

1863 June 5–Ellen G. White has a vision near Otsego, Michigan which officially starts Seventh-day Adventists practicing and advocating health reform, including vegetarianism.

1865 April–The U.S. Civil War ends, with the anti-slavery forces victorious.

1865 Dec. 18–The Thirteenth Amendment to the U.S. constitution takes effect, abolishing slavery in the United States.

1871–*The Descent of Man* by Charles Darwin is published. Darwin's second major work, it deals specifically with Darwin's theory of the evolution of the species *Homo sapiens* from monkeys.

1905–Japan defeats mighty Russia in the Russo-Japanese War, thus winning for itself full status as a world power, and becoming the first non-white or non-Western nation to defeat a white or Western nation. Vegetarians in England publicize the fact that the Japanese do not eat meat, that their soldiers eat brown rice, and that part of the victory was based on the Japanese ability to make long marches carrying heavy loads. British vegetarians then challenge the German army to similar long marches with heavy loads–and the vegetarians win, attracting great crowds and attention! The German military command takes note of a new way to save money and increase soldier endurance.

To summarize, as scientific thought led to the technological advances of industrialism, the humility of human beings in the face of the mysteries of the world gave way to a greater self confidence in the 17th and 18th centuries. By 1900 a state of supreme self assurance had begun to reign, along with materialism, rationalism, nationalism, urbanization, liberalism, and socialism. Then in 1914 the new world view and world order was shattered by the catastrophe of World War I, which also drained off most of the energy from reform movements. The dark, beastly side of human beings reappeared. In 1915 Germany starts using poison gas. In 1916, through the use of modern artillery and improved machine guns, 750,000 are slaughtered in bloody trench warfare at Verdun in France, as the French repel a large-scale German offensive. In Jan. 1917 Germany begins unrestricted submarine warfare against neutrals. The first aerial bombing of cities, initially from German Zeppelins and then from bombers (Luftwaffe, etc.), raises the horrors of war to new heights. As human beings increasingly behave in ways formerly considered inhumane, the positive connotation of the word "humane" comes to be tarnished. This prolonged outburst of violence puts a final end to idealistic notions of human perfectibility and progress that were the backbone of the reform spirit that brought vegetarianism to popularity before 1914. Now a new ethic begins to emerge out of the ashes of the European war–articulated so eloquently by Albert Schweitzer in 1923 as "reverence for life" in his book *Ethics and Civilization.*

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An asterisk in a listing of number of references [23* ref] means that most of these references are not about soybeans or soyfoods.

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American Soybean Association (ASA)–Soybean Council of America (June 1956-1969). Replaced by American Soybean Institute (Est. 11 July 1969). 1294, 2612

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Child Haven International (Headquarters: Maxville, Ontario, Canada). Founded by Fred and Bonnie Cappuccino in 1985. Homes in India, Bangladesh, Nepal and Tibet. 3589, 3590, 3616, 3617

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Chufa / Chufas (*Cyperus esculentus*). Also Called Earth Almond, Tiger Nuts/Tigernut, Nut Grass, Ground Almond, Hognut, Earth Nut, Rush Nut, Zulu Nut. French: Voandzou, Souchet. German: Erdmandel. Italian: Cipero comestible. 197, 198, 206, 704

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Cowherd, William (Rev.) (1763-1816). Vegetarian Pioneer in England. 1249, 1329, 1367, 1504, 2358, 2807, 2891, 3437

Cowpea or Black-Eyed Pea. *Vigna unguiculata* (L.) Walp. Formerly spelled Cow Pea. Also called Blackeye Pea, Pea Bean, Yardlong Cowpea. Chinese: Jiangdou. Previous scientific names: *Vigna sinensis* (L.) (1890s-1970s), *Vigna catjang* (1898-1920), *Vigna Katiang* (1889). 1415

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Curds Made from Soymilk (Soft, Unpressed Tofu) as an End Product or Food Ingredient. In Japanese: Oboro. In Chinese: Daufu-fa, Doufu-hua, Doufu-hwa, Douhua, Toufu-hwa, Tow-foo-fah ("Bean Curd Flowers") or Doufu-nao, Fu-nao ("Bean Curd Brains"). In Filipino: Taho (Often Served as a Dessert with a Sugary Syrup). 1813, 1814, 2014, 2033, 2317, 2393, 2401, 2947, 3321, 3436, 3443, 3536, 3563, 3606, 3610

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Dairy alternatives (soy based). *See* Coffee Creamer / Whitener or Cream Alternative, Sour Cream Alternatives, Soy Cheese–Fermented, Soy Cheese–Non-Fermented, Soy Cheese or Cheese Alternatives, Soy Cheesecake or Cream Pie, Soy Cream Cheese, Soy Pudding, Custard, Parfait, or Mousse, Soy Yogurt, Soymilk, Soymilk, Fermented, Soymilk, Fermented–Soy Kefir, Tofu (Soy Cheese), Whip Topping

Dairylike Non-dairy Soy-based Products, Other (Cottage Cheese, and Icing). See also Non-dairy Whip Topping, Soy Ice Cream, Soy Yogurt, Soy Cheese, Cream Cheese or Cheesecakes, Coffee Creamer / Whitener or Cream, and Sour Cream. 220, 283, 669, 670, 797, 908, 1014, 1251, 1498, 1711, 1774, 1813, 1814, 1838, 2033, 2180, 2536, 2920, 3109, 3110, 3151, 3563, 3620

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Daitokuji Fermented Black Soybeans–from Japan. In Japan called Daitokuji Natto or Daitoku-ji Natto. 1813, 3563

Davis, Adelle (1904-1974). Author and Health Foods Advocate. 1493, 1668, 1852, 1870, 1943, 2358, 2457, 2817, 3503, 3538

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Delsoy Products, Inc. (Dearborn, Michigan). Soy Protein Company. Renamed Whitehouse Products in 1963. Purchased by C.J. Christoff & Sons in 1983 (Lowell, Michigan). Renamed Chadalee Farms, Inc. 3618

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Erewhon (Boston, Massachusetts). Founded April 1966 by Aveline and Michio Kushi in Boston. Merged with U.S. Mills in 1986. 1616, 1807, 1863, 2068, 2079, 2670, 3022, 3056, 3441, 3572, 3592

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Haberlandt, Friedrich J. (1826-1878, *Hochschule fuer Bodenkultur*, Vienna, Austria). 533, 607

Hackleman, Jay C. (1888-1970, Extension Agronomist, Univ. of Illinois). 999, 1582, 2281

Hain Celestial Group, Inc. (Uniondale, New York). Hain Food Group, Inc. before 30 May 2000. Hain Pure Food Co. since Nov. 1931. Founded in Oct. 1926 by Harold Hain as Hain Health Foods. 742, 853, 864, 940, 1273, 1628, 1780, 1807, 1870, 2028, 2068, 2091, 2098, 2110, 2132, 2402, 2457, 3186, 3302, 3328, 3339, 3343, 3394, 3395, 3396, 3405, 3412, 3421, 3434, 3441, 3477, 3480, 3490, 3506, 3508, 3530, 3531, 3538, 3544, 3571, 3628

Haldane Foods Group Ltd. (Newport Pagnell, Buckinghamshire, England). Including Regular Tofu Co., Realeat Foods, Direct Foods, Haldane Foods, Vegetarian Feasts, Vegetarian Cuisine, Genice, Unisoy, and Granose Foods Ltd. Acquired by The Hain Celestial Group in fall 2006. 715, 956, 957, 1135, 1282, 1330, 1347, 1385, 1403, 1468, 1499, 1500, 1607, 1757, 1758, 1800, 1841, 1879, 1880, 1896, 1898, 1939, 1945, 1961, 1962, 1963, 1980, 1981, 1982, 1983, 2046, 2047, 2083, 2092, 2133, 2134, 2135, 2136, 2137, 2164, 2167, 2173, 2265, 2430, 2434, 2438, 2508, 2514, 2516, 2517, 2526, 2531, 2542, 2543, 2611, 2624, 2666, 2667, 2668, 2681, 2729, 2758, 2759, 2760, 2783, 2805, 2815, 2824, 2829, 2855, 2861, 2864, 2878, 2881, 2882, 2883, 2886, 2887, 2892, 2894, 2900, 2904, 2914, 2915, 2921, 2924, 2939, 2940, 2941, 2954, 2955, 2956, 2962, 2964, 2978, 2984, 2995, 2997, 3005, 3013, 3014, 3034, 3051, 3092, 3100, 3101, 3108, 3109, 3110, 3111, 3113, 3115, 3226, 3412, 3550

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Hamanatto Fermented Black Soybeans–from Japan. In Japan called Hamanatto or (formerly) Hamananatto. 1175, 1813, 3563

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Hartz (Jacob) Seed Co. (Stuttgart, Arkansas). Founded by Jacob Hartz, Sr. (1888-1963) in 1942. Continued by Jake Hartz, Jr. (1920-). Acquired by Monsanto in April 1983. Headquarters at Des

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Moines, Iowa, since Jan. 1998. 684, 685, 1166, 1475, 1582, 2281, 2824

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(New York City, and New Jersey), Kahan & Lessin Co. (California), Landstrom Co. (California)

Health foods manufacturers. *See* Baker, Bill, Cubbison, Sophie, El Molino Mills, Health Food Company of New York, Ralston Health Food Co.

Health foods movement in Los Angeles, California. *See* Baker, Bill, Bragg, Paul Chappius, Carque, Otto, Cubbison, Sophie, Davis, Adelle, El Molino Mills, Hauser, Gayelord, Irvine, Clarke

Health foods movement in Midwest and East Coasto of USA. *See* Kellogg, John Harvey as a Health Food Pioneer

Heart disease and diet. *See* Cardiovascular Disease, Especially Heart Disease and Stroke

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Henselwerk GmbH (Magstadt near Stuttgart, Germany). 1356, 1944, 2470, 2870, 2993, 3304

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Homemade ketchup (Western style). *See* Ketchup (Western Style, without Soy), Homemade–How to Make at Home or on a Laboratory Scale, by Hand

Homemade peanut butter. *See* Peanut Butter, Homemade–How to Make at Home or on a Laboratory Scale, by Hand

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Job's Tears (*Coix lachryma-jobi;* formerly *Coix lacryma*). Called *Hatomugi* or *Hato Mugi* in Japanese, and Adlay in South Asia. Sometimes mistakenly called "Pearl Barley" (Since it is unrelated to Barley). 3105

Johnson Family of Stryker, Williams County, Ohio. Including (1) Edward Franklin "E.F. Soybean" Johnson (1889-1961) of Johnson Seed Farms (Stryker, Ohio), Delphos Grain and Soya Processing Co. (Ohio), and Ralston Purina Company (Missouri); (2) Elmer Solomon Johnson (1879-1920); (3) Perhaps E.C. Johnson and Hon. Solomon Johnson (1850-1918). 1041, 1083, 1118, 1582, 2260

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Kahan & Lessin Co. (Los Angeles then Compton, California). Wholesale Distributor of Health Foods and Natural Foods. Formed in 1945 by Merger of Two Companies Founded in 1932 and 1935 Respectively. 1616, 2402, 2457, 2459

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Kellogg, Will Keith,... Kellogg Company

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Soy flour companies (Oceania). *See* Soy Products of Australia Pty. Ltd

Soy flour, roasted. *See* Roasted soy flour

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(Vancouver, BC, Canada)

Soyfoods companies (England). *See* Itona

Soyfoods companies (Europe). *See* , Albert's Tofuhaus (Lautersheim, Germany), British Arkady Company Ltd. (Manchester, England), Bruno Fischer GmbH (Aetorf, Germany), Galactina S.A. (Belp, Switzerland), Haldane Foods Group Ltd. (Newport Pagnell, Buckinghamshire, England), Henselwerk GmbH (Magstadt near Stuttgart, Germany), Huegli Naehrmittel A.G. (Steinach-Arbon, Switzerland), Innoval / Sojalpe, Jonathan P.V.B.A. (Kapellen, Belgium), Life Food GmbH (Freiburg, Germany). Taifun brand, Lima N.V. / Lima Foods (Sint-Martens-Latem, Belgium; and Mezin, France), Manna Natural Foods (Amsterdam, The Netherlands), Migros & Conserves Estavayer (Estavayer-le-Lac, Switzerland), Sojinal / Biosoja (Formerly Cacoja), Soya Health Foods Ltd. (Manchester, England), Soyana (Zurich, Switzerland), Tofutown.com (Wiesbaum / Vulkaneifel, Germany), Triballat (Noyal-sur-Vilaine, France). Makers of Sojasun

Soyfoods companies (USA). *See* Farm Food Co. (San Rafael, then San Francisco, California), Farm Foods, and Farm Soy Dairy, Galaxy Nutritional Foods, Inc. and its Soyco Foods Div. (Orlando, Florida), GeniSoy Products Co. (Fairfield, California), Hain Celestial Group, Inc. (Uniondale, New York), Lightlife Foods, Inc. (Turners Falls, Massachusetts), Rella Good Cheese Co. (Santa Rosa, California). Previously Brightsong Tofu, SunRich Food Group (Hope, Minnesota), Swan Food Corp. (Miami, Florida), White Wave, Inc. (Boulder, Colorado)

Soyfoods movement. *See* Farm (The) (Summertown, Tennessee), Plenty Canada and The Farm in Canada (Lanark, Ontario, Canada), Plenty International (Summertown, Tennessee), Rodale Press (Emmaus, Pennsylvania), Soyatech (Bar Harbor, Maine), Soyfoods Association of North America (SANA)

Soyfoods restaurants or delis. *See* Soyfoods Movement–Soyfoods Restaurants or Delis

Soyinfo Center (Lafayette, California). Named Soyfoods Center until 1 Jan. 2007. Founded by William and Akiko Shurtleff. 1782, 1787, 1790, 1799, 1813, 1814, 1842, 1843, 1863, 1869, 2014, 2033, 2076, 2079, 2081, 2086, 2096, 2114, 2176, 2177, 2178, 2179, 2180, 2181, 2187, 2192, 2207, 2213, 2223, 2224, 2225, 2229, 2230, 2231, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2242, 2243, 2246, 2251, 2252, 2254, 2257, 2258, 2317, 2322, 2323, 2383, 2384, 2393, 2400, 2401, 2437, 2438, 2443, 2493, 2558, 2610, 2649, 2696, 2701, 2810, 2921, 2930, 2941, 2944, 2947, 2975, 2980, 3047, 3053, 3056, 3082, 3106, 3107, 3108, 3115, 3123, 3154, 3164, 3193, 3219, 3277, 3281, 3306, 3312, 3321, 3428, 3436, 3443, 3444, 3469, 3536, 3563, 3590, 3606, 3610, 3611, 3612, 3618, 3619, 3620, 3628, 3630, 3632

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Soymilk companies (England). *See* Itona

Soymilk companies (Europe and Africa). *See* Actimonde S.A. (Agrolactor system)

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Soymilk companies (Europe). *See* Alpro (Wevelgem, Belgium), Plamil Foods Ltd. (Folkestone, Kent, England) and The Plantmilk Society, Unisoy Milk 'n' By-Products (Stockport, Cheshire, England)

Soymilk companies (USA). *See* American Soy Products (Saline, Michigan), Pacific Foods of Oregon, Inc. (Tualatin, Oregon), Vitasoy, White Wave Foods, a Division of Dean Foods (Dallas, Texas); Maker of Silk Soymilk, WholeSoy & Co. (subsidiary of TAN Industries, Inc., California)

Soymilk curds. *See* Curds Made from Soymilk

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Soynuts (Oil Roasted or Dry Roasted / Toasted). See Also *Irimame* Used in Bean-Scattering (*Mame-Maki*) Ceremony at Setsubun (Lunar New Year) in Japan and Parched Soybeans. 459, 529, 575, 588, 611, 673, 683, 702, 704, 742, 773, 784, 789, 793, 825, 831, 881, 924, 1009, 1015, 1021, 1022, 1023, 1024, 1044, 1058, 1066, 1101, 1133, 1139, 1221, 1230, 1321, 1401, 1492, 1498, 1522, 1538, 1539, 1555, 1586, 1615, 1665, 1680, 1685, 1731, 1749, 1780, 1782, 1788, 1806, 1807, 1813, 1814, 1838, 1841, 1891, 2014, 2028, 2068, 2083, 2086, 2153, 2156, 2195, 2285, 2393, 2400, 2432, 2794, 3108, 3152, 3238, 3321, 3443, 3461, 3536, 3563, 3570, 3586, 3587, 3589, 3606

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Spencer Kellogg & Sons, Inc. (Buffalo, New York). 999, 1005, 1044, 1104, 1288

Spillers Premier Products Ltd. (Puckeridge, Ware, Hertfordshire, England). Including Soya Foods Ltd [Named Soya Flour Manufacturing Co. Ltd. (1929-42), and Soya Foods Ltd. (1933)]. And incorporating British Soya Products (1932). 789, 1480, 1796, 1959

Spongiform encephalopathies (brain diseases; TSE and BSE). *See* Vegetarianism–Transmissible Spongiform Encephalopathies (Brain Diseases)

Sprouted soybeans used to make soymilk. *See* Soymilk Made from Sprouted / Germinated Soybeans

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Staley (A.E.) Manufacturing Co. (Decatur, Illinois; Acquired by Tate & Lyle PLC in June 1988). 537, 775, 789, 996, 999, 1005, 1028, 1044, 1045, 1112, 1443, 1479, 1542, 1546, 1627, 1629, 1678, 1681, 1687, 1721, 1722, 1727, 1736, 1743, 1753, 1756, 1793, 1795, 1840, 1863, 2086, 2125, 2154, 2281, 2308, 2470, 3030, 3132, 3412, 3428

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Strayer Family of Iowa–Incl. George Strayer (1910-1981; executive officer of the American Soybean Association 1940-1967), His Father Bert Strayer (1880-1941), and His Nephew Dennis Strayer (born 1938). 1027, 1041, 1083, 1101, 1118, 1166, 1230, 1582, 1584, 1863, 2079, 2081, 2086, 2260, 2281, 3632

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Sukiyaki–Famous Japanese Recipe and Dish. Its Basic Ingredients Include Tofu (Usually Grilled) and Soy Sauce. 1263, 1409, 1542, 1566, 1644, 1813, 1814

SunOpta, Inc. (Toronto, Ontario, Canada). Formerly SunRich Food Group (Hope, Minnesota). Formerly Minnesota Waxy Corn Growers Export Inc., Minnesota Edamame, Jameson-Williams Co. Acquired by Stake Technology Ltd. (Norval, Ontario, Canada) in July 1999, Stake changes its name to SunOpta on 31 Oct. 2003. 3231, 3341, 3343, 3364, 3409, 3444, 3447, 3477, 3490, 3531, 3632

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Wessanen (Royal), NV Co. (Based in the Netherlands). Acquired Tree of Life in Dec. 1985 and Balanced Foods in Dec. 1986. 2470

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White Wave, Inc. (Boulder, Colorado). Founded in Sept. 1977 by Steve Demos. Including Soyfoods Unlimited. Owned by Dean Foods Co. since 8 May 2002. 2033, 2086, 2174, 2317, 2401, 2799, 2824, 2947, 3033, 3053, 3067, 3087, 3108, 3156, 3185, 3186, 3187, 3277, 3293, 3343, 3364, 3398, 3405, 3409, 3410, 3412, 3434, 3436, 3440, 3447, 3473, 3474, 3475, 3476, 3479, 3480, 3490, 3502, 3529, 3530, 3531, 3538, 3548, 3549, 3552, 3571, 3587, 3605, 3630

White, Ellen G. (1827-1915). Co-Founder of Seventh-day Adventist Church. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 17, 18, 26, 28, 30, 49, 92, 146, 159, 171, 191, 197, 223, 292, 296, 315, 316, 331, 410, 502, 518, 655, 790, 885, 979, 1082, 1176, 1177, 1190, 1212, 1213, 1249, 1251, 1254, 1267, 1268, 1269, 1270, 1323, 1329, 1353, 1375, 1405, 1430, 1438, 1441, 1467, 1473, 1498, 1520, 1609, 1610, 1613, 1624, 1669, 1676, 1723, 1773, 1828, 1833, 1853, 1858, 1902, 1907, 1932, 1943, 1945, 1946, 1947, 2029, 2064, 2120, 2153, 2173, 2221, 2228, 2232, 2235, 2236, 2237, 2258, 2264, 2324, 2329, 2353, 2358, 2387, 2431, 2491, 2509, 2627, 2629, 2961, 2983, 3000, 3010, 3011, 3047, 3049, 3057, 3059, 3150, 3159, 3259, 3263, 3272, 3283, 3306, 3449, 3483, 3501, 3507, 3513, 3516, 3517, 3519, 3534, 3535, 3537, 3541, 3557, 3565, 3593, 3621, 3624, 3635

Whitehouse Products, Inc. *See* Delsoy Products, Inc.

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Whole Dry Soybean Flakes. *See* Microsoy Corp., Formerly Nichii Company

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Whole Dry Soybeans, Ground to a Paste, Puree, or Slurry, Then Used as an Ingredient in Commercial Food Products. 576, 681, 689, 710, 954, 990, 1087, 3612

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Whole Soy Flakes (Flaked Soybeans), Grits, Granules, or Textured Products, Made from Whole Dry Soybeans (Not Defatted). See Also: Soy Flour: Whole or Full-fat. 577, 678, 846, 1098, 1110, 1115, 1120, 1154, 1156, 1157, 1162, 1165, 3612

WholeSoy & Co. (subsidiary of TAN Industries, Inc.), Modesto WholeSoy Co. (California), and Aros Sojaprodukter (Örsundsbro, then Enkoeping, Sweden; Founded by Ted Nordquist. Started Feb. 1981). 1799, 1843, 2450, 2470, 2511, 2704, 2806, 2894, 2895, 2896, 2903, 2941, 2944, 2980, 2992, 3041, 3364, 3506, 3515, 3548, 3616, 3617

Wholesome and Hearty Foods, Inc. *See* Gardenburger, Inc.

Wildwood Harvest Foods, Inc. Formed on 24 Aug. 2001 by the merger of Wildwood Natural Foods, Inc. (Santa Cruz and Fairfax, California; started Nov. 1977) and Midwest Harvest, Inc. (Grinnell, Iowa; started Jan. 1999). 2086, 3293, 3506, 3521, 3548, 3610

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Wiley, Harvey Washington (1884-1930). Father of the Pure Food and Drug Act and the Meat Inspection Act (1906) and of the U.S. Food and Drug Administration. 702, 1329, 1473, 1943

Wilson soybean variety. *See* Soybean Varieties USA–Mammoth Yellow

Wing Seed Co. (Mechanicsburg, Champaign County, Ohio). Founded 1909. Including Joseph Elwyn Wing (1861-1915), Charles Bullard Wing (1878-1949), and David Grant Wing (1896-1984). 1582

Winged Bean (*Psophocarpus tetragonolobus*) (Also Called Four-Angled Bean, Goa Bean, Goabean, Asparagus Bean, Asparagus Pea, Segidilla, Seguidilla or Seguidillas Bean, Square Podded Pea, Square Podded Crimson Pea, *Botor tetragonoloba*, *Dolichos-*, or *Lotus tetragonolobus*, Pois Carré, Kecipir or Ketjeper, Calamismis or Kalamismis). 2520

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Worcestershire Sauce (Soy Sauce Was the Main Ingredient before the 1940s). Including Lea & Perrins. 121, 277, 417, 548, 676, 792, 853

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World Soy Foundation (WSF). *See* WISHH (World Initiative for Soy in Human Health)

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World problems–Environmental issues & concerns. *See* Environmental Issues, Concerns, and Protection (General, Including Deep Ecology, Pollution of the Environment, Global Warming, etc.)

World problems. *See* Hunger, Malnutrition, Famine, Food Shortages, and Mortality, Population Growth (Human) and Related Problems (Including Poverty), Protein Resources and Shortages, and the "World Protein Crisis / Gap / Problem" of 1950-1979, Sustainable Development and Growth

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Worthington Foods, Inc. (Worthington, Ohio). Including Battle Creek Foods (Michigan) from 1960, and Madison Foods (Tennessee) from 1964. A subsidiary of Miles Laboratories from March 1970 to Oct. 1982. Including Loma Linda Foods from Jan. 1990. 905, 987, 989, 990, 991, 993, 1005, 1085, 1086, 1087, 1111, 1116, 1117, 1127, 1150, 1151, 1155, 1202, 1205, 1208, 1209, 1210, 1229, 1238, 1247, 1248, 1279, 1284, 1288, 1289, 1290, 1295, 1299, 1304, 1305, 1306, 1307, 1309, 1318, 1320, 1326, 1327, 1328, 1337, 1338, 1339, 1340, 1344, 1345, 1358, 1359, 1363, 1364, 1365, 1370, 1381, 1382, 1387, 1400, 1411, 1416, 1417, 1418, 1419, 1420, 1425, 1426, 1427, 1428, 1429, 1431, 1432, 1433, 1434, 1437, 1443, 1444, 1445, 1447, 1449, 1451, 1454, 1460, 1461, 1462, 1463, 1464, 1465, 1466, 1470, 1471, 1472, 1475, 1476, 1477, 1478, 1479, 1481, 1492, 1496, 1497, 1511, 1512, 1515, 1516, 1517, 1518, 1519, 1521, 1523, 1524, 1525, 1526, 1528, 1529, 1531, 1532, 1533, 1534, 1536, 1539, 1540, 1541, 1542, 1545, 1546, 1547, 1548, 1549, 1550, 1551, 1552, 1564, 1570, 1571, 1573, 1574, 1576, 1578, 1580, 1581, 1586, 1589, 1590, 1591, 1595, 1598, 1599, 1600, 1601, 1602, 1603, 1617, 1619, 1622, 1623, 1627, 1629, 1631, 1638, 1641, 1642, 1643, 1647, 1656, 1657, 1660, 1662, 1663, 1664, 1671, 1674, 1678, 1680, 1681, 1682, 1684, 1685, 1687, 1689, 1690, 1691, 1693, 1694, 1695, 1696, 1697, 1698, 1704, 1705, 1706, 1707, 1711, 1721, 1722, 1724, 1726, 1727, 1728, 1731, 1732, 1734, 1736, 1738, 1739, 1740, 1741, 1742, 1743, 1744, 1745, 1747, 1748, 1750, 1751, 1752, 1753, 1754, 1756, 1759, 1760, 1761, 1762, 1766, 1767, 1768, 1769, 1770, 1775, 1780, 1781, 1789, 1791, 1792, 1793, 1794, 1795, 1796, 1797, 1798, 1811, 1818, 1822, 1823, 1824, 1825, 1826, 1834, 1840, 1845, 1848, 1850, 1856, 1857, 1859, 1864, 1865, 1883, 1885, 1888, 1889, 1890, 1891, 1901, 1905, 1909, 1914, 1917, 1919, 1922, 1927, 1928, 1929, 1940, 1959, 1993, 1994, 1995, 1997, 2000, 2001, 2013, 2020, 2021, 2040, 2042, 2054, 2060, 2061, 2062, 2067, 2068, 2086, 2087, 2088, 2090, 2091, 2093, 2098, 2105, 2108, 2112, 2113, 2114, 2115, 2124, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2156, 2159, 2161, 2162, 2165, 2172, 2173, 2177, 2180, 2183, 2184, 2193, 2194, 2206, 2214, 2226, 2231, 2243, 2244, 2245, 2247, 2248, 2249, 2250, 2267, 2272, 2308, 2310, 2311, 2312, 2334, 2349, 2362, 2367, 2372, 2384, 2385, 2386, 2389, 2390, 2391, 2394, 2400, 2403, 2404, 2406, 2425, 2431, 2432, 2437, 2443, 2447, 2448, 2450, 2451, 2454, 2455, 2456, 2457, 2462, 2468, 2473, 2490, 2502, 2503, 2504, 2505, 2506, 2515, 2525, 2533, 2536, 2537, 2544, 2550, 2555, 2559, 2580, 2582, 2583, 2584, 2585, 2587, 2599, 2602, 2603, 2604, 2609, 2621, 2629, 2631, 2632, 2634, 2635, 2636, 2640, 2648, 2649, 2655, 2656, 2659, 2665, 2670, 2696, 2699, 2701, 2703, 2707, 2712, 2719, 2720, 2749, 2770, 2781, 2782, 2785, 2786, 2787, 2789, 2790, 2791, 2795, 2797, 2799, 2804, 2810, 2812, 2818, 2819, 2822, 2824, 2863, 2864, 2866, 2879, 2880, 2907, 2908, 2910, 2911, 2912, 2918, 2919, 2922, 2923, 2926, 2927, 2929, 2931, 2932, 2939, 2940, 2964, 2972, 2973, 2974, 2979, 2982, 2984, 2987, 2998, 3001, 3006, 3007, 3008, 3019, 3021, 3026, 3029, 3030, 3031, 3036, 3038, 3039, 3042, 3043, 3044, 3047, 3048, 3051, 3053, 3063, 3064, 3065, 3066, 3067, 3068, 3069, 3071, 3072, 3073, 3074, 3075, 3076, 3077, 3078, 3079, 3080, 3081, 3082, 3083, 3084, 3086, 3088, 3089, 3090, 3091, 3093, 3094, 3099, 3102, 3103, 3106, 3107, 3108, 3116, 3117, 3121, 3122, 3123, 3128, 3132, 3134, 3136, 3137, 3138, 3139, 3140, 3142, 3144, 3146, 3152, 3153, 3157, 3158, 3161, 3173, 3175, 3176, 3177, 3178, 3181, 3185, 3186, 3187, 3189, 3190, 3191, 3194, 3195, 3196, 3198, 3199, 3201, 3203, 3204, 3206, 3208, 3209, 3210, 3211, 3217, 3220, 3221, 3222, 3223, 3225, 3227, 3228, 3229, 3230, 3232, 3233, 3234, 3236, 3237, 3239, 3240, 3241, 3242, 3243, 3244, 3245, 3246, 3247, 3248, 3249, 3250, 3251, 3253, 3267, 3269, 3270, 3271, 3275, 3277, 3279, 3282, 3285, 3287, 3290, 3291, 3293, 3294, 3295, 3296, 3298, 3300, 3302, 3308, 3311, 3313, 3315, 3322, 3323, 3324, 3328, 3330, 3331, 3332, 3333, 3334, 3339, 3340, 3341, 3342, 3343, 3344, 3345, 3349, 3350, 3351, 3352, 3355, 3360, 3362, 3363, 3367, 3371, 3380, 3393, 3394, 3395, 3397, 3398, 3399, 3400, 3401, 3403, 3405, 3407, 3408, 3409, 3412, 3414, 3421, 3424, 3428, 3429, 3430, 3433, 3441, 3446, 3448, 3468, 3472, 3474, 3476, 3477, 3478, 3479, 3480, 3490, 3502, 3529, 3531, 3532, 3547, 3549, 3559, 3560, 3561, 3562, 3567, 3580, 3581, 3582, 3584, 3586, 3596, 3619, 3626

Yamasa Corporation (Choshi, Japan; and Salem, Oregon). 1273

Yamato Tofuhaus Sojaprodukte GmbH. *See* Huegli Naehrmittel A.G. (Steinach-Arbon, Switzerland)

Yellow soybeans. *See* Soybean Seeds–Yellow

Yeo Hiap Seng Ltd. (Singapore and Malaysia) and Affiliates. 1887, 3628

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Yogurt, etymology. *See* Soy Yogurt

Yogurt, soy. *See* Soy Yogurt

Yoshihara Oil Mill, Ltd. (Kobe, Japan). 1780

Yuba (The Film That Forms Atop Soymilk When It Is Heated). In Chinese (Mandarin): Doufu Pi ("Tofu Skin") or Doufu Yi ("Tofu Robes," pinyin), Toufu P'i or Toufu I (Wade-Giles). English-Language Chinese Cookbooks and Restaurants: "Bean Curd Skin". 597, 1112, 1114, 1138, 1175, 1179, 1230, 1233, 1266, 1321, 1479, 1712, 1713, 1813, 1814, 2014, 2033, 2176, 2317, 2393, 2401, 2443, 2515, 2665, 2913, 2944, 2947, 3286, 3321, 3436, 3443, 3536, 3563, 3606

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Yves Fine Foods (Founded by Yves Potvin, Feb. 1985, Vancouver, BC, Canada). Renamed Yves Veggie Cuisine in 1992. Acquired by Hain Celestial Group in June 2001. 2703, 3181, 3186, 3187, 3190, 3343, 3446, 3477, 3529, 3552, 3564

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Zea mays. *See* Corn / Maize

Western Health Reform Institue
(forerunner of Battle Creek Sanitarium)

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