First Steps to Certified Organic Livestock Production

ACORN
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Prepared by Roxanne Beavers P. Ag.,
Janet Wallace and Elizabeth Dacombe

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Introduction

To have a truly integrated organic farm, many growers would argue that you must incorporate livestock. Livestock can return your investment by producing manure that provides a rich source of organic matter, feeds your soil microbes and improves both soil nutrition and soil quality. Animals can make use of hilly, rocky or marginal land that may not be suitable for other crops (although you still need good pasture). The challenge for farmers is to incorporate livestock in a way that can improve the farm's profitability while meeting the standards for certified organic livestock production.

Many small farms have livestock – poultry, a few pigs, cattle for meat or maybe even a milk cow. Yet, the statistics from our region show that few of these producers are certifying their livestock. Mark and Sally Bernard (of Barnyard Organics) discussed this dichotomy at the 2012 ACORN Conference in PEI and issued a challenge for organic growers to buy and raise more organic meat, milk and eggs.

If you are raising livestock and want to do so organically, or are considering adding a few animals to your organic farm, this guide can help you look at some of the considerations.

Sourcing Organic Animals

Poultry tend to be the "gateway" animal for new farmers. Day-old chicks can be purchased from non-organic sources, but must be raised following the standards starting on the second day of life. This allows farmers to order chicks by mail or from the local co-op; but pullets or slightly older birds can't be certified as organic unless it can be guaranteed they were raised according to the organic standards. These rules apply to both meat birds and laying hens; you can't start to feed your layers organic feed after they begin to lay, and then call the eggs organic.

Animals that are raised for meat must be raised in accordance with the organic standards for their entire lives. Conventional livestock may be brought onto the farm for breeding by special permission of the certifier under a few conditions – most importantly, you need to demonstrate there were no organic sources available. Non-organic animals can be bred and their offspring considered organic if the dam is fed organic feed during the last third of gestation.

Finding organic livestock is a challenge for smaller producers who only want to raise a few animals and don't want to get into keeping breeding stock. There may be a market opportunity for organic growers interested in breeding and selling to other organic farms.

Dairy animals, including cows, goats and sheep, are the only livestock that can be transitioned into organic production. After being managed organically for one year, they can produce organic milk. During the transition year, there is some allowance made for a small amount of non-organic feed to be fed (no more than 20%, only for the first 9 months of the year). Pasture in the last year of transition can also be fed to organic livestock on the same farm. The herds cannot be transitioned in and out of organic production, and animals transitioned from conventional production can't be sold as organic meat.

Day-old chicks can be purchased from non-organic sources

Raising Organic Animals

The Canadian Organic Standard includes a number of requirements for livestock living conditions, found in Section 6.8. The intention of these requirements is to allow animals to express their natural behaviour; to let pigs root and hens perch; to provide cattle with diverse pasture; to let social relationships develop.

If you are starting out with organic livestock, check Section 6.8 before you decide on the type of housing you will build or renovate. Minimum space requirements are prescribed for indoor housing and outdoor living area for most types of livestock from rabbits to wild boar. The indoor requirements are based on animal welfare standards and ensure that all animals can turn around, stretch and lay down.

Along with the living space requirements, there are other housing considerations for each type of animal. For laying hens, there is a minimum perch area of 18 cm per hen, and adequate nests and waterers. Floors need to be non-slip, and solid floor are preferred to slatted floors to reduce the risk of leg injury. If there is a slatted floor in your chicken coop, it has to have more than 30% solid floor area. If you are working with existing structures, make sure you review these numbers before you buy your animals.

Access to pasture and/or outside exercise areas is required for organic livestock. There are a few common sense exceptions to this rule; animals can be confined when they are very young, animals of all ages can be confined for short periods in severe weather or other dangerous or unhealthy conditions. Cattle can also be confined for finishing, and chicks may be confined until they are fully feathered.

To maintain a healthy herd, try to avoid environmental stress. Although it is important to allow access to the outdoors, it is also necessary to provide protection from the elements (wind, rain, snow and sun) and to avoid extreme heat or cold conditions.

Access to pasture and/or outside exercise areas is required for organic livestock.

Poor living conditions contribute to many disease problems. For example, wet paddocks can contribute to hoof-rot and a muddy chicken run can lead to an outbreak of coccidiosis. Providing drainage where livestock congregate can help prevent many health problems. To help prevent the build-up of parasites and pathogens, practice rotational grazing and periodically change the location of a poultry run or hog paddock. Within a pasture, aim to move the water source and feeders before the ground around them becomes muddy.

Feeding Organic Animals

The limiting factor often identified as a barrier to certification is the cost of organic feed. Organic feed needs to be provided for organic livestock, and it needs to meet the nutritional needs of the animal, as outlined throughout Section 6.4 of the Standard. Although finding a cost-effective source of feed for livestock is critical to your bottom line, feeding a nutritious diet appropriate for the species is key to their health and production.

For prepared feed, we are fortunate to have a regional organic feed mill, Co-op Atlantic (NB Seeds). There is also the option of sourcing imported organic feed from central Canada, although this is only economical if feed is ordered in bulk. Some farmers are beginning to grow and/or make their own feed using organic grains and adding macronutrient and micronutrient premixes. This is great but is limited by scale; larger farmers have the equipment, grain sources, and need for larger feed volumes while smaller growers may optimize their time by buying premixed feed.

Providing time on pasture can reduce the intake and the total cost of purchased organic feed. Cows may be able to have a nearly grain-free diet. For pigs, MOFGA's livestock specialist states that quality pasture with lots of legumes can reduce grain consumption by up to 60 percent. Joel Salatin states that chickens are may be able to gather 30 to 50 percent of their dietary needs from pasture (insects and plant matter), although other sources estimate 10-20 percent. If pens are moved more frequently, there will be more insects to eat.

Don't neglect quality in your search for organic feed. For ruminants, at least 60% of dry matter in their daily ration must consist of hay, fodder or silage, and many farmers aim for completely grass fed beef, sheep and sometimes even dairy animals. Because organic farmers rely on forage to provide much or all of the nutritional needs of their livestock, it is essential to feed high quality hay and maintain good pastures.

For all ruminants, organic hay will need to be supplied through the winter months. It can be challenging to find a good source of quality organic hay. As a result, many organic farmers who raise cows or sheep also grow their own hay. If you are buying organic hay, check out the quality before making a purchase. Look for leafy, not stemmy, hay preferably with a mix of legumes and grass.

If you have goats, you need to be particularly cautious when buying hay. Many times, farmers try to sell their poor hay to goat farmers because goats have a reputation of eating everything and preferring poor hay. In reality, however, goats are very picky. If you give them stemmy hay, they will pick out the bits they like and waste the rest. Like other ruminants, they prefer leafy hay but they love weedy hay. A legume-grass hay with many dandelion leaves is ideal.

Organic farmers often provide varied diets. Some growers sprout grain or raise red wiggler worms to supplement the winter diet of their poultry. Goats might be taken for walks in the woods to browse various trees and shrubs. Seaweed, herbs and conifer branches are often provided to sheep, goats and cattle to provide micronutrients and promote health. Cull organic vegetables and apples can be fed to ruminants and hogs.

Don't neglect quality in your search for organic feed.

Livestock Health

Much as for organic crops, care for organic livestock aims to produce healthy, resilient animals with little need for outside intervention.

Organic farmers produce healthy animals by:

- raising breeds better able to thrive in an organic system,
- providing access to the outdoors and natural habitat to allow expression of natural behaviours,
- focusing on long-term health rather than short-term production, and
- feeding a diet that reflects the natural diet of the species.

The key to organic livestock production is preventing health problems. The goal is not to maximize production per livestock unit, but rather to have healthy and productive animals that require little, if any, medical treatment. Whether you are raising livestock for the first time or transitioning your livestock from conventional to organic, it helps to start with a healthy herd or flock. When you're buying livestock, keep in mind that many farmers keep their best animals for breeding stock and sell their culls. Try to avoid buying someone else's problem animals.

If you can't find certified organic animals, try to find animals that have been raised in organic or nearly organic conditions. Moving an animal from one environment to another and switching diets is always stressful. You can minimize the stress if you find animals that have been raised in a similar environment. For example, try to find animals that have been raised with access to the outdoors without medicated feed or regular medical treatments. A farm visit might be necessary.

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Before visiting the farm, learn how to identify common health problems. For example, when buying goats, be on the alert for swollen lumps under the jaw that may indicate Caseous lymphadenitis. One advantage of buying directly from the farm is that you can assess the health of the entire flock, not just the individuals on sale. You may want to have a veterinarian evaluate the health of the animals.

Organic farmers often choose older or heritage breeds of livestock that are hardy, can thrive on forage (compared to grain-based diets) and require less medical intervention than more modern breeds. For example, dairy farmers often prefer Jersey or Brown Swiss or Canadienne cows over modern high-yielding Holstein cows and opt for Scottish Blackface rather than Polypay sheep.

Farmers can choose a breed well suited to their own farming conditions. Romney sheep, for example, are an ideal dual-purpose (meat-wool) breed for the Maritimes. They thrive in moist conditions and tend to show greater resilience to hoof rot and internal parasites than many other breeds.

Whenever new animals are brought to the farm, they should be quarantined for at least a week or two. During this time, their health should be closely monitored for signs of 'shipping fever' and other contagious diseases.

Medical Treatment

Various nutritional supplements and treatments can be used to help maintain livestock health as outlined in the Permitted Substances List. Examples of common organic treatments are provided below. Note that the efficacy of the treatments has not necessarily been proven and the use of such practices is not endorsed by ACORN.

- **Activated charcoal** to treat scours (diarrhea) and bloat, and help control internal parasites
- **Apple cider vinegar** to provide potassium, help prevent mastitis and difficult births, and control ringworm (when used externally).
- **Brewers' yeast** to provide B-vitamins, increase milk production, improve health, and increase resistance to internal and external parasites.
- **Crushed oyster shell** to provide calcium for laying hens.
- **Diatomaceous earth** to help control internal and external parasites.
- **Garlic** (fresh or dried) to repel internal and external parasites and strengthen the immune system.
- **Probiotics** (beneficial bacteria) to strengthen the immune system, particularly for animals that are under stress from giving birth, weaning, transportation or extreme weather.

You can check ACORN's Livestock Organic Input Directory to find more products allowed in certified organic production.

At times, preventative measures and permitted treatments might not be effective. A sick animal cannot be refused medical treatment to preserve its organic status. While some medication is permitted under the organic standard, the required treatment may mean that the animal loses organic status. Non-organic animals (also conventional breeding stock) can be kept on the farm as long as they are clearly identified and managed organically.

There are a few special situations where the medications below are permitted for use on organic livestock. For antibiotics and parasiticides, written instructions from a vet are needed that identify the product to be used and the treatment method.

Anesthetics, analgesics and/or sedatives: Physical alterations (such as dehorning and disbudding, castration, tagging or branding) can be performed for health or hygiene reasons, identification purposes, or to reduce risk of injury to other animals. These can be painful and stressful for animals, but local anesthetics, analgesics and/or sedatives are allowed.

A sick animal cannot be refused medical treatment to preserve its organic status

For antibiotics and parasiticides, written instructions from a vet are needed that identify the product to be used and the treatment method.

Antibiotics: If an animal is treated with antibiotics, the meat or eggs cannot be considered organic. Dairy animals (cows, sheep or goats) may be treated with antibiotics in an emergency. The milk cannot be sold as organic for thirty days after the treatment, or for twice the withdrawal period listed on the medication's label, whichever is longer. Also, if a dairy animal requires more than two treatments of antibiotics and/or parasite control in a year, the animal must go back into a one-year transition period after treatment ceases.

Hormones: Hormonal treatment can only be used for sick animals under veterinary supervision. Hormones can never be used as growth promoters. There are some hormones listed on the Permitted Substances List (PSL). For example, oxytocin is permitted after birthing. If hormones not on the PSL are used, then meat from these animals can never be sold as organic.

Parasiticides: Organic farmers need to have a management plan that describes how they will minimize parasite problems. Synthetic parasiticides or anthelmintics (chemical wormers) can be used as a last resort. Before treating their animals, farmers must confirm that there is a serious problem as determined by fecal samples or assessment of body condition.

- Meat animals: only one treatment is allowed for young animals (under one year old); older animals can only receive up to two treatments in their lifetime.
- Dairy animals can receive up to two treatments (parasiticides and/or antibiotics) per year; if more than this is given, the animals are placed back into a one-year transition period.
- Laying hens may receive one treatment per year; any more than this and they will not be considered organic.

Animal Welfare

In the General Principles of the Canadian Organic Standard, it states that growers must provide attentive care that promotes the health and meets the behavioural needs of livestock. "Under a system of organic production, livestock are provided with living conditions and space allowances appropriate to their behavioural requirements, and organically produced feed. These practices strive to minimize stress, promote good health and prevent disease." So, what do farmers need to do to make sure they are meeting these conditions?

While the Standard sets out requirements for animal welfare, there is some flexibility about how many of these requirements are met. Ultimately, organic certification relies on trust in the process. It is crucial that the farmer becomes the best manager they can be – while the organic standard sets out minimum requirements, the care and husbandry you provide year-round is critically important. The best regulation can't replace a trained farmer's eye.

The interpretation of what is best for an animal may be different in an organic system. While grazing can expose livestock to parasites or predators, outdoor foraging is crucial for physical development, appropriate diet, and mental health. Outdoor access for livestock is guaranteed on organic farms. The Standard requires outdoor access for all animals, but they may be kept indoors temporarily in a few specific cases including stage of production and poor weather. Your chickens may not like to venture outside in poor weather, but the opportunity has to be there, and it will be used if they are encouraged to go out of doors early in life.

Temple Grandin, an expert in improving animal welfare on farm and slaughterhouses, has commented that boredom or restrictive environments can be just as serious as neglect or abuse. Understimulated, overcrowded animals can exhibit behaviour like feather pecking, chewing, and tail biting. Animals need to be provided with interesting environments that meet their individual living needs. For example, poultry need an area for dust bathing and secluded laying boxes. Pigs like straw, woody or loose material for rooting and chewing.

It is in the farmer's best interest to minimize stress at every phase of production, but especially at the end of life. Stressed animals have poorer weight gain and meat quality, and are more prone to getting sick. Pigs and poultry under stress may develop PSE (pale soft exudative) meat, which reduces carcass quality.

At the time of slaughter, it is important to keep loading and transportation time short and stress free. There are resources available describing how to minimize stress during loading and transportation. The challenge is to find an appropriate slaughterhouse nearby that will work with the requirements of organic standards.

To reduce the stress of transport:

- Provide enough space so animals are not crowded
- Adapt the spacing so it is not so large that animals will shift around in transport
- Provide bedding on the floor provided it will not contribute to animals slipping in the vehicle
- Keep animals in familiar groups.

Processing

Finding a good abattoir to slaughter your organic animals and package the meat can be a major challenge; in fact, finding an abattoir at all in the Maritimes is becoming increasingly difficult. Like small farms, small abattoirs are faced with a disproportionate amount of regulation and paperwork, and many are simply shutting down.

Certified organic abattoirs can be found in provinces where the production and market demand are greater. In the past, local organic producers were able to have their abattoir sign a subcontractor agreement to confirm they were following organic standards, and abattoirs were required to submit to inspection when organic runs were being done.

Transportation to the abattoir should be as direct as possible.

In 2012, there is a new requirement under the Canadian Organic Regime for slaughter facilities to be reviewed by Certification Bodies. The abattoirs will need to have either an attestation of compliance (which will involve an application and inspection) or organic certification, depending on the type of services provided. They may be able to be included in an individual farmer's organic certification application, although this would add to the fee. It remains to be seen how this will affect local producers and abattoirs. One way to minimize the anticipated cost increase will be for farmers to use the same facility (as the fee will be for the facility, not per producer), but this could have the disadvantage of increasing livestock transportation time.

Animals need to be traceable by individual (or flock, for poultry). There needs to be physical traceability (e.g. ear tag) and documents to identify the animal through all stages of transportation and handling. The goal is that final cuts of meat are traceable to the individual organic animal; this can be achieved with lot numbering. Organic meat must be clearly marked and segregated in storage.

Transportation to the abattoir should be as direct as possible. Loading and transport need to be managed to minimize stress to the animal – different types of livestock have different methods of handling. If livestock is to be held at the site for any time before slaughter, any feed or bedding has to comply with the organic standard.

After raising your livestock without antibiotics, it is critical to make sure organic meat doesn't come into contact with conventional meat. Cross-contamination can lead, for example, to the transfer of antibiotic-resistant bacteria from conventional to organic meat.

All surfaces will need to be cleaned well. The Permitted Substances List Table 7.3 lists cleaners, like hydrogen peroxide, that can be used without a rinse afterwards while Table 7.4 lists cleaners that can be used as long as they are rinsed off before organic food touches the surface. If cleaners not on these lists are used in the facility, exceptions can be made provided that the abattoirs can show that all residues have been removed. Many smaller abattoirs are able to meet these cleaning requirements by processing organic livestock as the first product run of the day.

The good news is that abattoirs, whether provincial or federal, are regularly inspected and accustomed to regulations. The traceability requirements for organic certification may already be present in another form through their HACCP program. On top of the organic requirements, if the facility is cutting and wrapping the meat, you need to ensure the butcher understands your needs in terms of the size and types of cut your consumer wants.

Organic livestock grow at different rates and in different ways than animals raised in conventional intensive operations. Consequently, butchering organic livestock and heritage breeds can be markedly different than for conventional livestock. A good butcher is an artisan, and the right butcher will make sure you get a premium product.

Cost of Production

Most organic farms (well, most farms) operate on a slim profit margin. Yet, each farm is an independent business with different production methods, costs and markets. Because of the higher costs of organic livestock production, especially feed, you need to have a very clear understanding of your cost of production. This will help you establish a price for your product so you can make a living versus breaking even or taking a loss.

Calculating the cost of production is the only way you will know if you are able to produce livestock and make a decent income. Costs that do not change with the farm's output are known as fixed costs or overhead – taxes, insurance, depreciation. Expenses that change with production are known as variable costs. These can be broken down into direct production costs (like seed, feed, inputs) and indirect costs (labour, utilities). At the end of the process, you should be able to figure out what is left after all your costs are deducted – hopefully this is your profit! If you are overwhelmed by the idea of determining all these costs – start with the biggest costs (usually feed and labour), and try to estimate the rest.

At the 2012 ACORN Conference during a session on profitable egg production, NB organic producer Tim Livingstone presented a straightforward look at his production costs for a 180-laying hen system:
Initial costs: $2 for day old chick plus $10 of feed to reach the laying phase = $12
Assuming a chicken lays 24 dozen eggs in the production year
Feed intake: estimated to be 4.5 lbs per dozen eggs
By creating his own organic rations, he is able to keep feed costs to $650-700/tonne

Labour: calculated to be $1 per dozen eggs

Cost of production per dozen eggs:

Bird cost:	$0.50
Package cost:	$0.25
Feed costs	$1.33
Labour	$1.00
Total	$3.08

If premixed organic feed was in use, his costs could almost double. If feed costs were at $2 per dozen eggs, then the total would increase to $3.74. Feed costs of $2.50 per dozen eggs increase the total to $4.24. Take note that there are several potential costs not included in this calculation (certification, housing, depreciation).

Tim sells his eggs for prices between $4.00-4.75 per dozen, depending on delivery location and time of year. This example demonstrates the need to be cognizant of your costs in order to price your product.
http://acornconference.files.wordpress.com/2012/12/organic-eggs-profitably-2012_small.pdf

Many factors go into determining your cost of production, and these can change through the year. For example, laying hens may produce fewer eggs in cold weather at the same time that feed costs increase because the birds can no longer forage outside. If you are running lights or heat to a building, this will increase costs in the winter months; but lights help hens keep laying.

Investments in your production system can be evaluated through checking the cost of production. Overseeding and amending pastures can take time and money, but can improve health and gain in your grazing livestock. For meat producers, using a more costly butcher may be worth it if they can produce higher quality cuts of meat. Only by monitoring these costs can you determine if there is a payback to your efforts.

Potential categories – Variable costs

- Initial purchase cost (or the cost to maintain breeding stock)
- Death loss
- Feed – whether purchased, or the cost to raise your own
- Bedding
- Minerals, vitamins
- Medication & vet costs
- Processing and packaging
- Labour - daily tasks (collecting eggs, providing feed/water, moving animals on pasture)
- Labour - one-time tasks (transporting to abattoir)
- Gas, fuel & oil
- Equipment & housing repairs
- Utilities & phone
- Certification & recordkeeping
- Other (advertising, running the farm business, product storage)

You can find some sample spreadsheets to help calculate cost of production at the following websites:

ACORN Organic Path Worksheets:
Livestock and dairy spreadsheets - excel files that can be customized with your farm's information.
http://www.acornorganic.org/organicpath/foundation/costs_revenues/

British Columbia Ministry of Agriculture:
detailed cost of production info for many different livestock types –an older but comprehensive resource.
http://www.agf.gov.bc.ca/busmgmt/budgets/

Beef
Dairy
Hogs
Organic
Poultry & Specialty Poultry
Small Scale Production
Specialized Livestock

Preparing for Your First Livestock Inspection

By Elizabeth Dacombe, Organic Inspector

The inspector is coming to your farm in a few days. Be prepared! I always feel somewhat badly that many first-time applicants get quite nervous about the upcoming inspection. I have been told many times over my twenty years of inspections that it wasn't nearly as horrible as they thought it might be!

Producers that choose to apply to have their products certified organic must understand the reason for the inspection. I, the inspector (or verification officer, as we are sometimes called), am there to verify that you are indeed doing what you say you are doing on the application (organic system plan) that you completed and submitted to the Certification Body (CB). I can clarify standards for you, but I am not there to consult, and I am not there to help you overcome barriers to certification. So, as long as you have done your homework, and are following the Canadian Organic Standards (32.310) and the Permitted Substances List (32.311), as you stated in your application, the inspection should not be too stressful.

If you are a first time applicant, you will receive two inspections (about a year apart) prior to being able to have your production system (cropland, pastures and animals) certified. If you are only producing livestock and have a source of organic feed, you will only need one inspection before certification; this doesn't normally occur as most farmers are producing some of their own feed or pasture.

Certification involves a lot of documentation. The inspector is only there for a few hours of the whole year. The documentation is to prove what you have done during that previous year. However you choose to document, it has to be easy for you, so that it will get done. It should also be retrievable so that the inspector can easily review the documentation that they request. "It is with the accountant" is a statement I have heard many times over the years… please make copies of the documents that will not be on hand and are applicable to the organic system plan (OSP). Computer records are fine, and some certifying bodies do a really good job of requesting many of the documents when they review the OSP, and these are forwarded to the inspector.

It is your responsibility to prove that you have met the standard. For example, if you are purchasing the pre-mix for your flock of sheep, then you need to have invoices for that premix, plus proof that it is indeed allowable under the Standard. Many companies now get their products approved by certification bodies to show that it is allowable. However, some CB's still won't accept that approval from another CB. They will want to review it themselves. The best approach is to have all the products that you may use approved by the certification body you are certifying under. Send them a list, prior to use using them, and have that approved list available for the inspector.

Other records you will need for your livestock production are records for individual animals (or flocks, for poultry) showing their breeding,

OSP: Organic System Plan

CB: Certification Body or Certifier

COS: Canadian Organic Standard

PSL: Permitted Substances List

veterinarian orders, health products used, plus all feed records. If your livestock are on feed as well as pasture during the grazing season, you have to be able to show that they have met Section 6.1.3 (32.310), which is that 30% of their intake has come from pasture. Calculations are always based on dry matter intake.

Fortunately, part of the inspection is away from the kitchen or office table! I will want to see the livestock, their housing, and feed. For the purpose of this article, we are focusing on livestock, but I will also be looking at most fields and crops, equipment, storage (on and off farm), and inputs. Occasionally groups of the herd or flock are not at the farm. If you are grazing animals away from the farm, this should be made clear in the OSP, as these animals should also be seen. Most inspections take place in the summer, but occasionally certifying bodies do request that livestock inspections take place out of the regular season, so that the inspector can verify the winter housing.

Standard 6.2 covers origin of livestock. If you bring a pregnant animal in from off-farm, her offspring will only be organic if she has been managed organically and fed organic feed for the last third of her gestation. Therefore documentation of arrival of livestock to your farm, as well as breeding and birthing dates, is important.

A certified organic animal must receive certified organic feed. There are exceptions, such as transition of a dairy herd, and farm-scale catastrophic events (e.g. drought). These details are laid out in the Standards.

There are now many available premixes and feed supplements that are allowable and available in the Maritimes. The ACORN Brand Name Directory and the Organic Federation of Agriculture Directory are two very useful sources for Maritime producers.

Preventative livestock health care practices are the key to successful organic production. Under the Standards, there are allowances for the use of antibiotics and parasiticides. In dairy animals alone, antibiotics may be used as a last resort. This use is limited to no more than two treatments per year (of antibiotics and/or parasiticides). Meat animals can never receive antibiotics, as is the case for egg producers. However, there are allowances made for parasiticides. There are many details in the Standards. As a producer of livestock, it is very important you understand them, and have a plan as part of your OSP to deal with potential health challenges of the livestock.

The living conditions of the Standards are also full of details. Access to the outdoors is required for all creatures. Ruminants must receive pasture during grazing season. Pigs must be able to root. Poultry must have access to an outside area with vegetation.

I am often asked about shade access. With rotational grazing, there may not always be shade, but in your management plan you must have provided for how you will minimize stress on an animal on a hot, sunny day. Perhaps there will be portable shade, or perhaps animals will be not grazed in the heat of the day. Every farm is different. Again, you must show how you are meeting the Canadian Organic Standards.

Read and understand the Canadian Organic Standards to which you are applying to be certified under. Have easy access to them, and write a detailed organic system plan to help you be prepared for meeting the standards. Keep good records. And enjoy the few hours you have with the inspector.

Further Resources

Organic Livestock Handbook (2nd ed.) 2004. Anne Macey. Canadian Organic Growers Inc.

If you want to raise livestock organically, start by reading The Organic Livestock Handbook. Anne Macey defines the basic principles of organic livestock husbandry and provides detailed discussions of animal welfare, feeding and grazing, health care, manure management, marketing and certification. For many types of livestock ranging from goats to rabbits, and bees to work horses, Macey describes the natural behaviour of the species and how to house, feed and maintain the animals. Throughout the book, Macey provides interesting case studies of Canadian organic farmers and ranchers.

Joel Salatin of Polyface Farm has an innovative approach to farming that focuses on allowing animals to express their innate behaviour and consume a natural diet while performing some of the farmer's work. For example, in his 'pigaerator' system, hogs root through (and turn over) old cattle bedding to forage for corn. The system produces aerated compost and happy healthy hogs. Salatin's main claim to fame is the chicken tractor – rotational poultry foraging. His publications include Pastured Poultry Profits; Salad Bar Beef; Holy Cows & Hog Heaven; You Can Farm; The Sheer Ecstasy of Being a Lunatic Farmer; Family Friendly Farming; Everything I Want to Do is Illegal and the Polyface Farm DVD. www.polyfacefarms.com

Livestock Nutrition From Field to Feeder. 2003. Janet Wallace. Homestead Organics. http://www.homesteadorganics.ca/Field-to-Feeder.aspx
From Field to Feeder describes how to feed livestock organically and maintain healthy flocks. The book provides feeding plans to meet the nutritional needs of animals throughout their lives. The plans adapt the type and amount of feed to meet the energy and protein requirements of animals while growing, producing milk, ovulating, carrying young or laying eggs, and throughout gestation. From Field to Feeder also explains how to avoid and treat common health problems by improving living conditions, adjusting feed levels, providing nutritional supplements and using simple treatments.

Temple Grandin provides insight into how animals perceive the world. She has used her observations of animal behaviour and her own experience with autism to develop livestock handling systems that consider animal welfare. She describes her findings in books, including Thinking in Pictures, Animals in Translation and Animals Make Us Human, and on her website www.grandin.com.

Herbal Handbook for Farm and Stable (4th ed.) 1991. Juliette de Baïracli Levy. Faber and Faber.

The Herbal Handbook is divided into two sections. The 165-page Materia Medica Botanica describes herbs, including many common weeds. For each plant, Baïracli Levy describes its appearance, growth habits, natural habitat and medicinal uses. The bulk of the book describes the symptoms and treatment of common ailments that affect different types of livestock. Baïracli Levy doesn't limit herself to herbal treatments but includes many other natural treatments, such as dietary changes and basic hygiene.

Living with Worms in Organic Sheep Production (2nd ed.) 2008. Peter Stockdale and Anne Macey. Canadian Organic Growers Inc.

Living with Worms provides valuable information for all livestock farmers, particularly those who raise ruminants. Peter Stockdale, a sheep farmer and retired veterinary parasitologist, provides detailed life cycles of many common parasites. He explains how farmers can reduce the parasite load in their flocks and increase resilience so animals can better tolerate parasite loads. Co-author Anne Macey describes how several Canadian organic sheep farmers maintain healthy flocks.

Natural Cattle Care, Natural Horse Care, Natural Goat Care, Natural Sheep Care, Natural Goat and Alpaca Care. 2006-2013. Pat Coleby. Acres USA.

In a series of books, Coleby explores natural health care for many types of livestock. She describes how to maintain healthy animals by providing the appropriate diets, including forage, feed and supplements. She discusses herbal, homeopathic and other natural treatments for many common ailments.

The Organic Dairy Handbook: A Comprehensive Guide for the Transition and Beyond and Transitioning to Organic Dairy Workbook. 2009. Katherine Mendenhall (Ed.). Northeast Organic Farming Association of New York.

The Organic Dairy Handbook is an excellent resource for transitional and organic dairy farmers, and contains information that would be useful for farmers raising other grazing animals. The book covers all aspects of certified organic dairy production starting with "planning for transition." True to its roots in organic farming, the book covers not only pasture management but also soil management. Healthcare is covered in great detail and specifies what products are allowed on organic farms (n.b. Canadian organic farmers should check with the Canadian standards and/or their certifier before using any product). Profiles of successful organic dairy farmers provide real-life examples of the recommended practices. The companion workbook contains worksheets to help farmers plan their transition to organic dairy production.

http://www.cuaes.cornell.edu/cals/cuaes/organic/projects/dairy/dairy-initiative/upload/nofa_OrgDairyHandbook.pdf

Storey's Guides to Raising Livestock. Storey publishes an extensive series of livestock books; most of the titles begin with "Storey's Guides to Raising…" The books provide basic information on raising livestock naturally. For example, a book might begin with breed selection, cover feeding, housing and health treatments, and end up with chapters on butchering and marketing. Some of the recommendations might not be suitable for certified organic growers, but the focus is on natural, if not strictly organic, remedies.

Organic Agriculture Centre of Canada (OACC). OACC offers an online course in organic livestock management and the website is a great source of free information on organic farming. In particular, fact sheets on animal welfare can be found at http://oacc.info/AnimalWelfare/aw_awtf_factsheets.asp, extension articles are posted at http://oacc.info/Extension/livestock.asp and research articles are at http://oacc.info/ResearchDatabase/res_livestock.asp.

Other Resources

- ATTRA, the National Sustainable Agriculture Information Service, posts many articles on organic farming at https://attra.ncat.org. Some of the materials are free; other materials can be downloaded for a fee.
- eOrganic is the organic agriculture component eXtension. The website (http://eOrganic.info) provides free access to articles, videos and webinars about organic farming.
- Odairy is an email forum for organic dairy farmers. http://groups.yahoo.com/group/Odairy/
- The Family Cow. 1975. Dirk van Loon.
- Treating Dairy Cows Naturally. 2006. Hubert J. Karreman. Acres USA.
- Organic Dairy Farming. 1995. Laura Benson & Robert Zirkel. Kickapoo Organic Resource Net.
- Goat Husbandry (2nd Ed.) 1967. David MacKenzie. Faber and Faber. The book was later revised and abridged by an American publisher and some valuable information is lacking in the later editions.
- Greener Pastures on Your Side of the Fence (4th ed.). 1998. Bill Murphy. Arriba.
- Homeopathy in Organic Livestock Production. 2010. Glen Dupree. Acres USA. Note that there are also books on homeopathy for specific types of livestock.

More books on natural and organic livestock husbandry are available from a number of publishers and book distributers, particularly Acres USA and Storey.

Veterinary reference guides are available for all types of livestock. Although the recommended treatments often involve conventional drugs, the books are invaluable in terms of diagnosing ailments. Organic farmers often have difficulty finding veterinarians who are knowledgeable and supportive of organic methods. Learning to diagnose ailments enables farmers to conduct research into organic treatments – something the vet might not be willing or able to do.