



Martime Certified Organic Growers ~ Organic Farm Profiles ~

March 2002

Organic Beef & Organic Pasture Fed Beef

by Roger Henry, PAg.

This profile is part of a project coordinated by the Maritime Certified Organic Growers Cooperative (MCOG), with financial assistance from Agriculture and Agri-food Canada's CARD program. The information contained in this profile was obtained from interviews with regional organic producers over the past two years, and from the author's personal experience.

The systems used to produce organic beef are not that different from the more traditional non-feedlot system used to raise and fatten beef in this region. The organic beef producer requires similar animal housing, land, and feeding system. However, the inputs and the production practices used in organic systems will be different. For anyone considering organic beef production, the local extension office and any certified organic beef producer should have basic information on organic beef farming which will be of value to anyone new to this industry.



New Brunswick certified organic pasture fed beef

Land base

One of the main advantages of beef production is that this commodity can be run successfully on lower priced land. Wetter types of land are actually quite productive when it comes to forage/pasture production and in dry years they can be a real asset. The amount of land required depends on the amount of livestock kept, productivity of the land, and feeding system chosen. If a farmer has the option to choose where to set up the beef farm then consideration should be given to locations where there is available land out of agricultural production. Previously unused or abandoned land, if it has been without chemical inputs for three years, could potentially be organically certified in the first year of operation. There are many places in Nova Scotia and New Brunswick where such land is available for lease or purchase. It is not uncommon for neighbors to offer their land for rent at reasonable rates if they know chemical inputs will not be used; more and more people prefer to have their land farmed organically. Other considerations when looking for a place to set up a beef operation are: the type of buildings on the property; availability of water; woodlot opportunities; hedgerows; and winter shelter options for livestock. A rule of thumb for a pasture-based system would be 2.5–3.0 acres per 1000 pound cow unit.

Buildings

Beef cattle do not require extensive housing during winter; shelter from the elements during the coldest months is typically sufficient. When your cows calve determines the extent of your maternity housing requirements. Calving from May to October will not require much in the way of maternity housing. In all but extreme weather conditions the cattle actually fare better calving out on the grass. When calving in midwinter and early spring, some maternity building with pens that are clean and dry and

have good protection from the elements will be required. Otherwise frozen ears, tails and higher calf mortality due to scours often result.

Production Systems

The three systems currently used to produce beef in this region are: Feedlot with total confinement; pasture feeding with some grain supplementation; and pasture feeding only. The type of feeding system you chose and what you feed the cattle will have significant bearing on the buildings required and the amount of land base needed per beef animal on the farm, as well what markets will be available for your beef. The accessibility and cost of organic feed within the Maritimes is a major consideration when choosing to produce or purchase a portion or all of the feed. The feedlot system, where the cattle are confined from weaning until slaughter and fed a high-energy ration, will not be discussed in this profile since it is contrary to organic production principles and in any event organic inputs are not currently available at a price to make this production system viable.

System 1 – Pasture Feeding Only

This was the traditional method of feeding beef cattle in the region and it is still utilized by many cow-calf operations, whether organic or conventional. The cattle are pastured throughout the grazing season and fed stored forage in the winter. It is a simple feeding system, especially for the organic producer. The normal grazing season is from May to October or November. Season extension techniques are available to extend pastures well into November and early December in many parts of the Maritimes. Rotational grazing systems are proving to maximize grass production and reduce equipment requirements by allowing the cow to harvest her own feed. Rotational grazing has been shown to be quite profitable. Recent research at Nappan Research Station in Nova Scotia has shown that pasture fed cattle produce high quality meat. Pasture fed beef will generally have lower total fat content than feedlot beef and the fat will have a higher percentage of the beneficial fatty acids. This feature of pasture fed beef is now a selling point used by organic and non-organic graziers in the region and is discussed in detail in Jo Robinson's book *Why Grassfed is Best*.

There are two winter feed options for a pasture-based organic beef system: hay or silage.

Hay: The production of high quality hay requires good drying weather in June and July. High quality hay is a traditional and favorite food of cattle. When cut early and cured properly it serves as excellent feed and will not require



Pasture fed beef requires high-quality forage.

protein supplementation. Although equipment requirements for harvesting hay are not excessive, farmers in this region can choose between making their own hay and hiring a custom operator to do the job.

Silage: In areas where farm managers find they are not able to make good hay, a silage system which reduces the requirement of consecutive dry days to make quality feed may be preferred. There are several silage systems, each requiring specific equipment and buildings such as a silo, machinery storage, or feeding bunk. It is important to set up a system with minimum need for winter movement of feed as weather can play havoc with any system requiring daily outdoor feeding. High-quality silage is very palatable and high in protein, but if fed free-choice to beef cows it will also tend to fatten them. Depending on your calving system this may not be beneficial, as fat cows do not breed as well as cows in moderate shape. As with hay there are often custom operators who can be contracted to put up the silage for an organic beef operation, thereby saving the purchase and maintenance of forage equipment.

Fattening cattle on full feed silage can cause the cattle to have slightly yellow fat. This may or may not be a problem for the producer. In the conventional beef industry meat with slightly yellow fat is considered inferior, while meat with pure white fat from grain or potato feeding is considered premium quality. However, I am not aware of producers encountering negative reactions to their meat when selling direct to customers. Incidentally, yellow fat indicates high levels of beta-carotene, which is considered healthy for humans.

System 2: Pasture Feeding with Grain Supplement

This system is basically the same as the above except the cattle to be finished are fed some grain (usually barley and/or oats) prior to slaughter. Some producers prefer to finish cattle with some grain and they usually have customers who want this type of beef. In addition some producers are unable to fatten the cattle in their grazing system using only forage. Provided all feeds and the production methods are certified as organic, the meat will qualify as organic beef. Grain-fed beef, however, could not be labeled as pasture fed.

Organic grains: If one chooses the production system requiring grain in the ration then it is important to secure a source of organic grain. The accessibility of organic cereals is currently a real challenge in the region. This is changing, but it will be a few more years before a substantial amount of local certified cereals are available. In 2001 a feed mill in Kensington, PEI became certified to handle and make organic feed. The organic grains used in their rations come mainly from Ontario; this is costly and makes the production of a ration using significant amounts of organic barley unprofitable for the beef producer. Currently a tonne of imported organic mixed grain will cost \$350+. This will change as more local grain producers convert to organic.

There are other options—the beef farmer can grow his/her own grains, or make an arrangement with a cereal producer who is growing grains for human consumption. Sometimes they have grain that does not make the grade for milling quality but is satisfactory for cattle feed. Another alternative would be to contract feed barley or oats from a local cash cropper. This may be the best option as it would ensure supply and guarantee the price. If a cash cropper had a local market for organic oats or barley, they would grow it to extend their rotation and diversify their farm, both of which are beneficial to them and the environment. The price of mixed organic grain in Ontario at the farm gate was \$250 per tonne in the fall 2001.

Challenges

Animal Health

Some feeding systems can actually prevent disease by ensuring that the cattle are not able to defecate on their feed. Rotational grazing reduces the potential for the spread of all diseases and parasites as the cattle are moved to a new piece of grass daily or every few days. Cattle on the same piece of grassland for the entire season will tend to have internal parasites problems. Such systems are unproductive in

tonnage of forage produced per acre as well. Access to good clean water reduces the potential for foot rot and the spread of disease. The most important thing to know about organic animal production is that given half a chance, animals will stay healthy if they are fed high-quality feed. This means giving them a diet made up largely of forages, the occasional opportunity to graze weeds and bushes, and allowing them to express their own instincts and behavioral patterns. Animals will self-medicate to a certain extent by choosing various plants to browse on. Under the right conditions in an organic system, problems such as foot rot and pink eye can be kept to a minimum.

Another important factor is knowing the animals and being able to detect the onset of illness. Since antibiotics are not permitted in an organic system, other methods such as homeopathy or probiotics must be used. Organic standards forbid the withholding of antibiotics from an animal if it is the only treatment. Once treated with antibiotics the animal loses its organic status. There is a growing interest and understanding of alternative medicines such as homeopathy and probiotics in this region. Presently a veterinarian in Nova Scotia is actively practicing animal homeopathy. Probiotics have also been used by a few producers in the region for the past decade. There are several beef/dairy producers in the region who use such treatments and have excellent herd health.

Predators

The only predator encountered by beef farmers in this region is the coyote, and it can be discouraged by the inclusion of a donkey in the herd or judicious selection of cattle breeds that are more protective of their young and able to drive predators out of the field. Regionally, coyotes are more problematic for sheep farmers than those raising beef.

Slaughterhouse requirements

The slaughter regulations vary in the region. PEI and New Brunswick require beef to be killed at provincially inspected plants. Nova Scotia regulations require all third party sales to be killed at inspected plants, while sales direct to the consumer can be slaughtered on the farm. This allows producers in Nova Scotia options not available in PEI and New Brunswick. In order to sell meat outside the province the animal has to be killed in a federally inspected plant of which there are very few in the region. To my knowledge there is only one active in each province and none of them have organic certification. It is possible to get local provincial plants to follow a certification protocol on a case by case

basis if agreed by an organic certification body. A provincially inspected slaughterhouse in Sussex, New Brunswick has been operating under this system for the past three years.

Marketing

Marketing is where many organic beef producers falter because they view production of primary importance. Marketing is just as important and it provides an excellent opportunity to link the consumer back to the land. More and more consumers are seeking this connection. Marketing requires time and effort; you must acquire knowledge (perform some market research) to understand what consumers want and are willing to pay a premium for. If an operation is to be profitable and therefore sustainable, the beef produced must be sold at a premium compared to conventionally raised beef. It must be marketed as a superior product, several notches above standard freezer beef. Establishing and maintaining the product's integrity with the customer is what will allow an organic beef farm to prosper.

At slaughter each animal should gross roughly \$2000; the exact amount depends on animal weight and your marketing strategy. Additional value-adding to the product could easily double that number. Trying to compete with stores and discount operations, or selling to conventional sources will not be financially sustainable and will require outside income.

This past year the major wholesalers have expressed some interest in purchasing organic beef, but their policy of all product being purchased at a central warehouse and then shipped throughout the region means all beef would have to come from a federally inspected plant. Given this limitation, marketing organic beef to major chains will require some additional infra-structure and production strategies before it is a real option. One can still wholesale organic beef to local retail outlets, especially in the major cities. As stated above, when selling direct it is important to distinguish between your product and the regular beef in the supermarket (this isn't difficult to do—most western beef is finished in feedlots on a high grain ration which includes antibiotics and hormone implants). Direct selling also requires that you develop a relationship with your customers. It will help if you prepare a short information sheet about your production methods and its benefits. When selling direct in quantities of twenty pounds or more, you might consider guaranteeing the meat you supply; if the customer is not satisfied you will replace any unused portions.

The bottom line is that organic beef should retail for at least \$1500-\$2000 per head, depending on your marketing system.

Labor requirements

If you have a 35 cow herd, keep all calves and sell them when they are 2 years of age, you will have approximately one hundred head of cattle on the farm. That would constitute a full time job for one person year round, and would require additional help in the summer when putting up winter feed.

Recommended Reading

Greener Pastures Your Side of the Fence by Bill Murphy. This is an excellent manual on setting up and maintaining a good rotational grazing system.

Salad Bar Beef by Joel Salatin (Polyface Inc., Virginia). In this book Joel Salatin, a very successful mixed farmer from Virginia, discusses his system of producing and marketing pasture fed beef.

Why Grassfed Is Best by Jo Robinson (Vashon Island Press, Vashon, Washington). In her book Jo discusses in detail the benefits of pasture fed beef, eggs and dairy products, and the research supporting this conclusion.

The Stockman Grass Farmer (Mississippi Valley Publishing Corp., Jackson, Mississippi). A monthly journal for those interested in grazing various types of animals.

Project Funding Partners:

New
Brunswick
Agricultural
Council



Prince Edward Island
ADAPT Council



Agri-Futures

Nova Scotia's Adaptation Council

Canada



Agriculture and
Agri-Food Canada

Agriculture et
Agroalimentaire Canada