

Organic dairying in Quebec...alive and well!

Quebec organic dairying is a model well worth emulating, particularly in those regions, such as the Atlantic Provinces, that lack organic dairy production. The evolution of the Quebec organic dairy system is one that was marked with vision, determination, and cooperation. Pioneers in organic milk production received no premiums and lacked a marketplace for their value-added product, as such organic milk was not processed separately from conventional milk. However, a decade ago, regional pockets of organic milk producers proved sufficient in quantity to warrant distinct processing facilities and the Quebec organic dairy industry was born. Now, the province boasts over 50 certified organic milk producers who not only supply the needs of the Quebecois, but also are exporting fluid milk and milk products to other regions of Canada.

On a recent tour (funded by the NB and PEI Departments of Agriculture and the Organic Agriculture Centre of Canada-OACC) of organic dairy farms in Quebec, veterinarians, dairy producers, and agronomists (myself included) got a first-hand look at the technical aspects in converting from conventional to organic milk production. But as one producer noted, "technical aspects are only a small part of the transition, the mental change of learning to see your farm from a totally different perspective is the big battle." So, without question the greatest benefit of the farm visits was talking with each producer and hearing their challenges, their perseverance, and their successes. Each farm we visited was as expected, very unique, however there was an underlying philosophy that seemed to be expressed by all. This article will highlight some general principles practiced by Quebec organic dairy producers.

Field Crop Production and Pasture Management

A common theme among all organic producers hosting the tour was the need for self-sufficiency in cereals, forages, and straw. For them these inputs must come from on-farm sources to enhance economic viability of the system. A typical rotation included three years of forages followed by one year of mixed grain (often underseeded to forages). The mixed grain often included three cereals (e.g., wheat, oats, and barley) and field peas, all sown at 90 lb/acre. The increased competition by having several species worked well in suppressing weed encroachment, but also served to retard the earlier-maturing barley so all species were at similar stages of development at time of harvest.

Hay and pastures were also complex mixtures often involving three legumes (e.g., alfalfa, red and white clover) and several grasses (e.g., orchardgrass, perennial ryegrass, meadow fescue, timothy, and smooth brome grass). Without exception, the organic dairy producers were using a modified version of intensive rotational grazing called strip-grazing. Milking cows would essentially have access to new "strips" of pasture twice daily (after each milking). Pastures were mowed at least once after grazing to ensure even regrowth and to remove any herbage that was rank.

The high forage-based rotations serve as a deterrent for weed establishment (with exception of quack/couch grass), however cultivation also plays an important part in producing a weed-free crop. Typically, a finger weeder is used blind, followed by the rotary hoe at the 2-leaf stage, and then the finger weeder at the 3 to 5-leaf stage.

Nutrient Management

Quebec is leading the way in facilitating farmers to create a nutrient management plan for their farms. The environmental plans for these farms regulate the number of milking cows and the number of total animals permitted for a given area of land.

The organic dairy producers visited kept detailed records of manure (composted or stacked) applications. Some producers, who separated urine from the solid manure, also kept track of urine application rates (typically 2000 gallons/acre on a hay crop).

Farm Management

An integral component to the success of the organic dairy industry in Quebec is the existence of farm management clubs (over 60 in the province with nearly 2000 farmers participating). These technical support groups have created networks where producers, both conventional and organic, share economic data and evaluate their performance. With production peaking at just less than 9000 kg of milk/cow/year, most organic producers are not at the top of the pack. However, with cost of production being significantly less than their conventional counterparts and a 10% premium for their value-added product, most organic producers find themselves in the middle of the group. In many clubs, farmers not only share economic information, they also share equipment, fostering cooperation while simultaneously reducing overhead.

Livestock Health

Veterinarian bills can often be your single largest unexpected expense of your dairy operation. For the tour participants the livestock health issue was by far the most interesting aspect of the farm visits. At each farm, the story followed a similar pattern - homeopathy leading to prevention. During the transition phase most of the organic producers were reliant on homeopathic remedies that treated mastitis, pneumonia, and other ailments. Many were pleased with their successes in using homeopathy, but realized that this was just a stepping-stone for a more proactive approach - prevention. Without exception the farms we visited were immaculate and had adequate bedding. Many producers placed great emphasis on proper ventilation and the importance of daily exercise in the outdoors year round. But, the most prevalent tool used to promote livestock health is probably best described by the following. A tour participant asked an organic dairy producer if he could see his pharmacy (to get a look at which medicines were being used). The producer agreed and proceeded to take the tour to visit his feed mixer. For him and many others the key to livestock health begins with nutrition. All

producers favoured a greater percentage of the diet to forage rather than grain. Also mineral supplementation via sources such as sea kelp and crab meal was key for proper nutrition. More acute problems such as internal parasites and detoxification were achieved by feeding bentonite clay and charcoal, respectively. Fly control was managed using essential oils (citronella/clove) while mites were controlled using vegetable shortening and sulfur coated on the hide.

Heifer Development

Other aspects in the prevention of disease or illness were the maintenance of a closed herd and reducing visitors (especially veterinarians). Without exception, vaccination was not part of the livestock health program so generating your own replacement heifers was important. Early nutrition plays a central role in building a healthy immune system. Calves receive no grain until six months of age. A diet consisting of milk and hay is fed until weaning at which time they are ready for pasture. According to several producers, milk fed using a bottle with a small-holed nipple helps stimulate saliva production, which in turn helps develop the digestive system.

Tour organizer, Claude Bertheleme (Organic Production Specialist at NB DFA) emphasized the importance of dairy producers in the Atlantic Provinces to "not re-invent the wheel", but rather take advantage of the experiences of other organic dairy producers across Canada and adapt them to fit their regional needs. The OACC is currently conducting on-farm research on three transitional dairy farms in New Brunswick and Nova Scotia, with hopes that one of them will be the first certified organic dairy producer in the Atlantic Provinces.