



Martime Certified Organic Growers

~ Organic Farm Profiles ~

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Organic Poultry – Eggs

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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, poultry specialists, and from the author's personal experience.

Poultry Production Methods

In recent years there has evolved several different methods or systems for producing eggs. These systems vary in how the birds are housed, fed and managed. Before discussing organic poultry production it is important to clearly identify the various systems; some of the names are similar yet the production systems can be quite different.

Conventional Layers (battery cages) – In this system two to four pullets as young as 19 weeks of age are put into a wire cage with an area of approximately two square feet. A barn full of these cages is known as a battery of cages.



Organic free range poultry.

These barns contain thousands of birds. Feeds are allowed to contain antibiotics at prescribed levels. Battery cages are banned in some places in Europe and in recent years are often targeted by animal welfare groups when discussing issues of cruelty to animal.

Free Run – This system is similar to conventional layers but does not use battery cages. The layers are allowed to run on the floor of a barn. Birds are densely packed in these barns with no access to the outdoors, and are fed the same feed as battery birds. Eggs produced by this system would be known as 'free run' eggs.

Free Range - Birds in this system are required to have outside access most of the year. Birds would have a significant outside run or runs, and would have roosts for resting. There is the same floor space requirement as organic. The feed is not allowed to contain any antibiotics or production stimulants. Eggs produced in this system would be known as 'free range' eggs.

Pastured - The layers are kept in a movable enclosure with nests and roosts. The structure is moved once or twice daily to a new piece of grass. The chickens will forage and get 20% of their diet from the forage and insects in the new ground daily. This system differs from free range as the birds have access to new grass/ground daily. In this region birds can be pastured for six to seven months a year.

Organic - Organic guidelines are more stringent than free range. The pullets must be raised by certified organic production methods from birth. The layers are required to have outdoor access year round, or be fed sprouted grains for the period when indoors only. As well, all feed must be certified organic. No antibiotics or meat by-products are allowed in the feed and each bird is required to have two square feet of floor space. One can buy conventional chicks but they have to be raised organically from birth to be considered organic birds. (Note: exact guidelines will vary with certifying body used) Eggs produced in this system would be known as 'organic' eggs.

Omega 3 – Laying hens in this system are fed a diet enriched with feeds high in omega 3 fatty acids. This is normally done by adding flax seed to the laying ration. It can also be achieved by pasturing the layers. Recent research has shown the omega 3 fatty acids to be beneficial to human health. Chickens fed a ration high in omega 3 will produce eggs much higher in omega 3 fatty acids than the conventionally farmed bird.

Quota System – The production of eggs in Canada is controlled under a supply management system, which means there is a limit or quota of egg layers in this country. The total quota for Canada is divided up between the provinces and administered within each province by a local board. Each farm has a quota allotment which allows them to own/manage a specific number of layers. The quota will vary in price from province to province; average price is \$100 per layer. A single quota gives one the right to sell all the eggs produced by one bird in one year at the price set by the board. Each province does exempt small flocks from the quota system. The number of layers one is allowed to own without quota varies with each province. At present it is 300 layers in PEI, 199 layers in NB, and 99 layers in NS and NFLD & Labrador. For anyone wanting to raise more than the maximum number of birds (and are unable to purchase quota), there may be special allowances/provisions made, especially for producers who want to produce non-conventional eggs. You will need to demonstrate there is a market which is not being met by local production, and imports to fill this market may be pending if the market is not filled locally.

Breed

The breed you choose depends on your objectives and markets. There are many breeds of poultry and each has advantages and disadvantages for egg production. For more complete information and practical experience contact a local hatchery or an extension specialist.

Commercial White Layer – Each breeding company has its own strain. This is typically a refined bird requiring a high quality diet. It is a bit more nervous/skittish than a brown commercial strain, and is a small breed (only 4 pounds when mature). Average commercial production is 25 doz./yr.

Commercial Brown Layer – Each breeding company has its own strain. This is also a refined bird requiring a high quality diet. It may produce a little less than the white layer, and is a larger bird (five pounds when mature). It tends to be cannibalistic if stressed. Five to ten percent of brown layers will produce fishy smelling eggs if fed fishmeal or canola meal.



Inside view of free range poultry shelter.

Bovan Neara – Rhode Island Red hybrid x Barred Rock female. This is a black bird that lays brown eggs. It is a larger bird and a good layer capable of reaching commercial production. It is possible to buy pullets with full beak from the hatchery in NB if you are interested in pasturing the layers.

Bovan Gold - Rhode Island Red hybrid x White female. This is a brown bird that lays brown eggs, on average 25 doz./yr. It is smaller than the Neara. It is possible to buy pullets with full beak for pasturing.

Rhode Island Red – This is a pure breed, larger than the commercial birds and more docile. It is a reasonably good layer (70%) that produces brown eggs. It is difficult to find chicks locally.

Barred Rock – This is a larger pure breed, more of a dual purpose hen that lays 60% (variable depending on conditions). There is a pure flock at NSAC, and the hatchery in NB does sell chicks periodically.

Production

Management and tender loving care play a critical role in the success or failure of any poultry business. If one is interested in producing eggs on a small but serious scale then a target production needs to be set to calculate costs and determine the profitability of the venture. Conventional layer barns work on a 25 dozen eggs per bird per year target. A reasonable target for free range or organic would be 20 dozen eggs. To achieve such a target one needs a high quality feed and lots of it.

Ration

The ration is very critical for good egg production. In all but organic egg production access to high quality local feed inputs is possible. One has to inquire about the source of feed and additives in the feed but it should not be a problem to make a suitable ration for laying hens without the chemical inputs used in the conventional ration. Certified organic laying feeds are expensive and at present hard to find, especially protein sources. There is very little certified grain grown in the region; almost all available here is imported from upper Canada.

In general a pelleted ration is more expensive, but hens will lay more than with a mash type feed. A layer will eat 120 pounds of an 18 percent protein ration per year in a free range system with a run (commercial layers require 100 pounds of 16–18 percent protein annually. Pastured layers can obtain up to 20 percent of their feed requirements from the pasture. Cull vegetables from a market garden will also replace the grain requirement, similar to pasture feeding. For those interested in producing Omega 3 eggs, add flax seed at a rate of 7 percent to the laying ration. The ration will also affect the egg yolk color. Free range, pastured poultry or chickens on a high corn diet will produce deep-colored yolks.

Housing

A few points to consider when renovating or constructing a layer building:

(1) Temperature: hens lay best at room temperature (70 degrees F/20 degrees C), with good production in the temperature range of 45–80 degrees F/7–26 degrees C. Normally it would pay to insulate your building.

(2) Light: hens rest or are dormant when it is dark and are most active early in the day. The majority of eggs (80+ percent) will be laid by 2 PM. Some producers keep the hens indoors until then and let them out after 2 PM to forage and exercise, which keeps the barn litter and nests cleaner.

(3) Day Length: hens are most productive when there is fourteen hours of light.

(4) Runs: if you'd like your birds to have access to the run throughout the daylight hours, it may be best to set up more than one run. This allows for rotation of the runs and regrowth of the vegetation. A run without ground cover will become muddy in rainy weather, which in turn will dirty the barn and nests and require more time cleaning eggs. The size of the run required depends on the number of birds. Three hundred layers will turn a 300 foot x 50 foot run to brown soil in a season.

Organic Chicks

Chicks have traditionally been raised on finely ground boiled eggs mixed with oatmeal. This type of starter can be made on farm provided the eggs and oatmeal are certified. Also, any poultry diet can be improved significantly by the addition of cod liver oil. This may be too expensive, but in the past it was a cheap source of vitamins.

Canadian disease standards for poultry are higher than the US standards; care should be taken when importing chicks from a US hatchery to ensure the disease quality standards are comparable.

Traditionally, many small poultry flocks were molted and kept over the second year. The birds are out of production for two months during the molting process and produce well for another ten months following the molt. These birds can be quite productive for two years and molting reduces input costs.

Marketing

It is important to check the markets for your eggs prior to going into production if you expect to have more than a few hens. If you plan to sell wholesale, even to a local retail outlet, the eggs must be graded in a federally inspected facility and placed in a new carton with a product code. The cost is approximately 40 cents per dozen. The Canadian Food Inspection Agency, if made aware of ungraded product on the shelves, will seize the eggs and prohibit the retailer from buying any more such eggs. The major food retailers are moving towards purchasing all eggs at one point from a source that can supply the entire region with a particular product. Recently smaller poultry producers have seen their market disappear overnight as wholesalers discontinue local purchases in favor of a source that could supply the entire region.

Pricing

The following prices reflect an average that producers can expect to receive for their eggs. Keep in mind that the market is changeable and unique to each local area. There are few organic eggs produced in the region, even in small flocks, as there is currently no economically viable organic laying mash. Free range or pastured eggs sold at the farm gate ungraded are selling for \$2.00-\$3.00/doz. throughout the region. Free range eggs graded should wholesale for \$3.00 / doz. and retail for \$3.50-\$3.80. They are presently selling in the Halifax farmers market for \$2.50/doz. ungraded and \$3.25/doz. graded.

Organic eggs graded should wholesale for \$3.50-\$3.80/doz. and retail for \$4.75/doz. Presently the only graded certified organic eggs in the region are imported from Ontario and are retailing for approximately \$4.99/doz.

Challenges

Animal Health

Commercial pullets are vaccinated for several respiratory diseases and merk, but they are raised in cages and probably are susceptible to coccidiosis if put on the floor. An alternative would be to raise pullets from chicks with commercial feed. By eleven to twelve weeks pullets raised on the floor will have developed immunity to coccidiosis and one could then feed their own ration.

The traditional method for controlling lice was to put dry wood ashes in the corner of the henhouse. The hens will dust in the ashes and this will control lice.

Predators

For those considering free range or allowing the hens to run around at large, birds of prey can be a real problem. Generally one has a period of grace until the eagle finds a flock but once found will carry off chicken daily if not prevented. Foxes, skunks and raccoons will also take chicken.

Cannibalism

This can be a major problem. It is brought on by stress from overcrowding, undernourishment, a low protein diet, overheating, or lack of attention to the flock. An extended period of muggy, rainy weather may also induce cannibalism. Commercial pullets are debeaked, but an alternative to debeaking is spectacles that one can put on the bird to prevent cannibalism. Debeaked chickens generally cannot eat eggs, but alternatives to debeaking include putting hot boiled eggs in the nest, or emptying some eggs and filling them with hot or bitter substances such as pepper.

Resources

All literature before 1950 discusses raising poultry using organic type of production methods, since the entire industry was made up of small flocks. Around 1950 drugs were discovered to control coccidiosis, allowing larger, confined flocks and intensive production systems we see today.

Egg Marketing Boards:

PEI tel: 902-892-5331 NS tel: 902-895-6341
NB tel: 506-458-8885 NFLD tel: 709-722-2953

Hatcheries:

NB tel: 506-485-2930 (Miss Feathers)

Recommended Reading and Surfing:

All literature before 1950 will discuss poultry raising using organic type of production methods as the entire industry was made up of small flocks. Around 1950 drugs were discovered to control coccidiosis and this has allowed the conventional poultry farmer to have these larger confined flocks and intensive systems we see today.

Pastured Poultry Profits by Joel Salatin (Polyface Inc., Virginia). In this book a successful mixed farmer in Virginia discusses his system of producing and marketing pastured poultry and eggs.

Why Grassfed is Best by Jo Robinson (Vashon Island Press, Vashon, Washington). Jo relates the benefits of grassfed meat, eggs and dairy products as well as the research that verifies these benefits.

A Guide to Raising Chickens and The Chicken Health Handbook by Gail Damerow (Storey Books, VT). Readable, practical guides to raising poultry. Good resources at the farm level.

Stockman, Grass Farmer. A monthly magazine on the utilization of grass for animal feed. This publication has regular articles on pastured poultry; the December 2001 issue has examples of pasture cages.

www.mcmurrayhatchery.com. The web site of Murray McMurray Ltd, known throughout N. America as a source of poultry equipment and pure breeds of poultry and fowl.

www.homestead.org/animalsupp. The web site of Homestead Organics rare breeds, provides sources of various breeds of poultry.

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