

Martime Certified Organic Growers

~ Organic Farm Profiles ~

March 2002

Organic Poultry – Meat Birds

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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 raising small flocks of meat birds. These systems vary in how the birds are housed, fed and managed. The following defines some of the common production methods.

Non-organic Commercial Broilers - Day old chicks are put on the floor of a large barn on the floor and allowed to run around. The chicks are fed a refined ration, which is allowed to contain antibiotics at prescribed levels. Various artificial lighting schedules are used to obtain maximum



Organic pastured turkeys in a pasture cage.

growth of the chicks. The birds typically grow very fast, reaching four pounds in approximately forty days, at which time they are slaughtered. This meat is the commercial chicken available in stores.

Roasters - These are commercially raised birds larger than four pounds, typically 50-70 days old at slaughter.

Free Range - In this system birds are required to have access to the outdoors most of the year, with significantly large outside run or runs, and a minimal floor space requirement of two square foot per bird. The feed is not allowed to contain antibiotics or production stimulants. Meat produced in this system can be labeled "free range."

Pastured - In this system the birds are kept in a movable enclosure with shelter from the elements. The structure is moved once or twice daily to a new piece of grass. Chickens may get up to twenty percent of their diet from the forage and insects in the new ground daily. This system differs from free range since the birds have access to new grass daily. Birds can be pastured for 6-7 months each year. Birds produced in this manner are called Pastured Poultry.

Organic - The guidelines for raising organic chickens are more stringent than free range. From birth the chicks must be raised by certified organic production methods. The birds are required to have access to the outdoors or be fed sprouted grains for the period when confined indoors. The ration must be certified organic and is not allowed to contain antibiotics or meat by-products. Each bird is required to have 2 square feet of floor space. One can buy conventional chicks but they must be raised organically from birth to be considered organic birds. (Note: exact guidelines will vary with organic certification body used)

Quota System

The production of poultry meat (chicken and turkey) in Canada is controlled under a supply management

system, which means there is a limit or quota of amount of broilers and turkeys meat produced 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 in kilograms which allows them to produce a specified amount of chicken or turkey at a price set by the board. The rules and regulations vary considerably from province to province, so it is best to check with your local commodity board. Each province does exempt small flocks from the quota system. The number of birds one is allowed to own without quota varies with each province. At present it is 500 broilers in PEI, 200 broilers and 25 turkeys in NB, 50 broilers in NS, and 100 broilers in NFDL & Labrador. The NS Chicken Board has recognized Free Range as a niche market for chicken. Free range growers are required to purchase an annual license (cost \$25) and pay a levy per bird produced (4 cents in 2001). The turkey quota for PEI is presently under review. For anyone wanting to raise more than the allowable amount of birds there have been some allowances/provisions made, especially for producers who want to produce specialty chicken such as in NS. 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

In the past several breeds of chicken were used for meat purposes. The present meat bird is a hybrid. The breed you choose depends on your objectives and markets. The following comments may help you make that choice. For more complete information and practical experience contact a local poultry farmer, extension specialist or hatchery.

Commercial white broiler – There are various names given to this bird, the most common being Meat King. Each commercial hatchery will have its own name, but this bird is a White Rock X Cornish crossbreed, known to have a problem with slipped tendon and flip-over. There are several strains of this cross and some are better on their legs than others. The commercial bird was bred to live only seven weeks, so if one is going to raise them beyond that point certain precautions need to be taken.

Light Sussex - This is a dual purpose pure breed. It is white/light feathered and does not have the health problems of the meat king, but it is slower growing and has a smaller breast compared to the meat king. It is often difficult to get chicks locally.

Barred Rock – This is a dual purpose pure breed with dark feathers. While the hens are decent layers and do not



Another design for a mobile pasture cage.

have the health problems of the meat king, they have less breast meat and grow more slowly. There is a pure flock at NSAC, and the local NB hatchery often sells chicks.

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 fowl on a small but serious scale then a target production needs to be set to calculate costs and determine the profitability of the venture. The meat king will easily grow to 6-8 pounds in ten weeks; if allowed to grow larger the mortality rate increases significantly. Depending on the system, production costs average \$1.50/lb of chicken produced considering feed costs, mortality and a labour rate of \$7/hour. A mortality rate as low as 5% is obtainable when raising a flock of organic meat birds.

Ration

The ration is a key to profitable chicken production. In all but organic 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 meat birds without all the chemical inputs used in the conventional ration. Certified organic feeds are expensive and currently hard to find, especially protein sources. There is relatively little certified grain grown in the region; most feed grain is imported from upper Canada. Generally a pelleted ration will be more expensive than a mash. The commercial chick starter is 20-22 percent protein. It is possible to make an excellent ration for \$350 per

tonne. If the ration is to be barley based, it should include barley extract enzyme as chickens do not digest barley well. The diet and ration will also affect the colour of the flesh—free range and pastured chickens, and those on a high corn diet will tend to have a yellowish skin color. For small scale flocks a feed conversion of 2.5 pounds of feed for 1 pound of gain is very good. (Commercial producers use feed conversion in broilers of 2:1 and turkey at 3:1)

Ration and Metabolic Disorders

Diet is critical in the health of meat birds. A common problem with commercial birds is slipped tendon or perosis. Slipped tendon causes the bird to go off his feet and stop growing, usually when they are 3-4 pounds. This condition is caused by a magnesium deficiency in the diet. Feeding milk to the young birds is an excellent way to prevent this disease. Another metabolic disorder of the meat king is the condition known as flip-over, where the bird has a heart attack and flips over dead. Fat deposits build up around the heart and cause a heart attack. Males appear to be affected more than females and usually the faster growing birds have the highest incidence. This normally happens when birds are around 3 pounds and later when the birds are near slaughter weight. Stress or overheating increases the incidence of flip-over. A bird that has reached a critical stage of this condition will appear dopey, be nonactive, and have a bluish comb. When this condition is noticed it is best to do emergency slaughter.

There are several ways to reduce the likelihood of metabolic disorders: allow the birds to have abundant exercise; do not overcrowd them; do not feed them an excessively high energy diet (some commercial rations have a very high energy content); keep the birds slightly hungry when they enter the fast growing phase (three weeks old and up; the meat king is not as cannibalistic as the layer so one can keep them a bit hungry); and ensure the ration is high in vitamins and lower in protein (approximately 18 percent; this slows down growth and reduces the chance of flip-over).

Housing

A few points to consider when renovating or constructing a broiler building.

Temperature - Broilers grow best at room temperature (70 degrees F), with good production when temperature above 45 F. As the temperature drops the bird eats more feed for the same growth, this is not a major factor with small flocks. Normally it would pay to insulate the building if one was planning on raising birds throughout the year.

Light - If starting a flock in late spring, with slaughter in late summer or fall, natural lighting works best.

Roosting - The commercial broiler is not a roosting bird, generally roosts are not required for raising meat birds, unless one has a purebred, known to roost.

Smothering - Chicks in general will tend to crowd into a corner and smother each other. To reduce smothering place heat lamps in center of building.

Pasture cages - This is a lightweight portable shelter/pen. The original one used by Joel Salatin is 10 feet X 12 feet in area and only 2 feet high making it awkward to catch or handle the birds. The cage is moved once or twice daily to new grass. Usually the cage is moved twice a day as the birds get older to ensure fresh grass and clean pen. A pen of this size will hold seventy-five birds and allow them to grow to six pounds or more each. The chicks can be put in the pasture cage at three weeks of age if the weather is warm and clement. One has to be careful when moving the cages as the birds (not known for their intelligence) can often get caught and crushed as the rear sill of the cage moves forward.

One option to prevent this would be to put a rubber bumper on the back sill and this would push the bird forward while allowing it to get its foot away from the rear sill of the cage. The rubber bumper could be made of a folded section of an old tractor tube. Pasture cages are lightweight and can be flipped around in a windstorm. There are several new and, I believe, better designs being tried by local producers, so research the options before you build (try searching the internet under “pastured poultry”). A timely visit to someone in the area who is also pasturing poultry would be helpful. This is not a new system, but rather the reintroduction of an old system employing portable chicken houses on skids known as range shelters. They were used locally for chicken production in the 1950s. The range shelters were constructed with a wooden slatted floor and attached run, and they were moved as needed.

Free range housing - This system does not require portable housing, but the birds do have access to a run.

Organic Chicks

Traditionally chicks are raised on finely ground boiled eggs mixed with oatmeal. This type of starter could be made provided the eggs and oatmeal were 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. Commercial chicks are available each spring from local feed dealers throughout the Maritimes.

If you want to produce birds year round there are brokers who can supply smaller quantities of chicks. (Note: the farmer will be required to pay shipping during the off-season)

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.

Marketing

There is an increasing demand for quality chicken raised in a more natural system, whether free range, pastured or organic. Small scale poultry farmers using these systems are experiencing a high demand for their product. Many organic market gardeners are finding that poultry fits well into their operation. It is important to inform your customers of the difference in how your product was produced and the potential health benefits. The most successful farmers have developed a close relationship with their clientele.

Availability & Pricing

There is a relatively small amount of organic chicken now being produced in the region; most of the meat available is imported. Locally grown chicken, whether free range or pastured, is selling throughout the region at \$1.75-\$3.00/lb.

Challenges

Predators

For those considering free range or pastured poultry, birds of prey can be a problem. One typically has a period of grace until eagles find a flock, but once found these birds of prey will carry off chicken daily if not prevented. Foxes, skunks and raccoons are also a threat. In some areas of the Maritimes the raccoon population is very high. Raccoons are known to reach into pasture cages at night and grab birds, killing or mutilating them. Electric fencing placed three inches off the ground around the pasture cage or house has been found to be effective against raccoons.

Meat birds are not as cannibalistic as the layers. Cannibalism is brought on by stress from overcrowding, under-nourishment, a low-protein diet, overheating, lack of attention to the flock, or even an extended period of muggy, rainy weather may induce cannibalism.

Slaughtering

For private use you can kill your own birds, but this requires preparation, equipment and labor. Most farmers hire a commercial facility to slaughter birds for resale.

Resources

Broiler Chicken Commodity Boards:

PEI tel: 902- 838-4108 NS tel: 902-582-7400
NB tel: 506-452-8085 NFLD tel: 709-747-1493

Turkey Commodity Boards:

NS tel: 902-582-7877

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.

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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