

Chickens

HISTORY

When European colonists arrived in Manitoba, they brought with them poultry animals including chickens, turkeys, ducks, and geese. These birds were an important source of meat and eggs for farmers. If there happened to be extra, it was usually marketed locally.

Since then, poultry farming has changed dramatically. For instance, the number of poultry farms has decreased, but the number of birds per farm has increased. Although some farmers still maintain small poultry flocks for their own use, farming has changed from a backyard source of food to a sophisticated farming style. However, over 97 per cent of Manitoba *broiler farms* (farms raising chickens for meat) are owned and run by families.

Marketing has shifted from an *open market system* to marketing boards that regulate poultry production in Canada to ensure supply meets demand. Poultry farmers in this *supply-managed system* are *registered* broiler chicken producers, so the amount of chicken they produce can be tracked.

A DAY IN THE LIFE OF A CHICKEN FARMER

Farmers take care of their birds every single day, including on holidays.

First thing in the morning, a chicken farmer goes out to check the barn. The farmer enters the *anteroom* (the entrance of the barn) where all the controls are located. This room separates the “outside” zone from “inside” zone. The farmer checks the *barn computer*, which controls all barn functions, including ventilation, air intake, and temperature. The computer has an alarm that will immediately notify the farmer if there is a power outage, or if the temperature becomes too hot or cold for the

chickens to be comfortable. Farmers might also have equipment to monitor water consumption, humidity levels, and bird weight.

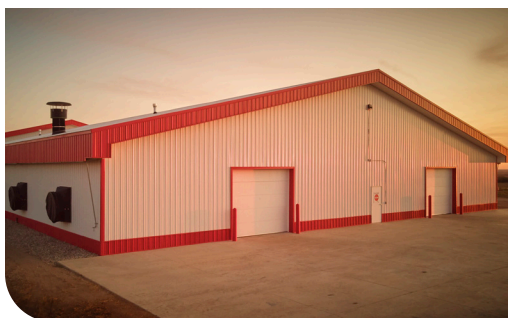
Biosecurity is important on a chicken farm to keep the chickens healthy. The farmer will wear farm clothes and change into barn-specific boots to check the barns.

The farmer enters the barn slowly to avoid startling the birds. First, the farmer will look to see if the chickens are spread throughout the entire barn. The farmer judges the air, and checks the ventilation system, including air inlets, fans, and heaters, to make sure everything is in working order. The farmer makes adjustments, if necessary, and checks the litter condition to make sure it is dry and comfortable for the chickens. The farmer also checks the *feed lines* to ensure there is enough feed, checks the height and pressure of the *water lines*, and repairs anything not functioning properly.

Slowly walking up and down the barn, the farmer looks at the chickens’ appearances and behaviours as a way of evaluating their health and comfort. The farmer looks for sick, injured, or dead birds to be removed.

Once the barn tasks are completed, the farmer returns to the anteroom, washes their hands, and changes out of the barn boots. The farmer keeps records about the barn and flock: for example, the number of culled birds or dead birds, as well as humidity levels, temperature, ammonia levels, and water consumption. The farmer checks the birds at least twice a day.

These recording measures are required under the national *Animal Care Program* and *On-Farm Food Safety Assurance Program* to ensure the health and proper care of the flock. Alarms and generators are tested regularly to ensure emergency situations such as power outages can be dealt with immediately.



PRODUCTION

Chicken farmers watch the birds carefully each day to make sure they are healthy and growing to the desired weight. Modern technology makes this task much easier. The chicken farmer coordinates with the *processing plant* to determine what dates the chickens will be shipped to the plant, and what weight the chickens should be to meet specific market needs. The weight of the chickens is extremely important to the farmer because it has a direct impact on price.

Breeder Farm

Poultry production starts with fertilized eggs that will hatch into chicks. The farms that produce these eggs are called *broiler breeder farms* or *broiler hatching egg farms*, where hens and roosters live together for the eggs to be fertilized. They produce almost 38,000,000 eggs to supply broiler chicks to the meat chicken producers in this province!

Hatchery

The next step in the process takes place in the *hatchery*. There are currently four hatcheries in Manitoba that provide broiler chicks. In the hatchery, the eggs are sorted on trays and placed in an *incubator*, which is a large hot room that controls temperature and humidity. The incubator also turns the eggs at regular intervals. After 18 days, the eggs are moved to the *hatcher* to hatch. Eggs are incubated for 21 days. From the hatchery, when the chicks are still only a few hours old, they are counted, then transported to a broiler farm.

Broiler Farm

Great care is taken on the farm to ensure proper animal welfare and food safety. Broilers are housed in a clean, closed barn to keep them safe from weather, predators, and disease. The barns are maintained at the proper temperature, humidity, and light throughout the year. The chickens are not kept in cages – they are free to roam throughout the entire barn. They are grain-fed and always have access to fresh feed and clean, fresh water. The average time for a *broiler* (meat) bird to grow from chick to a commonly desired weight of two kilograms is about 30 to 33 days.

Processing Plant

Once they reach the desired weight, birds are shipped to the processing plants in trucks specially designed to carry poultry. At the plant, every chicken is checked by inspectors who make sure that each bird is healthy and safe to eat, and that they remain that way as they move through the processing plant.



DIET

Chickens are *omnivores*, meaning they eat foods of both vegetable and animal origin. Creating a feed that best meets the nutritional needs of a chicken is a science.

All chickens are grain-fed. One kilogram of chicken feed contains about 880 grams of grains, oilseeds, and meal made from these seeds. The remaining ingredients include fats and oils, proteins from canola meal or soya, vitamins, and minerals. These are essential for a balanced diet and give the feed an acceptable taste and texture for the chickens. *In Canada, it is not legal to use hormones in chicken production.* The use of hormones and steroids was banned in the 1960s.

The colour of chicken fat and skin changes with the type of grain chickens eat. Chicken farmers in Manitoba use a feed that is high in wheat and soybean meal. These grains are responsible for white chicken skin and fat. Feed containing a high percentage of corn results in chicken skin and fat that is yellow.

As the chickens grow, their nutritional needs change, so the ingredients in their feed are adjusted to maintain optimal health. The chickens are provided with three different *feed rations*:

- A **starter ration** for very young chicks
- A **grower ration** for the growth phase
- A **finisher ration** during the last several days of growth or growout.

The starter ration is a fine and easy-to-eat crumble feed. The grower and finisher rations are either in pellet form or “mash”. A chicken eats about 1.5 kg of feed per kilogram body weight.

NUTRITION

Chicken is Canada's most popular poultry product, and for good reason. Chicken has exceptional nutritional value and is an excellent source of high-quality, complete protein. It is lower in saturated fat than most other meats and provides many other essential nutrients required for health. Chicken breast or white meat is one of the leanest sources of protein, especially when cooked without the skin. A roasted, 100 gram serving of chicken breast (about the size of a deck of cards) contains just 2.1 grams of fat, while providing with 32 grams of protein and 157 calories.

Key nutrients in chicken and their health benefits include:

- **Protein** – required for creating every cell in your body, and critical for building, repairing, and maintaining healthy muscles, skin, eyes, hair, nails, and even bones. Protein aids in healthy immune function and other vital body processes such as blood clotting and production of hormones and enzymes.
- **Vitamin B₁₂** – plays a critical role in brain function and development of healthy red blood cells. Only animal-based foods like chicken contain B12, and dark meat from thighs and drumsticks contains exceptionally high amounts. Chicken is also a good source of many of the other B vitamins, including Biotin, Thiamin, and Riboflavin. These nutrients are essential for several important processes such as converting food into usable energy and for the generation of healthy skin, nails, and hair.
- **Iron** – carries oxygen from the lungs to the cells in your body. All cuts of chicken are excellent sources of heme-iron, an important nutrient for building healthy red blood cells, preventing anemia, and promoting normal brain function. Heme-iron is more easily absorbed by the body than non-

**DID YOU
KNOW?**

All meat chickens are free run, meaning they may roam freely throughout the barn.

heme iron found in plant-based foods. Dark chicken meat is higher in iron than white meat.

- **Zinc** – is vital in promoting a healthy immune system and in helping wounds heal. Zinc is required for proper smell and taste and needed for normal growth and development.
- **Potassium** – plays an important role in maintaining normal blood pressure, fluid balance in the body, and heart rate. Potassium is also essential for maintaining healthy bones, kidneys, nerves, and muscle.



FARMER PROFILE



RACHEL

“I’m a third-generation chicken producer here in Manitoba, where I currently farm with my parents and brothers. We operate a mixed farm, meaning we raise broiler chickens for meat and grow crops in the fields. The best part of being a chicken producer in Manitoba is being in the barn with the chickens. Walking the barn throughout the day and making sure the chickens are comfortable is my favourite part. I love seeing the chicks start out so small then watching them grow into a market ready bird for other people to enjoy for supper as much I as I do. It is always fun, exciting, and brings new challenges.”

INDUSTRY IN MANITOBA



Production: Each farm averaged 71,563 kg of chicken every 7 weeks (2019)

Producers: 125 farms in Manitoba (2022)

Value to Economy: \$2.8 million in farm cash receipts (2020)

INDUSTRY IN CANADA



Production: 1.27 billion kg of chicken meat (2020)

Producers: 2,836 (2020)

Value to Economy: \$123.1 million in farm cash receipts (2020)

ANIMAL WELFARE

Chicken farmers value the welfare of their birds and take measures to ensure they are safe, comfortable, and healthy.

Today’s chicken barns are well ventilated. The temperature and humidity in the barns are regulated so birds are always at a comfortable level for their age.

Modern chicken barns also feature a water pipe known as a *nipple drinker line*, and an *auger* that automatically dispenses feed from a bin outside directly into a *feed pan*. Each barn has enough water nipples and feed pans to give every chicken many opportunities to drink and eat.

All barns require alarms to notify farmers of temperature problems and power outages. Farms must have generators to run all the barn equipment in the event of a power failure.

ENVIRONMENT

Chicken manure is a valuable fertilizer. After the chickens are shipped to the processing plant, the farmer scrapes the manure out of the barn. The manure is often temporarily stockpiled until an appropriate time when it can be spread on fields to provide nutrients for growing crops.

Sustainability is important to chicken farmers. Providing safe, affordable chicken that is humanely raised is a priority in the industry. Chicken farmers are active contributors to the economy and to food banks. They also continually seek ways to improve efficiency, animal care and land health.

CAREERS

- » Farmer
- » Poultry veterinarian
- » Poultry researcher
- » Chicken catcher
- » Truck driver
- » Meat cutter
- » Poultry nutritionist
- » Engineer
- » Computer programmer
- » Farm/plant inspectors
- » Feed mill operator
- » Marketing



Explore the diverse careers in agriculture at [thinkAg](http://thinkAg.com).