

Chickens



History

Poultry that arrived in Saskatchewan with European pioneers included chickens, turkeys, ducks, and geese. Birds were reared extensively and were frequently scavengers in the farmyard. These birds were an important source of meat and eggs for farmers and if there happened to be extra product it was usually marketed locally. As time passed, chicken production evolved into a more sophisticated industry and farmers started to raise more birds to provide a larger portion of farm income.

Poultry farming has changed dramatically over the years. The number of poultry farms keeping poultry has decreased, but the total number of birds per farm has increased. Although a few farmers still maintain small poultry flocks for their own use, farming has changed from a backyard source of food and minor income to a sophisticated and intensive business. Marketing has also shifted from an open market system to marketing boards that regulate production in Canada to ensure the demand for chicken is met by the appropriate supply. Poultry farmers in this supply managed system are “registered” broiler chicken producers, so the amount of chicken they grow can be tracked.



A Day in the Life of a Chicken Producer

First thing in the morning, a chicken farmer will go out to check the barn. They will enter the anteroom (this is the entrance of the barn where all the controls are located), and check the barn computer. The barn computer controls all of the barn functions such as the ventilation, humidity, and temperature. If there were any incidents in the barn during the night the farmer will be able to see it there. They will then change into clean, barn-specific boots and enter the barn slowly so as not to disturb the birds. Walking up and down the barn, the farmer will look at the feed lines to ensure there is enough feed, check the height and pressure of the water lines, and repair anything that is not functioning properly.

The feed and water lines will be lifted as the birds grow bigger. The ventilation system including air inlets, fans, and heaters are checked to make sure all is in proper working order. The farmer will look for sick or injured birds to be culled and dead birds to be removed. The culled and dead birds are removed from the barn as soon as possible and taken to a composting pile at least 15 metres away from the barn. Once these tasks in the barn are completed, the farmers will go back to the anteroom, wash their hands, and change out of their boots. They will check the barn computer again, looking for water consumption, feed consumption, feed efficiency, and weight.

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They will record on a sheet of paper what they saw in the barn that morning (number of culled birds, the ammonia and humidity levels, temperature, water meter reading, feed consumption, and thermal comfort level of the birds). These recording measures are required under the national Animal Care Program and On-Farm Food Safety Assurance Program, as well as to ensure the health and proper care of the flock. Alarms and generators are tested periodically to ensure emergency situations, such as power outages, can be dealt with. All of this work is done at least twice a day.

Production

Producers watch the birds carefully each day to make sure they are healthy and growing at the desired weight. This is made easier by the use of modern technology on the farm. The chicken farmer coordinates with the processing plant to determine what dates they will deliver, and at what weight the chickens should be for the market that those birds will fill. This weight is extremely important to the farmer as weight ranges will change the price they are paid. The average time for a broiler (meat) type bird to grow from a chick to two kilograms is about 33 to 38 days. A roaster takes 45 to 60 days on average to reach 3.2 kg.

Breeder Farm

The first step in poultry production is to have fertilized eggs that will hatch into chicks. The farms that produce these eggs are called breeder farms or broiler hatching egg farms. There are ten breeder producers in Saskatchewan and eight farms that produce hatching eggs for the broiler (meat) industry. Typically one breeder farm will supply enough chicks for eight broiler farms. They produce over 30,000,000 eggs to supply chicken meat producers in the province.

Hatchery

The next part in the chain from egg to final product is the hatchery. At present there are two hatcheries in Saskatchewan that supply the registered broiler chicken producers. In the hatchery, the eggs are sorted on trays and placed in a special machine called an incubator. This machine controls the temperature and humidity of the egg. As well, it turns the eggs at regular intervals. After about 18 days, the hatching eggs are moved to the hatcher. Hatching time for chickens is 21 days. From the hatchery, the chicks are counted, and then transported to a chicken farm when the chicks are only a few hours old.

Growing Barn

Care is taken at all times on the farm to ensure proper animal welfare and food safety. The birds are always kept in a facility that is clean and disease free. The barns are kept at the proper temperature, humidity, and light throughout the year. The chickens are not kept in cages; they are grain-fed and have access to fresh feed and clean fresh water at all times.

Processing Plant

Most chickens stay in the barns for 33 to 38 days and weigh around two kilograms before going to the processing plant. They are shipped to the processing plants in trucks designed for carrying poultry. At the processing plant, every chicken is checked by inspectors. The inspectors make sure the chickens are healthy and safe to eat and remain that way as they move through the processing plant.

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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 the meal made from these seeds. The remaining ingredients include fats and oils, proteins, vitamins, and minerals. These ingredients are essential for a balanced diet, and give the feed a taste and texture that is acceptable to the chickens. No hormones or steroids are ever given to 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 the chicken fat and skin changes with the type of grain chickens eat. Chicken farmers use a feed that is high in wheat and barley. 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 amount of each feed ingredient is adjusted to maintain optimal health.

The chickens are provided with three different feed rations or types: starter ration for the very young chicks, grower ration for the growth phase, and finally a finisher ration to put on extra weight. The starter ration is a “mash feed,” meaning it is very fine so the young chicks can easily eat it. The grower and finisher rations are “pelleted” so it is easier for older birds to eat. The feeds are special blends of grains, vitamins, minerals, and a high protein source such as canola meal or soya. It takes about one kilogram of feed to produce 0.45 kg of meat.

Animal Welfare

Chicken barns today are well ventilated. This keeps the air inside at the proper temperature and humidity for the age of the birds.

Modern chicken barns feature a water pipe known as the nipple drinker line and an auger that automatically dispenses feed from a bin outside to a pipe that goes directly into a feed pan. Enough water nipples and feed pans are present so every chicken has plenty of opportunities to drink and eat.

The temperature and humidity in the barns are automatically regulated so birds are always at a comfortable level for their age.

Industry in Saskatchewan

Production: 26,092,000 chickens for meat
(2010)

Value to Economy: \$78,591,000 in farm cash
receipts (2010)

Industry in Canada

Production: 641,506,000 chickens for meat
(2010)

Value to Economy: \$1,967,043,000 in farm
cash receipts (2010)

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Chickens and the Environment

Farmers' livelihoods are very tied to the land and so farmers understand more than most about the importance of healthy soil, water and air. They live on farms with their families and depend on the environment to create a healthy place to live and provide the right conditions to raise chickens.

Poultry farms that are large are considered intensive livestock operations and must have an environmental plan that protects all surface and ground water. The smaller chicken farms still follow sound environmental practices even though they do not have to follow the same regulations as large farms.

Nutrient management plans are approved by the Saskatchewan government when manure is being applied to agriculture cropland. The plan must be "agronomically" sustainable to prevent leaching contaminants into ground water. The plan must also ensure that manure is not spread near waterways so there is minimal amount of runoff. Farming and industry is continually changing to benefit the environment for everyone.

Nutrition

Chicken is a versatile, low-fat, and nutritious choice to make. Chicken contains protein, amino acids, niacin, vitamin B6, iron, and zinc. Chicken is useful for cardiovascular health, for thyroid function, and for promoting the immune system. It helps protect against bone loss in aged people, cancer, and Alzheimer's disease. It is also a good source of energy.

Chicken white (breast) meat is widely known as one of the leanest of protein sources; particularly when cooked skinless and boneless. In Canada, it is by far the most commonly requested poultry product. A roasted 100 gram serving of chicken breast contains just 2.1 grams of fat, which provides you with 33 grams of protein and 159 calories.

Careers

- Farmer
- Poultry Veterinarian
- Poultry Scientist
- Chicken Catcher
- Truck Driver
- Meat Cutter
- Poultry Nutritionist

Glossary

- Hen: female chicken
- Pullet: baby chick
- Rooster: male chicken