Facts & Figures About Canadian Dairy Cows

Dairy FACT SHEET

In General:

- Average number of cows in milking herd: 70
- Canada has 12,529 dairy farms with almost 1 million cows
- Canadian dairy farmers sell an average of 7.31 billion litres of milk annually to processors
- Three main processors process approximately 80% of the milk produced in Canada
- There are approximately 450 milk processors in Canada
- 700 kinds of cheese are made in Canada
- Sales of milk and dairy products contribute $10 billion to the Canadian economy
- Ontario's milk production in 2012 was 2.6 billion litres of milk
- The farm gate value of milk from Ontario's dairy farms is about $1.9 billion annually and accounts for about 19 per cent of the province's agricultural production
- Licensed dairy farms in Ontario as of December 2012: 4,100
- Average age of Canadian dairy farmers: 47
- Number of dairy cows in Ontario in 2012: 315,000 milking cows plus 173,000 heifers over one year old.

Facts courtesy of Dairy Farmers of Ontario

You were asking about...Dairy Cows

Housing: Where do Dairy Cows Live?

There are a couple of basic variations in dairy cattle housing – the tie-stall or free stall setup. Size of herd and the farmer's preferences for management and milking all play a part in housing decisions.

In a traditional tie-stall operation, the cow stays in her own stall where she has ample room to stand up and lie down comfortably. Her bed is made of straw, wood shavings or synthetic mats that ensure her comfort. She has free access to water at all times and feed is available in her manger. She is kept beside her herd mates in aisles that allow the farmer to keep her clean and content while allowing her to be milked efficiently. The milk travels through a pipeline that runs through the barn to a bulk storage tank in the milk house.

Farm managers of larger herds may prefer large, open barns known as free-stall barns. Twice a day, or more, the cows will enter a milking parlour, an area designed specifically for ease and efficiency of milking, and the rest of the time they spend lounging around indoors in adjoining barns where they eat, rest and move around as they choose. Bedded stalls are provided for the cows to lie down. Barn aisles are often cement or slatted floors that allow easy clean up of manure. Cows have free choice feed and some farms use a computerized transponder tag that identifies them when they access feed.

Milk production all revolves around the reproductive cycle of the cow. Cows are usually milked for about ten months and then dried off (stop milking) for two months as they prepare for the birth of a calf. Dry cows are commonly grouped together in yards or pastures for six to eight weeks before calving (giving birth). Calves are kept in pens in the barn or in their own individual building called a hutch.

Nutrition: What Do Dairy Cows Eat?

The average dairy cow eats about 29 kg of feed every day. Her diet is scientifically formulated to keep her in good condition while maximizing her milk production. The feed may include clover and alfalfa hay, ground oats, barley, corn, and soybeans, combined with a balance of vitamin and mineral supplements. She may drink between 80 and 180 litres of water a day.

Cattle are herbivores, meaning that their diet consists of plant matter. Like sheep and goats they are also ruminants: instead of having just one stomach like humans, they have four separate stomach compartments that allow specialized digestion of different components of the high-fibre feed.

About the Life Cycle of Dairy Cows...

In order for a cow (adult female) to produce milk, she has to give birth to a calf. Cows are usually bred at around 15 months of age, and after a nine-month pregnancy they will have their first calf at about two years of age.

Most dairy cattle today are bred using artificial insemination. The bulls (male cattle) are kept at breeding units and the semen can be shipped frozen in straws, sometimes from all around the world.

Cows will usually give birth to a single calf weighing about 40 kg. The calf will be fed individually while the cow will enter the milking herd. She will produce milk for about 10 months. She will stop milk production during a two-month "dry" period to prepare for the birth of her next calf. An average cow will produce about 30 litres of milk per day, much more than a calf could consume. The cows are milked two or three times each day. The milk will naturally contain about 3.8 to 4% butterfat content and 3.2 to 3.3% protein. Even with automated milking machines, a typical dairy farmer will be in the barn by 5 a.m. to milk the herd and again at 5 p.m., 365 days a year.

Most cows will have an average productive lifespan of four or five lactations. Some cows milk for 10 lactations or more. Female calves may be raised as replacement heifers for the herd, while the male calves are typically raised for veal.

The whole digestive process takes a while. A cow will spend approximately six hours a day eating and approximately eight hours a day chewing its cud: regurgitating boluses of feed from the rumen (the first stomach compartment), masticating (chewing) them, and re-swallowing them to be further digested in the next three stomach chambers called the reticulum, omasum and abomasum. This lengthy process allows them to efficiently digest low-grade, fibre-based food.

Calves receive colostrum, milk that contains the mother's antibodies, for their first three days. After that, calves are fed either cow's milk or a milk replacer (similar to human baby formula) until they are old enough for solid food, which is slowly introduced as part of the diet to prepare the calves for weaning.

Off to Market

Some of the milk may be used to feed young calves but the majority is stored in a refrigerated tank on the farm and picked up every other day. It is transported by truck to a dairy processing plant to be pasteurized (heat treated) and sold fresh or further processed into products such as cheese, ice cream, or yogurt. It takes two to three days for fresh milk to get from the farm to the store.

Since 1965, dairy farmers have worked under a supply management system that is now administered by the provincial dairy farmer organizations. Supply management refers to producing the exact amount of milk required by Ontario milk processors to meet consumer demand. This system has allowed the dairy industry to prosper, providing a constant, reliable supply of high-quality milk products for consumers at reasonable prices while ensuring a fair return to the farmer.

In dairy farming, medication is only used if it is required to treat a specific illness. When dairy animals become ill, the problem is diagnosed and, with the help of a veterinarian, a treatment program is established. Her milk is discarded since it is illegal to sell or offer for sale any milk that contains antibiotics or other pharmaceuticals, and she is milked separately from the rest of the herd until she has complied with strict withdrawal periods for her specific medication.

In Canada, there is a stringent dairy inspection program in place to test milk. Samples are taken at each farm for quality and composition. As well, each truckload is tested for antibiotics at the dairy. Any milk that does not pass the test is discarded immediately and any producer whose milk is found to contain antibiotics faces heavy financial penalties.

Breeds

There are six commonly used breeds. They are Holstein, Jersey, Ayrshire, Brown Swiss, Guernsey and Milking Shorthorn. For more information about these breeds and their role in the dairy industry please visit www.milk.org.

Dairy Trivia

- The Holstein (black and white) breed of dairy cows makes up 94 per cent of the dairy population in Canada. Other breeds in Canada include: Jersey (brown) which make up four per cent of the dairy population, Ayrshire (red and white) one per cent, Brown Swiss (greyish-brown) less than one percent, Guernsey (fawn) less than one percent, and Milking Shorthorn (reddish-brown and white) less than one percent.
- The Canadienne dairy cow is the only dairy breed native to North America, and is extremely rare today except in certain areas of Quebec.
- A cow's udder is divided into four chambers known as quarters.
- Dairy cattle have been selectively bred for milk production and type, so their udders are larger and their bodies more streamlined than their beef cattle cousins.
- Dairy cows give an average of 30 litres of milk per day.
- A cow can eat up to three suitcases full of hay (20 kilograms) and drink up to a bathtub full of water (80 litres) every day.
- When cows lie down, it doesn't mean that it's going to rain! They often lay down to rest and digest their food. Cows that lay down more often tend to produce more milk.
- Cows are typically pregnant 10 days longer than humans on average...276 days.
- Dairy cows produce the most milk of any mammal in the world (fact courtesy of CyberSpace Farm).
- Cows take about five minutes to be milked and are milked by a machine, not by hand.
- Using a milking machine is easier, faster and more sanitary than milking by hand.
- Cows are female and must have a calf before they begin producing milk.
- It only takes 2-3 days for milk to get from the farm to the store.
- Milk has 16 nutrients in it.
- Chocolate milk and white milk have the same nutrients.
- Chocolate milk has the same amount of sugar as unsweetened juice.
- Most Canadian dairy farms are family-owned.
- Cows eat a balanced diet made by a nutritionist every day to keep them healthy.

Dairy Dictionary

Here are a few terms you need to know to get around a dairy cow farm:

- **Calf:** A newborn bovine or dairy animal.
- **Heifer:** A young female that has not yet had a calf and begun to milk.
- **Cow:** A mature female bovine or dairy animal.
- **Bull:** A mature male bovine or dairy animal.
- **Pipeline milking system:** The cows are tied in their stalls, the udders washed and a milking machine attached to all four teats on the cow's udder. A hose runs from the milking machine to a stainless steel pipeline located over the cow's head. The pipeline runs the length of the barn and is connected to a big bulk tank in the milkhouse.
- **Milking parlour:** The cows walk onto a raised platform with gates. The gates keep the cow from moving while she is being milked. When milking is over, she walks out the other side. The milk goes directly through a pipeline to the bulk tank in the milkhouse.
- **Robotic milking system:** Similar to a parlour system, except that the entire milking system is automated. Cows can enter the robot at anytime during the day to be milked. A warning system alerts the farmer if there is a problem with a cow or the milking system.
- **Hay:** A mixture of grass and legumes, like alfalfa. It is most commonly used in two ways:
  - Haylage: the hay is cut, chopped and stored in a loose way in a storage silo, while it is still moist.
  - Hay: usually cut after haylage when the plants are taller, it is allowed to dry in the field. It is then baled into round of square bales and stored under cover.
- **Corn:** Planted in the spring and harvested in the fall. It too is usually used in two ways:
  - Corn Silage: The whole plant is harvested while it is still green and stored in a silo. After the silage is stored in the silo, the wet corn undergoes fermentation, or pickling. In this process, the corn is changed by a bacterial process to make it tastier and easier to digest by the cows. When the silage comes out of the silo it is more palatable. The same process turns wet hay into haylage.
  - Grain Corn: Only the kernels from the plant are harvested and stored in a dry form. Grain corn is usually ground up and mixed with any barley or oats, a protein food like soybean meal, plus vitamins and minerals.

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Dairy – The Product

The main product from dairy cattle is milk. Milk is an ingredient in a number of products found in homes every day. It can be processed into cheese, butter, ice cream, yogurt, cream cheese, sour cream, skim milk powder and more. Dairy cattle can also give us meat when they are no longer producing milk. A by-product of the dairy industry is veal. Only approximately half of the dairy calves born are female and will be used to produce milk. Most of the males are raised for the veal market.

About Dairy Cows - Who to Call

Dairy Farmers of Canada:
Visit www.dairyfarmers.org

BC Milk Marketing Board:
Visit www.milk-bc.com

Alberta Milk:
Visit www.albertamilk.com

Dairy Farmers of Manitoba:
Visit www.milk.mb.ca

Federation des producteurs de lait du Quebec:
Visit www.lait.org

Dairy Farmers of Nova Scotia:
Visit www.dfns.ca

New Brunswick Milk Marketing Board:
Visit www.nbmilk.org

Dairy Farmers of Prince Edward Island:
Visit www.dfpei.pe.ca

Dairy Farmers of Ontario:
Visit www.milk.org

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