

# What Do Beef Cattle Eat?

## Forages: Grass and Hay

For the majority of their lives, beef cattle eat a diet comprised of pasture grasses and other plants in the summer, and hay (dried grasses and plants) in the winter months. These grasses and plants are referred to as forages.

Beef production begins with cow-calf operations that raise calves for the industry. Peak calving is timed to take place in the spring when grass has begun to grow. On most farms, the entire cow-calf process takes place exclusively outside on open pasture where the cattle graze and calves nurse until they are weaned in the fall. Cows are fed hay over the winter.

Salt and other minerals are often made available to cattle on pasture in the form of a free-choice salt lick. These minerals are required for optimum cattle health and growth.

The land used for pasture is usually too hilly, infertile, or otherwise not suited to growing food crops for human consumption. Their four-stomached (ruminant) digestive system allows cattle to eat plants (i.e. grass) that are indigestible by humans or even single-stomached livestock such as swine. Thus through cattle, farmers are able to produce high quality food for people on land that would otherwise be unusable.

## After Weaning

Calves born in the spring are weaned from their mothers in the fall. After weaning, calves are over-wintered on hay-based diets until their weight increases to about 900 pounds. This process is known as backgrounding.

Some grain may be fed during the backgrounding phase, however the amount is limited so the cattle don't gain weight too quickly. Silage may also be fed. Silage is made of whole plants that have been preserved for later feeding through natural fermentation.

## Feedlot Finishing

At 9 – 11 months of age, when they reach approximately 900 pounds, cattle typically are placed in a feedlot where they are brought to a finished weight of around 1,300 pounds. Beef production on a feedlot begins with a diet made up of forages and progressively moves to about 90 per cent grain. The diet is changed progressively because a sudden change could cause digestive upset in the cattle. The main reason grain is fed to cattle is to produce tender, marbled beef.

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In Canada, barley and corn are the grains usually used for beef finishing. Grain used for cattle feeding is often of lower quality than that used for human consumption. Cattle feeding gives grain farmers an alternate market for crops that have been damaged by frost, drought or other weather conditions.

## Supplements and Additives

Minerals and vitamins are essential for the health and growth of beef cattle. Many of these are present in hay and grains, but not in optimal levels. Where additional amounts are required, these minerals and vitamins are added as a supplement.

Ionophores are a special type of antibiotic not used in human medicine. These work on the cattle digestive system to improve uptake of energy and protein, reduce digestive problems and decrease methane production. Other antibiotics may be added to the feed for short periods of time under special circumstances, such as when there is illness in the herd or when several herds are mixed together. Situations such as these can stress the animals and can lead to illness.

Additional protein in the form of soybean or canola meal may also be added to cattle feed. Plant-based proteins are virtually the only source of protein used in beef cattle feed in Canada. Since 1997 Canada has banned the feeding of ruminant-based meat-and-bone-meal to other ruminants such as cattle. This feed ingredient is believed to have caused the spread of Bovine Spongiform Encephalopathy in Europe. Use of this feed ingredient was never common in beef cattle rations in Canada due to our abundant cropland available for growing high-protein crops.

## Regulations

A Federal Government Feeds Act, regulated by the Canadian Food Inspection Agency (CFIA), ensures that livestock feeds manufactured and sold in Canada or imported into Canada are safe and effective. As part of the feed program, CFIA monitors manufactured feeds for the presence of pesticides, heavy metals and medications. It routinely inspects feed mills to ensure that feeds are properly manufactured and labelled.