Cows are...

Big animals

They need to eat forty times more than a grade 4 student each day.

Ruminant animals

They have hooves, four parts to their stomach and chew cud.

Milked twice a day

The milk is stored in a tank and is cooled to 4 C. The milk hauler picks up the milk from the farm every second day and takes a sample of the milk that goes to the lab.

At the lab

The sample goes through many tests for quality and freshness.

At the processing plant

Raw milk is pasteurized and then made into many different products for us to enjoy.

Pasteurization is a process that uses high heat to kill the natural bacteria in milk and keeps it fresh longer.

Enjoy milk

at school and at home.

Cows Eat...

4 kg of high quality hay, 16 kg of silage and 10 kg of mixed grains per day, plus vitamins, minerals and salt.

Cows drink about...

100 litres of water per day.

Moo2You.ca

ALBERTA milk

moreaboutmilk.com

January 2010, Rev – March 2015

DAIRY QUIZ

Write True or False for each of the following statements.

1. Homogenization is a process done at the dairy to kill natural bacteria and make the milk stay fresh longer.
2. Chocolate milk has the same nutrients as white milk.
3. Pasteurization is a process done at the dairy to prevent milk fat from separating from the milk and floating to the surface.
4. It takes two litres of milk to make 1 kilogram of cheese.
5. Milk is a nutritious drink for children and adults.

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1. *False. This is a description for pasteurization. Milk is homogenized to prevent milk fat from separating and floating to the top.*
2. *True. Chocolate milk has the same nutrients as white milk. It is made by adding sugar and cocoa powder to white milk.*
3. *False. This is the description of homogenization. Milk is pasteurized by heating to 72 C for 16 seconds then immediately cooled to 4 C. This kills the natural bacteria and keeps it fresh longer.*
4. *False. It takes 10 litres of milk to make 1 kilogram of cheese.*
5. *True. We never outgrow the need for milk. As our bones are constantly being reformed, we need the calcium in milk.*

MILK BY ANY OTHER NAME

What do people call milk in other languages?

Arabic **Laban**

Italian **Latte**

Spanish **Leche**

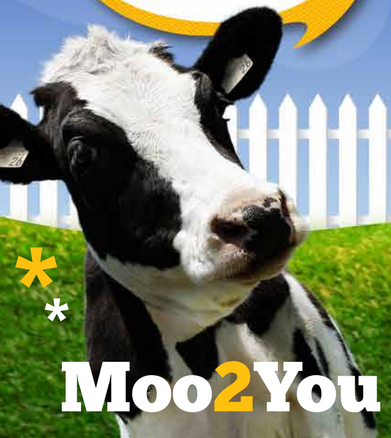
German **Milch**

Dutch **Melk**

French **Lait**

Portugese **Leite**

The Journey of Milk



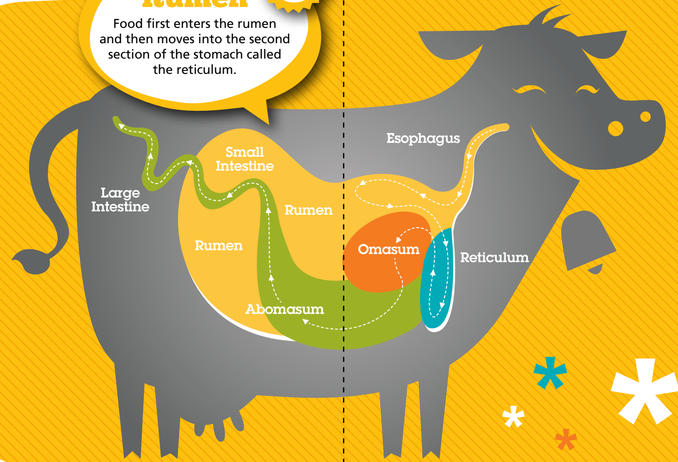
Moo2You

How Cows Make Milk

Cows produce far more milk (about 9,500 litres) than their calf will need (about 255 litres). This extra milk is for us to enjoy in a variety of milk products. Cows produce milk for about 305 days of the year. The remaining 60 days are called the dry period as the cow is not producing milk. During this time, cows near the end of their next pregnancy and store nutrients so they can produce milk when their new calf is born.

1 Rumen

Food first enters the rumen and then moves into the second section of the stomach called the reticulum.



2 Reticulum

The reticulum is partially separated from the rumen. The job of these two sections is to soften the food and hold it there until the cow is finished eating. The food forms tennis size balls called cud. The cow brings cud up from her stomach to her mouth one at a time and chews it. The cow swallows the well-chewed cud and the food goes into the third part of the stomach.

3 Omasum

This is where softening and grinding of the food continues.

4 Abomasum

Finally, the food reaches the "true stomach" and the food is digested. The small intestine completes digestion and the nutrients are carried by the blood to the rest of the cow's body. These nutrients, along with water, fill the cow's udder to make milk.
An udder is a pouch with four parts (teats), from which the milk is drawn. The nutrients give milk its colour. The light reflects off the particles of milk fat making it appear creamy white. When the milk fat is skimmed off, like in skim milk, the milk has a bluish colour. This is because one of the nutrients, riboflavin (vitamin B2), is blue in colour.