

DISCOVER Dairy



Keepin' It Fresh

Guided Reading Pamphlet



From Farm to You



Have you ever thought about how much milk from the cow becomes dairy products that we eat? There are eight important steps that go into making sure milk and the dairy foods we buy at our local grocery store are safe and wholesome.

The first step in milk safety is the farmer's job of keeping cows healthy and the barns where they live clean. Barns must be clean and well kept, and cows must be clean, comfortable and well cared for. Healthy cows produce quality milk.

Step 2 is inspections. Dairy farms are regularly inspected by state sanitation **inspectors** to make sure the milking equipment, barn, and cows are clean.

What are some ways that you stay healthy?



What routines do you do everyday?



The milking process is step 3 in providing a safe milk supply. Cows like to be milked. They respond best to regular routines and kind handling.

Before milking, the cows' **udders** (where they store the milk) are cleaned to make sure the milk stays clean. The **milking equipment** gently squeezes the milk out of the **udder** through the **teats**. The process takes about 8 minutes.

The fourth step in the process is cooling the milk. The milk from the cows flows through **sanitized** pipelines to the large **milk tank**. Here the milk is cooled quickly to 40°F or lower to keep it fresh.

The next step is transporting the milk to the dairy. The milk is picked up by an insulated **transport truck** every one or two days and transported to the **processing plant**. On average the milk arriving at the processing plant is less than two days old.

Why do you think it is important to keep milk cold?



How do you know the milk you drink is safe?



Pasteurization is a very important step in ensuring milk safety. It is the process of heating milk to high temperatures (at least 145°F) for a short period of time. Pasteurization ensures milk and dairy products are safe to drink and eat.

Continuous testing is also an important step. Every load of milk shipped from every dairy farm in the U.S. is tested and re-tested for safety and quality—up to 17 times throughout the process. Any milk that does not meet safety standards is thrown away.

The last step in making sure milk is safe is our job. Dairy farmers and others do many things to ensure the safety and wholesomeness of the milk we drink. However, once we get it home, it is up to us to keep it safe and pure.

Think of our job as the three Cs:

- Keep milk **cold**
- Keep milk **covered**
- Keep milk **clean**

How will you do your job to make sure your milk is safe?



Dairy Farmers: Provide Safe Dairy Products That are Wholesome and Healthy for You



Not only do dairy farmers care for their cows for their health, but also for yours! Every day farmers are providing wholesome and healthy milk for your family and theirs.

To ensure a safe product on your kitchen table, farmers milk their cows 2-3 times a day using high levels of **sanitation**. The cow's **teats** are sanitized thoroughly before and after milking to guarantee a safe and healthy product.

Fun Fact:

A 15-year-old cow named Hilda broke the world record for most milk produced in her life. Hilda made 460,720 pounds of milk in her life as of 2020.

Dairy farmers measure milk by the pound instead of by the gallon. One gallon of milk is equal to 8.6 lb.

Using the information above, how many gallons of milk did Hilda make in her life?



Let's Review!



- 1** Dairy Farmers keep the cows healthy and safe so they can produce quality milk.
- 2** It is important that the barn and equipment used to milk is safe and clean.
- 3** The milk is then cooled and taken to the processing plant to be pasteurized and tested to make sure it is safe.
- 4** Our job is the three Cs: Keep milk cold, covered, and clean.

Keepin' It Fresh:

Key Vocabulary

Udder— The mammary gland of the cow where she produces and stores the milk.

Teat— The projections on the bottom of the udder with openings for the milk to leave the udder.

Inspector — Someone who represents the state or the U.S. Department of Agriculture who evaluates dairy barns, cows and equipment to make sure they are kept clean and properly maintained.

Pasteurization— The process of heating milk to high temperatures (at least 145°F) for a short period of time. It ensures milk and dairy products are safe to drink and eat.

Sanitize— The process of cleaning something to ensure any dirt or harmful residues are removed.

Milking Equipment — What is used to gently remove the milk from the cow's udder during the milking process.

Milk Tank— A refrigerated tank where milk is cooled to below 40°F and stored until it is delivered to the dairy plant.

Transport Truck — An insulated tanker truck that transports the milk from the farm to the dairy plant.

Processing Plant — The place where milk is pasteurized and bottled for fluid milk or made into dairy products.

Antibiotic— Medicine given to a cow to treat her when she is sick—much like a doctor prescribes an antibiotic for people who are sick.

Regulators— Organizations representing the state and the U.S. who make sure farms and processing plants do their job.