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Produce Quality Milk

Cooperative Extension, South Dakota State University

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Website: extension.sdstate.edu
Phone: 605-688-4792
Email: sdsu.extension@sdstate.edu

Produce Quality Milk

Quality dairy products require one basic ingredient —quality milk. And the ultimate outcome of quality dairy products is more income for the dairyman.

The difference in price between Grade A milk and some of the lower grades is condsiderable. But it goes beyond this. Quality can mean increased demand too.

Buyers, consumers, and health departments all have a distinct interest in the quality of milk used for manufacturing. This fact sheet tells how to produce quality milk—it will help answer questions producers of manufacturing milk may have. In addition, your local county agent or milk plant fieldman is in a position to give you further help.

Quality milk can be produced only when the dairyman pays special attention to a number of factors. He must be concerned over his herd's health, the layout and structure of his barn and milkhouse, care of the utensils, and cooling and storage of the milk.

KEEP THE HERD HEALTHY

The herd should be free from disease that might be spread through milk. Bacteria in the milk, coming from the cow, must be eliminated.

Mastitis is the most important current problem. The following suggestions can help prevent this profit-taker from gaining a foothold in your herd.

1. Wash the udder of each cow before milking. Use a warm chlorine or disinfectant solution and a clean towel for each cow.
2. Use the strip cup before milking each cow.
3. Be sure milking machine is in the proper working order.
4. Keep hands and equipment clean when milking.
5. Do not attach milking machine until the milk is let down.
6. Remove teat cups as soon as the animal is milked out.
7. Do not leave excessive quantities of milk in the udder (machine strip).
8. Avoid excessive variation in routine.
9. Provide adequate bedding in stalls, barns, or sheds.
10. Prevent injuries to the udder by avoiding such conditions as slippery floors, mud holes, high door sills or similar obstructions.
11. Have cows that are infected with mastitis treated, but do not rely on treatment alone; sanitation and good management are important in controlling mastitis.
12. If it is necessary to treat an infected udder, do not sell the milk for at least 72 hours.

By **Ervin Kurtz**, Extension dairyman

F.S. 76

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Cooperative Extension Service

SOUTH DAKOTA STATE COLLEGE

MILKING PROCEDURE AND EQUIPMENT CARE

Clean Animals. Clean flanks and udders at milking time to prevent dirt from getting into the milk. The flanks and udder are common sources of contamination of milk with bacteria and sediment. Clean floors and bedding and well-drained yards make the cleaning job easier.

Clean Utensils. Keep milking utensils clean and as free from bacteria as practicable. Bacteria grow in cracks and on rough spots on equipment if it is not properly washed. Milkstone provides food for bacteria. Good utensil care includes these four steps:

1. Rinse milking equipment with lukewarm water (110° F.) immediately after using to remove the film of milk.
2. Scrub thoroughly with a stiff brush and hot water, using a soapless dairy cleaner.
3. Rinse in scalding water (180° F.) and place upside down on a rack to dry.
4. Before the next milking, rinse all equipment with a sanitizing solution. (This rinse can be further used as an udder wash.)

Teat Cups and Tubes. Care of the milking machine teat cup assembly and rubber tubes needs special attention. After the teat cup assembly and tubes have been washed, they may be either (1) rinsed in very hot water and hung up to dry or (2) immersed in or filled with 0.4 to 0.5% lye solution.

Leaving them immersed in or filled with lye solution until the next milking will effectively prevent bacterial growth. (All parts treated with lye solution

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should be thoroughly rinsed with clean water before they are used.)

The lye solution is made up as follows: Add a 13-ounce can of household lye to 1 gallon of water in an earthenware jar. (Do not use a glass or metal container—a glass one may break from the heat that is produced and a metal one will be corroded.) After the lye is dissolved, add 1 cup of the solution to 1 gallon of fresh water. Use an earthenware jar or glass jar for this. The solution will be the 0.4 to 0.5% mentioned.

MILK HANDLING AND STORAGE

Proper cooling and storage of milk on the farm require facilities which will cool the milk promptly to 40° F. and then hold it at that temperature until it is collected. Mechanical refrigeration is a necessity in all seasons of the year in South Dakota. Bacteria will reproduce (divide) once every 30 minutes in 70 to 90 degree temperatures. In 12 hours one bacteria can reproduce 16,000,000; cooling will control this growth.

BARN AND MILKHOUSE

The milking barn should be clean and have a concrete floor. Eliminate barn odors by having the barn well lighted and ventilated.

A milk house or milk room is important to the convenience of the producer. Experienced dairymen have found that a milk house—well planned, well constructed, properly located and equipped—is an aid to the production of high quality milk. It is a labor saving investment.

CONTROL FLIES

Fly control is an important part of dairying. If flies are present, they can add to the bacterial count of milk. Some flies have been found to carry as many as 1,250,000 bacteria. They can carry typhoid, dysentery, or other contagious diseases. Breeding places for flies, such as manure piles and mud holes, should be removed.

CONTROL BACTERIA

Here is a summary of how bacteria count in milk can be kept down.

1. Bacteria like moisture—rinse the utensils and equipment in hot water after cleaning so that it dries off quickly.
2. Bacteria must have food—remove milkstone from the equipment.
3. Most bacteria like high temperature—cool the milk as quickly as possible to 40°F.
4. Bacteria do not like acid or base solutions—wash and sanitize with proper cleaning and sterilizing materials.
5. Bacteria like darkness—have a well-lighted barn and milk house.

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