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MASTITIS THE MENACE

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Preventing the Spread of Mastitis

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E. F. FROLIK, DEAN E. W. JANIKE, DIRECTOR

PREVENTING THE SPREAD OF MASTITIS

Bacteria or organisms that cause mastitis can live for long periods of time. They can live on the cow's body, in manure, in stagnant water, on milking utensils and equipment, in bedding and in the soil.

When bacteria increase because of unsanitary conditions, they may cause infection because the cow does not have the resistance to fight them off.

Don't expect any treatment to keep your cows immune to mastitis if their surroundings are unsanitary. For prevention and control of mastitis, absolute cleanliness and sanitary conditions are necessary.

Protection of Uninfected Cows

In infectious mastitis, the organisms generally enter the udder through the teat. Make every effort to keep the organisms away from teats and udder.

The milking act is the chief means of spreading organisms from infected to non-infected cows, therefore, milk infected cows last. Most heifers calving for the first time are free of infection and should be milked first.

Discard contaminated bedding. Don't let milk from infected cows spill or come in contact with bedding. When you move an infected cow from a stall, clean and sanitize the stall thoroughly and provide new bedding before moving in another cow.

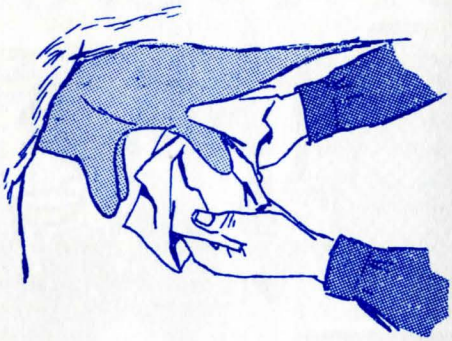
Sanitary Procedures

The purpose of any sanitary program is to prevent or minimize the spread of organisms.

The efficiency of any disinfectant is dependent upon several factors such as time, concentration, temperature, organic matter and hardness of water. Generally, a disinfectant is more efficient the longer it acts, the stronger its concentration, the higher the temperature of the solution and the freer the surfaces and disinfectant solution are of organic matter, such as milk and manure.

The conditions under which disinfectants are used determine their killing efficiency. These will vary for the disinfectant and the organisms.

There are four procedures usually recommended for controlling the spread of mastitis producing organisms by using disinfectants: (1) washing the udder before milking, (2) dipping the teat cups between cows, (3) washing the milker's hands and (4) dipping the teats after milking.



Washing the Udder Before Milking

Washing the udder and teats with a disinfectant solution may reduce but not stop the spread of organisms. The solution must be maintained at an effective concentration. If possible, prerinse the teats and udder with water from a hose to remove dirt and manure before each udder is washed with individual paper towels.

Paper towels are the most satisfactory since you can throw them away after a single use. Dip the paper towel in the disinfectant solution immediately before use. Burn or bury used paper towels as they rot slowly and will blow around the field if discarded with manure.

Do not wash udders with rags, cloth towels or sponges unless you use a separate one for each cow. Under farm conditions it is difficult to sterilize cloth with chemicals, and water is not kept hot enough to kill bacteria on the cloth.

Dipping Teat Cups Between Cows

Teat-cup liners of the milking machine can harbor mastitis-causing organisms. It is difficult to disinfect the liners between milkings. Rinsing liners in warm water between milkings and then dipping the teat cups in a disinfectant helps pre-

vent the spread of organisms. Be sure you keep the disinfecting solution at the proper strength.

Rinsing the teat cups in cold water, then in hot water at 140° F and again in cold water, has given results comparable to or better than dipping the teat cups in a disinfectant.

The most efficient method reported for decontaminating the teat cups is rinsing them first with cold water, then circulating 160°F water through them for 3 minutes. Rinsing teat cups in cold water, then submerging them for 15-30 seconds in a pail of hot water (170°-180°F) also is effective.

The efficiency of any of these methods will be reduced if thick, mastitic milk is present and if the rubber liners are worn and cracked. Under farm conditions none of the methods recommended can be expected to sterilize the rubber inflations but will reduce the number of organisms.

Disinfection of Hands

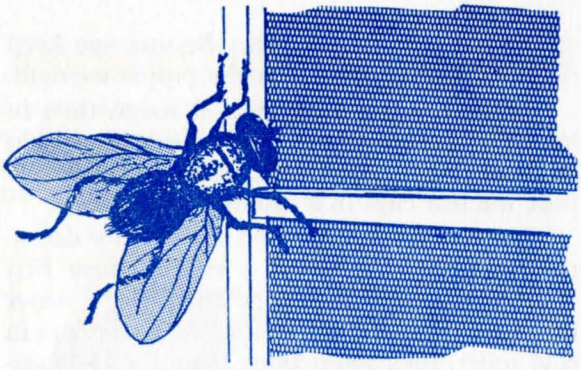
Cracked or chapped hands provide a good place for mastitis organisms.

Milkers must keep their hands clean. Before starting to milk, wash and scrub your hands with warm water and soap. Then rinse in a disinfectant solution. Dry your hands on a fresh paper towel.

It is particularly important to take care of your hands when hand milking. If your herd has no mastitis, be extremely cautious about letting someone from another farm milk your cows, especially if he comes from a farm where there is mastitis.

Dipping the Teats After Milking

Dipping teats in a disinfectant solution after milking is recommended as a preventive measure against infection. Quaternary ammonium compounds and iodine have been used successfully to remove some of the organisms from teats. The number of staphylococci on teat cup liners also has been reduced by using iodine and chlorhexidine.



Flies

Flies can spread certain types of mastitis. Flies pick up mastitis organisms as they feed on the milk on the teats after a cow is milked. As the fly moves from teat to teat or from cow to cow, the organisms will be spread. Keep flies away from cows. Screen doors and windows. Spray to eliminate and control flies. Remove all potential fly-breeding areas from the cow's surroundings. Keep barnyards well-drained, and remove all manure regularly.

Herd Replacements

Healthy, rugged, home-raised heifers are the best herd replacements. Select your replacements from cows with good udder conformation and from mastitis-resistant cow families. Cull young cattle with undesirable udder development. Watch cows introduced into a herd for at least 30 days after they have freshened. Have their udders examined for soundness by a veterinarian. In buying dairy cows, be sure you do not buy someone else's troubles.

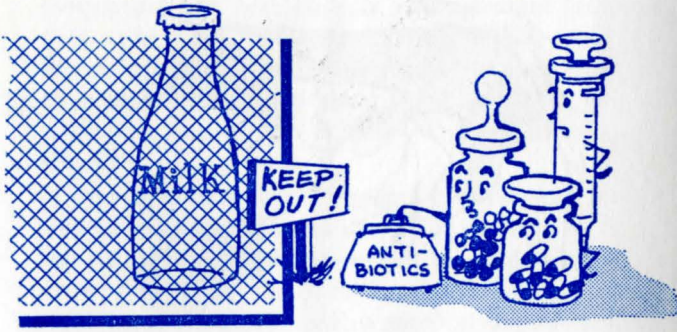
Prevent Spread of Mastitis to Calves

It is a poor practice to let calves nurse cows with mastitis or feed calves milk from cows with mastitis. In sucking an infected cow, the calf will pick up organisms on its mouth and if it sucks another calf, will transfer the organisms to the immature teats and mammary gland of the second calf.

This same problem applies to the practice of pail feeding calves with mastitis-infected milk. To keep your calves healthy, feed them milk from mastitis-free cows. Prevent sucking by housing calves in individual pens.

Mastitis and Public Health

It is imperative that milk be marketed from healthy, disease free cows. Make every effort to keep antibiotics out of milk. If antibiotics are infused into the udder you must withhold milk from all quarters for at least six milkings (three days). If antibiotics are given intermuscularly, the milk must be withheld seven days.



Get rid of abnormal milk such as:

1. Colostral milk (for five days after calving).
2. Stripper cow milk (for at least 15 days before calving).
3. Milk that has any off-color, bad taste, or unpleasant odor.
4. Mastitis milk.

Dispose of milk from a sick cow, even during the recovery period. The consumer of dairy products wants high quality products with desirable flavors. If mastitis is prevented and controlled, both the consumer and producer will gain. The rewards for controlling mastitis are:

More milk per cow.
More milk per herd.
More breeding stock to sell.
A better quality product to market.

EC 63-639 Mastitis and Your Dairy Herd
EC 63-640 Preventing Mastitis by Better Herd Management
EC 63-641 The Milking Machine and Mastitis
EC 63-642 Preventing Mastitis with Better Milking Practices
EC 63-643 Preventing Spread of Mastitis
EC 63-644 You Can Control Mastitis

Prepared through the cooperation of the Nebraska Mastitis Committee, C. W. Nibler, chairman, P. H. Cole, secretary.