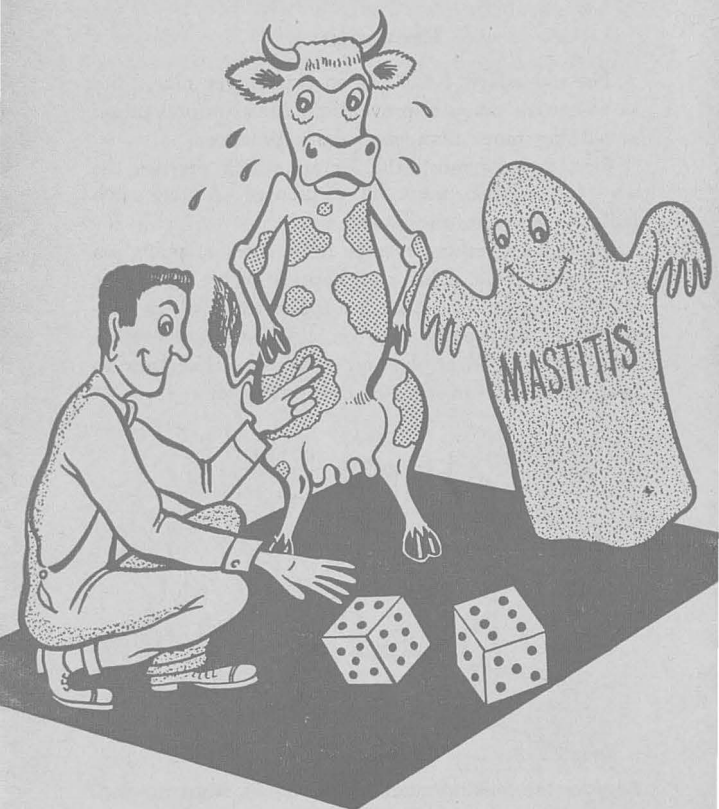
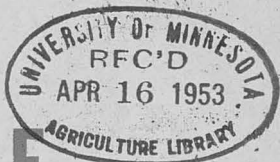


**DON'T**

**GAMBLE**

**WITH**

**MASTITIS**



**I. A. Schipper**

# Prevention Is the Best Defense Against Mastitis

Mastitis is an inflammation of udder tissue brought about by the activity of bacteria (germs). It is known by other names such as garget, stringy milk, mammitis, and caked udder, but they are the same disease.

This disease is present throughout the dairy cattle areas of the entire world. From the economic standpoint it is the most important disease of dairy cows—it would be difficult to estimate the amount of loss suffered by the dairy farmer because of mastitis. Though mastitis appears to claim more high-producing cows as its victims, no herd is likely to be entirely free of this disease.

Losses caused by mastitis may be due to one or all of the following: (1) decreased production, (2) poor-quality milk, (3) destruction of one or all quarters of the udder, and in some instances (4) death.

Most mastitis is the result of poor management, for good cow men have little trouble with this disease. The term management applies to a wide area of procedures that the dairyman goes through every day—like the ones listed below.

## STEPS IN CONTROLLING MASTITIS

### Watch Your Milking Machine

Injury to the teats and udder is an important cause of mastitis. The delicate linings on the inside of the teat and udder may be injured even though there is no outside evidence of injury. An important manage-

ment factor in avoiding injury to these delicate parts is the use of the milking machine.

Remember always to remove the machine when the milk stops flowing, and never let one man attempt to operate more than two units. Keep the milking machine in top operating condition, for hard or cracked inflations, too high a vacuum, or incorrect operating pulsators will lead to mastitis. Have your milking machine service man check your machine frequently and follow his instructions.

### Be Sure Stalls Are Big Enough

Stalls should be of adequate size to provide comfort and prevent injury. Stalls that are too short will force the cow to lie so that her udder may be injured by contact with the gutter edge of the platform. Avoid support posts and sharp cement ridges in the stalls, for cows can injure teats and udders on them.

### Keep Your Cows Warm and Dry

Always avoid drafts and cold, damp stall floors. Adequate bedding is a must in mastitis prevention. Good straw plus wood shavings makes an ideal bedding. Not only will good bedding counteract drafts, dampness, and cold, but it will also aid in preventing injury.

### Strip Cup Helps Find Mastitis Early

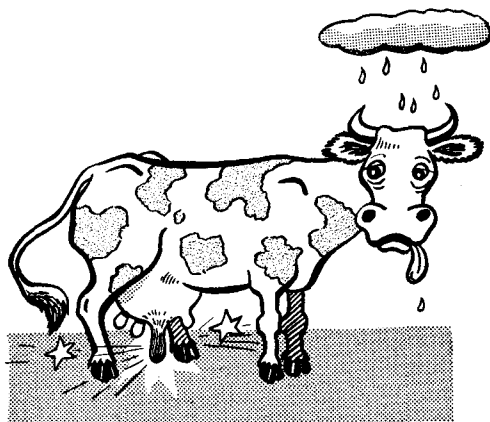
The routine use of the strip cup gives the dairyman a means of detecting mastitis early. This strip cup need not be an elaborate affair—just a container with a black-surfaced object on which the milk is forced.

### See Your Veterinarian

Remember that early detection is essential to successful treatment. The services of a competent veterinarian are usually less expensive than the use of highly advertised mastitis remedies.

### Feeding

**Don't look to feeds as the cause or cure of mastitis. High protein rations don't cause mastitis nor do high vitamin or mineral rations prevent or cure mastitis.**



Watch for signs of mastitis.

## What Is Mastitis?

Mastitis is the invasion of the udder by harmful bacteria, resulting in the production of abnormal milk, swollen quarter or quarters, and often a very sick cow. A good name for mastitis would be "management disease," since it is usually the result of poor management.

The factors that pave the way for mastitis (injury, dampness, chills) are often more important than the bacteria themselves. Bacteria must have the right conditions to cause mastitis, and such things as injuries provide these conditions.

## Signs of Mastitis

The signs of mastitis are well known to dairymen.

In *mild* mastitis a few clots appear in the first milk removed. Sometimes there is a slight swelling of the quarter that has been infected, and this quarter may feel warmer than usual.

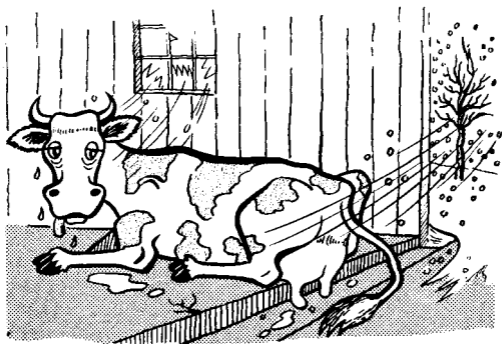
In *acute* mastitis many clots are formed and the infected quarter has an extensive abnormal secretion. The quarter is swollen, hard, and hot. The body temperature is abnormal and the cow may be off feed.

In *peracute* mastitis all the symptoms of the acute form are exhibited—only in a more intense manner. In addition, the animal is usually completely off feed and very depressed. All cows that have mastitis will give less milk, but in a varying degree.

In *chronic* mastitis (flare-ups now and then) any one of the above types may be present—depending on how severe the case is.

## Causes of Mastitis

Improper management is the most common cause of mastitis. Poor management (poor milking methods,



Use plenty of bedding; avoid drafts and cold.

injury, dampness, and cold drafts) provides the conditions necessary for bacteria to produce mastitis.

Mastitis differs from diseases like tuberculosis and Bang's disease in that mastitis is not caused by one germ but by many different types. Every barn contains many different varieties of germs that may cause mastitis. Injuries, warts, chapped teats, and cow pox may open the way for infection. Decreased milk production should always serve as a warning of probable mastitis.

*Feeding*—Feeding does not seem to play an important part either in causing mastitis or in preventing it. Some have said that various protein concentration rations play a direct part in producing mastitis, but there has been no evidence offered to prove it. The well-fed dairy cow is usually a high producer, and mastitis usually occurs in the highest-producing cows.

Others have claimed that high concentrations of various vitamins and minerals will help prevent or cure mastitis, but again no proof is offered.

## Detection

Today there are many tests for the detection of mastitis. Two of these tests are of real value—use of

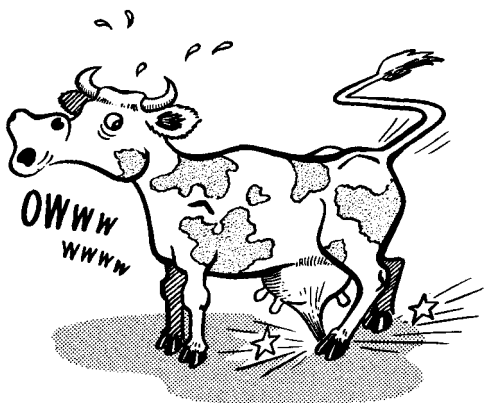


Use strip cup routinely.

the strip cup and the laboratory bacteriological examination. No fancy gadgets are necessary for the farmer to detect mastitis. A simple strip cup will do in every case.

Most any of the various types of strip cups will do. All that is needed is a container of some sort and a black-surfaced object on which the milk is forced. It should be made so it can be easily cleaned. The strip cup is an essential piece of equipment to any dairyman and should be used regularly.

At present laboratory bacteriological examinations are only adapted to research work or herd problems where the veterinarian is involved.



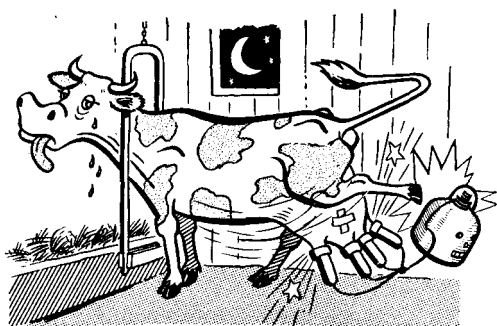
Prevent teat injury.

### Prevention

The old adage, "A stitch in time saves nine," fits in well with mastitis prevention. Mastitis prevention is nothing more than good dairy practices.

First and foremost, the factors which prepare the way for mastitis must be eliminated. Among such factors various injuries stand out.

A common injury results from cows stepping on their own teats. This can happen where cows are stanchioned in stalls that are too narrow, where support posts are located between stalls, or where cement ridges are placed at the end of the stanchion row to keep bedding from spreading into the alleyway.



Remove the milking machine when milk stops flowing.

The milking machine is another important source of injury. Never operate more than two milking units at one time, and don't attempt any other chores while operating the milking machine.

When milk ceases to flow, remove the teat cups at once, as the vacuum then extends to the inside of the

teat. Continued milking will injure the sensitive tissue lining the teat and the lower portions of the udder. Then the conditions are right for the invasion of organisms causing mastitis.

Pay particular attention to animals that milk out rapidly or have one quarter that milks out more rapidly than others. It is very easy to forget and leave the milking machine on the easy-milking quarters or easy-milking cows when the milk has ceased to flow.

When cows are in the last stages of lactation and milk production is low, it again is very easy to forget that you need less time for milking than when the cows are in the early stages of lactation. And if you fail to remove the milking machine in time, mastitis may follow. When production is four pounds of milk or less per milking, stop milking the cow.

Another thing to remember is always to have the milking machine in the best operating condition. Hard or cracked inflations cause mastitis. Your milking machine service man can be of great help to you in keeping your milking machine in top operating condition. Many farmers find it very satisfactory to have two complete sets of rubber inflations for each unit, alternating them from week to week.

The milking machine should operate at at least 40 pulsations each minute. Pulsators that are not clean or are in poor condition provide varying rates in pulsation. And this is still another cause of mastitis.

Cleanliness is an essential to mastitis control. Always keep the entire milking machine clean.

## Treatment

When prevention fails, treatment is necessary.

You may obtain treatment for your sick cows by seeking the services of a competent veterinarian—a



Call your veterinarian early.

must in successful treatment of mastitis. Remember that the veterinarian has had extensive training in the use of antibiotics and the various sulfas now available. In addition, he understands the use of antiseptics—a very important point in mastitis treatment.

Most mastitis begins as a mild case and becomes gradually worse. You can counteract the effects of these mild cases by removing all of the milk from the infected quarters as soon as you detect the disease. Follow this by the removal of 10 to 15 streams of milk every one to two hours until the milk becomes normal. Before removing the milk, stimulate the cow for milk letdown (wash her udder in warm water and massage it).

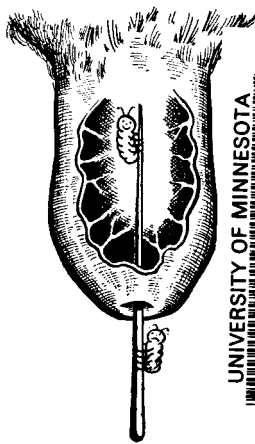
If this frequent removal of milk from the infected quarters does not appear to be having any effect on the infection, consult the veterinarian at once. If you have any doubt as to which procedure to follow—whether to continue this partial milking or call the veterinarian—don't gamble. Call your veterinarian at once.

The essentials of successful treatment then are (1) early diagnosis with a strip cup, (2) reduction of the effects by a frequent partial milking, and (3) early veterinary treatment.

Another point to remember is to use the highly advertised mastitis cures with caution. Frequently you can bring about a more severe case of mastitis than the one already existing if you use these "cures."

Another dangerous practice is the passing of anything through the teat opening without complete removal of germs. The dairy barn, the cow's teats, and the worker's hands all contain many potential mastitis-producing organisms. Unless the teat is absolutely germ-free, the door is open for the passage of these organisms into the mammary glands.

The use of teat dilators and teat slitters is very dangerous and should be done only by a veterinarian.



Don't pass anything  
into the teat.

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Cooperative Extension Work in Agriculture and Home Economics, University of Minnesota, Agricultural Extension Service and United States Department of Agriculture Cooperating, Paul E. Miller, Director. Published in furtherance of Agricultural Extension Acts of May 8 and June 30, 1914.

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