

Five Answers Regarding Mastitis

Good Housekeeping and Constant Alertness Can Save You From Many Dollars in Dairy Losses This Winter

By I. A. Schipper¹ and D. F. Eveleth²

Various estimates of losses incurred by the dairy farmer because of mastitis have been frequently presented. One would hesitate to attempt an intelligent, conservative estimate of these losses without more information. Those associated with the livestock industry are well aware of the importance of mastitis. Because of the prevalence of this disease, frequent questions are asked by those associated with the livestock industry. The following is an attempt concisely to answer the five most frequently posed questions.

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What Is Mastitis?

Mastitis is an inflammation of the mammary gland brought about by the activity of organisms. It may occur in any of our domestic animals. Mastitis is most often detected during the lactation period, which is that period when most of our domestic animals nurse their young or are used for milk production for other purposes. This disease is most often associated with the dairy cow which has been bred and selected for milk production beyond that required to supply food for its offspring.

Mastitis is known by other names such as garget, stringy milk, mammitis or caked udder. Each of these terms describes the same condition, which is inflammation of the mammary gland.

From the economic standpoint, mastitis is one of the most important diseases of livestock farming. The first milk supplied by the mother (colostrum) contains the essential elements for rapid growth and disease prevention for the young animal. The young are often deprived of this nutritious food because of mastitis, and slow growth or death is the end result. The dairy farmer is frequently confronted with decreased milk production or complete loss of his better milking cows because of mastitis. Though much of the information known about mastitis has been obtained from investigations with the dairy cows, this information is equally applicable to our other farm animals.

What Are the Causes of Mastitis?

Mastitis is caused by many types of organisms which are always present in the barn, on the cow and/or in the udder of the cow. Though organisms are always present within the udder of the cow,

¹Assistant Professor and Veterinarian.

²Veterinarian and Head, Department of Veterinary Science.

mastitis will not occur until the udder has been subjected to some form of stress such as injury. When this occurs, the udder loses its resistance to the organisms within it and mastitis results.

The most common cause of mastitis is improper management. Included in this category are such procedures and conditions as improper milking, teat and udder injury, exposure of the udder to

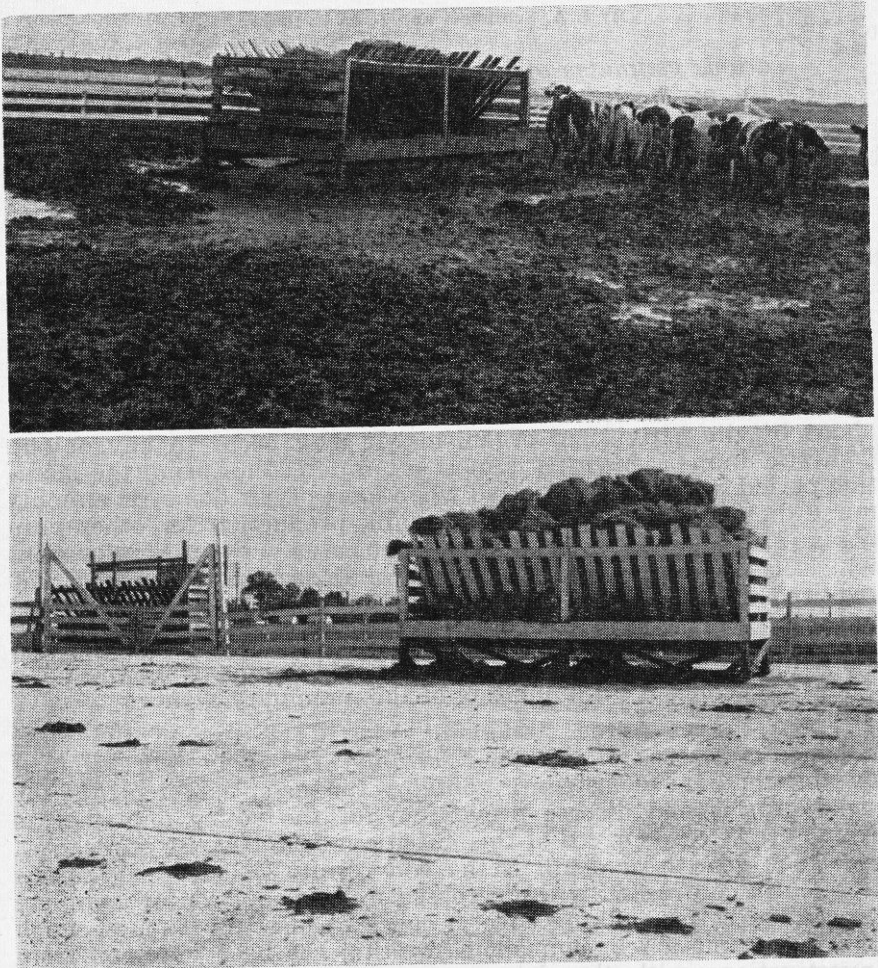


FIGURE 1.—Wet, muddy barnyards cause chapped teats, high bacterial counts in the milk and ultimately are conducive of mastitis. Here are two views of a North Dakota barnyard, one view taken during a period of rainy weather, the second after a bad situation was corrected by paving with concrete. Even if you cannot afford to pave the barnyard surface right away you can afford to “police” your barnyards to remove pieces of wire or boards, perhaps farm machinery or parts of farm implements, loose boards or projecting wires on the fences, loose or unusually high sills between barnyard and stable. Parking the manure spreader or disk or plows in the barnyard may make a setting for injuries when cows begin to crowd or fight in an enclosed area.

cold drafts, damp stalls, chapped teats and milking machines that are not in good operating condition. The passage of the teat dilators or mastitis remedies through the teat often serve as a means of producing mastitis which is more serious than the existing condition being treated. Barnyards or pastures containing rubbish, old barb wires, rocks, stumps, machinery and water holes often serve as predisposing causes of mastitis. The failure to clip the needle teeth of baby pigs often results in mammary injury to the sow. Lowered milk production and mastitis frequently follow.

Udder injury may result from riding of cows in heat or herding of cows into the barn by improperly trained dogs. Injury to the udder is a form of stress and will serve as means of lowering its resistance to the mastitis producing organisms within it.

What Are the Signs of Mastitis?

One of the first indications of the presence of mastitis is a decreased milk production and an elevated body temperature. Mastitis may appear in various forms or degree of severity. In some instances, it may be so mild that only a few very small clots in the milk may be detected. At other times, the udder may be swollen, red and feel hot when touched. In many instances, milk production completely ceases and too frequently, the udder may become gangrenous and be entirely destroyed. Often the animal may die because of mastitis.

Many tests are available for mastitis detection, but only one is of real value—the strip cup. There are a number of strip cup designs, but the essentials are a black surface onto which the milk may be forced and a container to hold the milk. Extensive research has shown that the strip cup affords a practical, rapid means of mastitis detection. In addition, its routine use serves as a means of eliminating milk which contains large numbers of bacteria, thus it will aid in keeping bacterial counts low.

The routine use of the strip cup will take little additional time or effort. The results of its routine use will be gratifying as mastitis will be detected at its beginning. Early detection is essential for successful mastitis treatment.

How May Mastitis Be Prevented?

Research has shown that mastitis may be prevented through good management. The term management applies to a number of procedures carried out by the dairyman each day. Good "cow men" seldom have trouble with mastitis. Complicated or expensive procedures such as routine laboratory examination of milk, disinfection of teats, and teat cups, and constant rearranging of the cows in the milking line are of little value. The following procedures are only means of real value in preventing mastitis.

Milking Machine

The milking machine always should be in maximum operating condition. Pulsators that are dirty will not operate at a constant rate. Changes in pulsation rate prevent rapid milk let down with ultimate teat injury. Rubber inflations that have been incorrectly worked or stored, lose their elasticity or become cracked. Udder and teat injury is the end result. The teat cup should be removed immediately when milk ceases to flow. Particular attention should be made of quarters that milk out more rapidly than others. Many cases of mastitis are the result of leaving the milking machine on cows as long in the terminating period of lactation as when the cow was at her peak milk production. Keep the milking machine in maximum operating condition, have the machine checked at least once a year by an authorized service man. Follow the manu-

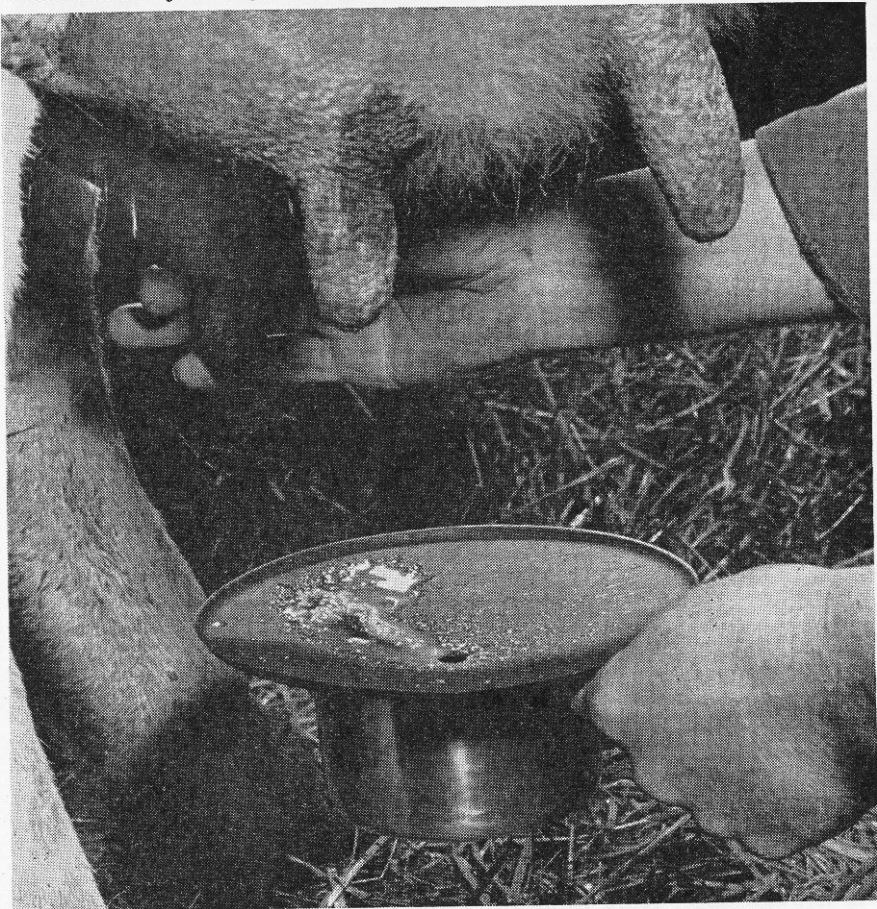


FIGURE 2.—The best means of early detection of mastitis is the strip cup. It should have a black surface on which to force the milk and a container to hold the milk. (Photo courtesy of Babson Bros. Co., Chicago)

facturer's instructions for operation. Reliable manufacturers spend time and money to determine optimum pulsation rates, vacuum and other details for maximum operating efficiency. When these recommendations are not followed, mastitis and lowered milk production often follow. It has become a recognized fact that generally, one milking machine is as good as another, providing it is kept in maximum operating condition and operated correctly.

Housing

Today there are available to the dairy farmer, two generally different types of housing—conventional and pen type housing. It is generally felt that the pen type barn has provided less teat injury than our stall type barns. Regardless of type of housing available, the milking cow should not have its udder exposed to dampness and cold drafts. Stalls that are too narrow or too short are conducive to udder injury. Under these conditions, cows not only step on their own teats, but other cows' teats as well. Support posts at the gutter edge often serve as a source of teat injury. The use of plenty of good, clean straw for bedding will do much to avoid mastitis. The rebedding of cows before retiring during the housing season, serves as a means of keeping cows' udders clean and dry.

Feeding and Breeding

There is no feed or feed mixture available that will prevent or cure mastitis. Over-feeding of concentrates will frequently cause mastitis. Through selective breeding, dairy cattle have inherited definite reproductive ability. When nutrients are supplied for production beyond the inherited ability, the animal is subjected to stress. Mastitis is the end result. No definite controlled research information available today indicates that mastitis as a disease is inherited. Many cases of mastitis may be avoided by selecting cows with well attached udders and teats that permit easy milking.

How May Mastitis Be Treated?

A sane mastitis prevention program can save many dollars for the average dairyman. One of the important phases of a good prevention program is early detection of mastitis. The routine use of the strip cup will afford an efficient and inexpensive procedure, utilizing little time, for mastitis detection. When mastitis is detected, the affected quarter should be milked out completely, following stimulation for milk let-down. The affected quarter should then be milked out at half hour intervals for five to six times. If it becomes evident following this procedure, that the condition is not improving, there is but one recourse, that is to engage veterinary service immediately.

The highly advertised mastitis remedies are of little value and in many instances, a more severe condition will be produced following their administration. The use of teat dilators should always be avoided. Bag balms are of little value. The therapeutic effects are the result of massage during application.