Mastitis (garget) of dairy cows may be a human health problem, depending upon the causative agent, and is always a matter of economic importance.

This disease or condition may be non-infectious, caused by some external injury, but it is usually due to the action of one or more of several species of bacteria which invade the udder.

Mastitis may vary greatly in its severity. It may exist for some time as a mild chronic type in which little or no physical change is evident in either the affected glands or the milk, and only suitable laboratory tests can show it to be abnormal. It may develop as an acute condition in which one or more quarters are greatly swollen, hot, and painful and from which the secretion may be bloody, flaky, thin and watery, or exhibit the characteristics of pus.

The character of the disease is principally determined by the species of bacteria invading the udder. Some bacteria such as Staphylococci, Colon bacilli, Diphtheroids, and some strains of Streptococci may cause an extremely acute and severe type of mastitis, but they are not readily transmitted to other cows in the herd. Also many of these acute cases if properly treated at the onset may completely recover.

The most serious type of mastitis from the herd standpoint is that caused by a specific strain of Streptococci known as Streptococcus agalactiae. This organism seems to be responsible for most of the herd mastitis reported in all countries where the disease has been studied.

The infection caused by this organism usually develops slowly, and the bacteria may be given off in the milk for some time before any alteration in the milk or in the affected glands is noticed. Only suitable laboratory procedures can detect the infection in the early stages.

This chronic form is rarely if ever self-limiting. It usually progresses until an extensive fibrosis or hardening of the affected glands can be readily determined. The character of the milk gradually changes until it becomes flaky or stringy at times when, unless tested with a strip cup (fine mesh wire screen), it may appear normal.

During the course of this chronic infection acute attacks may occur, occasionally because of the invasion of other species of bacteria. This course may continue for months or years until the affected glands are functionally destroyed.

While the mastitis caused by Streptococcus agalactiae usually does not show the initial severity of that caused by some other bacteria, the ultimate results are likely to be worse and the danger of spread to non-infected quarters in the same cow and to the other cows in the herd is much greater than from some of the more acute types.

Many dairymen believe that as an economic problem mastitis rivals or surpasses Bang's disease. Certainly it is a problem which has received too little attention.
Methods of medicinal treatment used in the past have in general given rather disappointing results. Only recently have some drugs been introduced which appear to offer some hope of a cure in a fair proportion of the cases treated. These treatments to be successful should be administered by a competent veterinarian. The choice of the agents used and the method of administration depends upon the severity of infection and the species of bacteria causing the infection.

While specific treatment is highly technical, there is much that the dairy-man can do in the way of care and management to lessen the severity of an attack of acute mastitis and to prevent the spread of contagious mastitis through the herd.

Following are some suggestions which have given good results when carefully carried out:

Eradicate Bang’s disease. The organism causing Bang’s disease frequently localize in the udder and cause a mild type of mastitis. This is seldom of sufficient severity to be detectable, but the udder is made more susceptible to the invasion of other organisms. It is rather generally agreed that mastitis is more prevalent in Bang’s-infected than in Bang’s-free herds.

If veterinary service is available, call a veterinarian to treat acute cases and to examine the herd for early stages of the chronic type. Many of the chronic cases respond to some of the new drugs available to the veterinary profession.

Acute cases may be considerably relieved by bathing the affected quarters with hot water, by milking frequently, and by giving the animal a light laxative diet.

Avoid the spread of the disease in the herd. Find the infected animals. Where laboratory service is available, milk samples should be tested from each quarter of each cow to determine the presence of any infectious organisms. In the absence of laboratory service the dairyman can detect many early cases by using a strip cup. This consists of a cup over which is placed a 100-mesh wire screen. When a small amount of the milk from an infected cow is milked onto the screen, small clots which would not ordinarily be noticed may be easily detected.

All cows which are shown to be infected should be segregated if kept in the same barn and milked after the healthy cows. Even though a mechanical milker is used it is advisable to milk known infected cows by hand to avoid contaminating the milking machine. The course of the disease can be more readily followed when milking is done by hand.

No milk at any time should be milked onto the floor of the stable. This practice can readily spread the infection.

The stable floor should be sprayed once each week with a good disinfectant after being thoroughly cleaned. A chlorine solution of 400 parts per million is satisfactory and will leave no objectionable odor. Daily application of lime to the floor is a good practice.
The milker should wash his hands before milking each cow. A chlorine solution of 100 to 200 parts per million should be used for this purpose. The hands should then be dried with a clean towel. Wet-hand milking should not be practiced. If a mechanical milker is used, the teat cups should be rinsed after milking each cow. This should be done with a chlorine solution of 200 parts per million followed by clean water.

The udder and teats of each cow should be washed before milking with a chlorine solution of 200 parts per million. This should be applied with a clean cloth or towel which should then be wrung dry and used to dry the udder. A separate cloth should be used for each cow.

After milking it is a good practice to dip each of the cow's teats in a chlorine solution of 200 parts per million. During cold weather at least the teats should then be dried, but a separate clean cloth or paper towel should be used for each cow.

Deep straw bedding should be used to keep the teats off the floor when the cows are lying down.

**General Care**

Heavy feeding for maximum production tends to lower the resistance to mastitis and aggravates the condition if it already exists. Milking heavy producing cows three times daily may help to avoid mastitis.

Irregular milking or failure to milk out completely may be factors in causing mastitis.

Dairy cows should be kept dry and warm. Exposure to a cold wind or cold rain or snow may increase the susceptibility to mastitis.

The use of teat plugs and teat tubes should be avoided if possible. If they must be used, they should be boiled for at least 10 minutes, and the end of the teat treated with a suitable antiseptic, before insertion.

Calves and heifers should be prevented from nursing each other. This may lead to the development of mastitis which becomes apparent during the first lactation period.

No cows should be added to the herd until an examination of the milk shows no evidence of mastitis.