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EC63-639 Mastitis the Menace : Mastitis and your Dairy Herd

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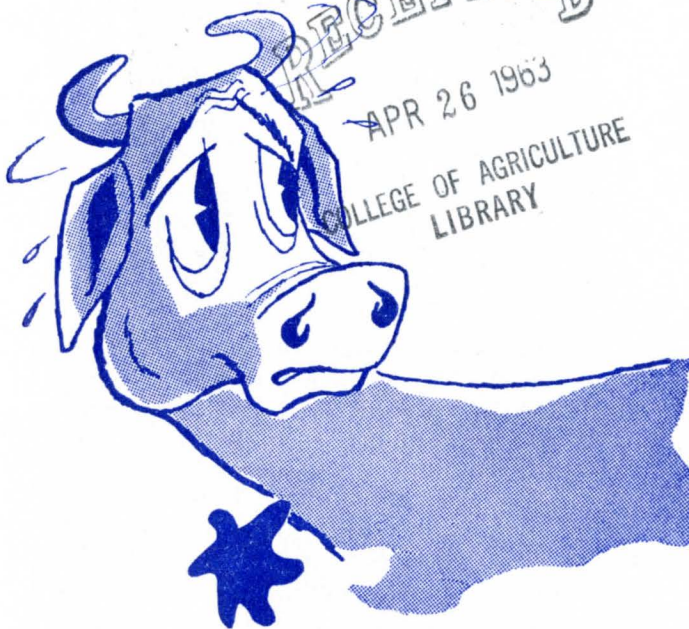
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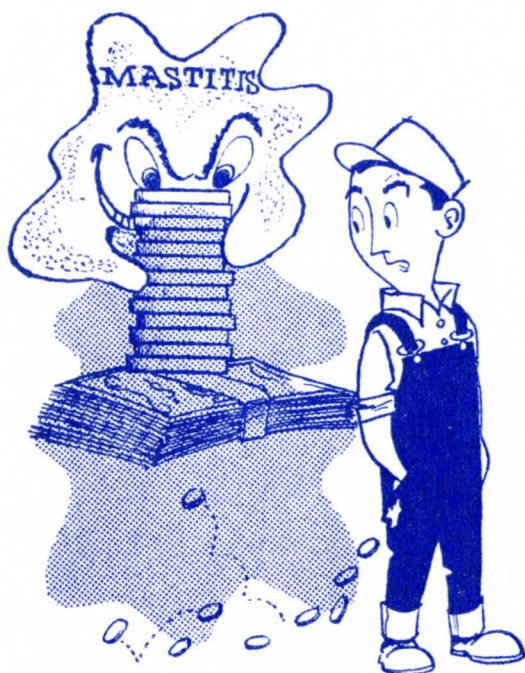
E.C. 63-639

MASTITIS THE MENACE



Mastitis and your Dairy Herd

EXTENSION SERVICE
UNIVERSITY OF NEBRASKA COLLEGE OF AGRICULTURE
AND U. S. DEPARTMENT OF AGRICULTURE
COOPERATING
E. F. FROLIK, DEAN E. W. JANIKE, DIRECTOR



Mastitis is the most costly disease affecting the dairy industry. The annual loss due to mastitis is about \$13 per milk cow. This figure represents only the loss of animals and milk. When you consider cost of therapy, milk withheld following mastitis treatment, and value of unsalable milk discarded because of untreated mastitis, the total annual loss is about \$29 per cow.

To produce quality milk, mastitis must be controlled. Dairywomen, by knowing more about mastitis and following the best sanitation, management, and control practices can:

Increase milk production.

Greatly reduce incidences of mastitis.

What Is Mastitis?

Mastitis (sometimes called garget) is an inflammation of the udder. There are two types of mastitis:

Non-specific—not caused by bacteria. This type of mastitis may be caused by irritation, trauma, injury, or chilling of the udder.

Infectious—caused by one or a combination of different bacteria. Bacteria enter the cow's udder through the teat orifice, streak canal, or through the blood stream. After entering the milk cistern, the bacteria multiply, causing inflammation. From the cistern they spread to other parts of the quarter.

Invasion and establishment of bacteria in the udder are followed closely by changes in the milk.

Physically, the milk may contain flakes, clots or become stringy or watery.

Chemically, the most apparent changes are decreases in fat, casein, lactose and mineral and a change in the acidity. There is an increase in the water, non-casein nitrogen, and chloride.

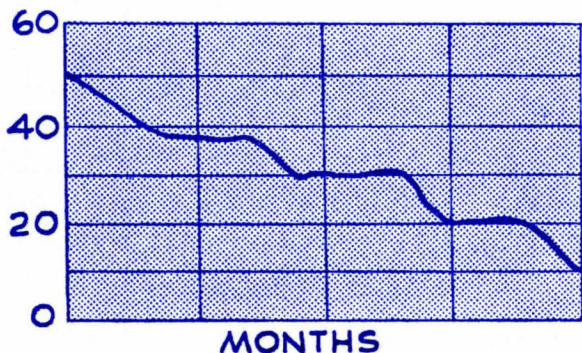
In both cases the milk-secreting tissue of the udder is gradually replaced by hard areas of non-secreting, fibrous scar tissue.

Infectious mastitis may be divided into two main classes, acute, and chronic.

Acute mastitis strikes suddenly. The sick cow is weak, showing chills, fever and no appetite.

Chronic mastitis is a mild, continuous inflammation of the udder. Occasionally, a "flare-up" occurs, when the quarter swells and production is down. Damaged quarters become increasingly susceptible to "flare-ups." After each "flare-up" there is less secreting tissue and hence, less production.

MILK LBS.

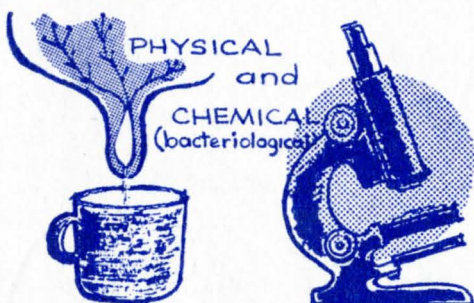


Production goes down with each "flare-up."

Mastitis is caused by many different kinds of bacteria and even yeast cells. The inside of the udder is an excellent place for the bacteria to multiply because of the temperature, food available, and moist conditions. The bacteria causing infectious mastitis are present in the soil, water, manure, milking utensils, milking machine parts, equipment, the milker's hands, the cow's body, or other places.

Diagnosis

There are two methods of diagnosing mastitis—physical and chemical (bacteriological). Without a complete diagnosis, treatment is frequently useless and may be actually harmful.



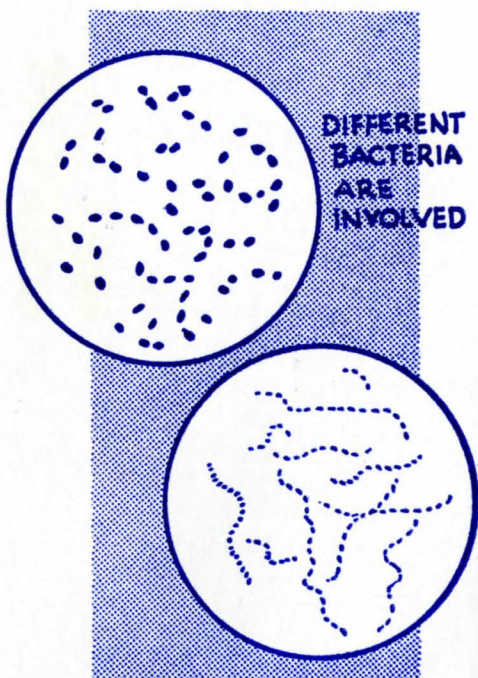
Physical Examination

Udder—The normal udder should be soft and pliable after milking. In acute infection, the affected quarter is hot, swollen and hard. It will show marked contrast to the other quarters, especially after milking. A thickening of the teat cistern is also a sign of infection. Chronic mastitis may at first be detected as slight hard swellings in the udder.

Milk—The nature of milk varies widely in different udder infections. Noticed first, many times, is the failure of the milk to filter properly. Use the strip cup for early detection. This examination of the foremilk of each quarter enables you to see small flakes or clots which are the first signs of mastitis. In advanced cases, firm clots and stringy secretions will be present and the milk will have an abnormal color. In chronic infection the milk may appear and taste normal. Therefore, more sensitive tests are needed for positive diagnosis.

Chemical (Bacteriological)

Screening—There are many tests that indicate infection in the udder. These tests show abnormalities but do not show the specific bacteria causing mastitis. Some of these are the Whiteside test, the California Mastitis test, or the Catalase test.



Cultural—Unless you know which bacteria causes mastitis, you can not treat the disease intelligently. Each kind of bacteria needs different treatment. Variation may even occur between different strains of the same organism in their susceptibility to chemicals and antibiotics.

Laboratory examination of the milk must, therefore, include procedures for growing and identifying germs present in the milk. After the bacteria are identified, tests should be made to determine which drug or antibiotic will kill them. These procedures require the services of a well-equipped laboratory and experienced personnel.

Conclusion

The diagnosis of mastitis should include physical and laboratory tests. Proper diagnosis needs the cooperation of the dairyman, his veterinarian, and other professional workers. It is best to prevent mastitis, but when treatment is necessary, it must be aimed at the particular factor causing the trouble.

The subject of mastitis will be covered in six circulars. Information in the next five circulars will be as follows:



- 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 Mastitis and Public Health

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