

# Mastitis 101



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Mastitis costs the dairy industry more than \$100 million a year, including lost

milk production, treatment costs, and cows that may have to be culled. Mastitis — inflammation of the udder — may result from infectious causes, such as bacteria and yeasts, or non-infectious causes, such as an injury. It is most commonly the result of a bacterial infection of the tissue of the udder, caused by the entrance of bacteria into the udder via the teat opening during milking or when the cows lay down in a dirty environment. When foreign organisms enter the udder, the cow responds by defending herself. She produces immune cells (white blood cells) to try to fight the bad guys. The presence of bad bacteria in the udder, combined with the presence of the immune cells trying to fight the infection, can cause changes in the composition of the milk.

**As a milker**, your goal should be to harvest the highest- quality milk possible. Any abnormal milk should be discarded (not milked into the tank) and the cow should be identified and/or removed for examination and possible treatment.

**The presence** of mastitis may be apparent through changes in the health and demeanor of the cow (fever, droopiness), changes in the udder (swollen, firmness, redness, pain) or changes in the milk (watery, thick, different color, presence of clots). We call these the clinical sign of mastitis, as they can be readily seen. Yet, other cases are difficult to see. Many cows with mastitis **DO NOT** show changes in the composition of the milk, nor changes in the udder. This is called sub-clinical mastitis and cannot be diagnosed nor readily detected using the human senses. A specialized test is needed to detect the change in milk composition, such as a somatic cell count, which is described separately in this issue, or a California Mastitis Test. It is important to know whether it is mastitis that is causing abnormal milk or something else. A cow that was not dried off and is still being milked will start producing colostrum prior to calving and will have abnormal or thick milk. A cow that reaches the end of her lactation may “dry herself up” and produce abnormal or watery milk. Finally, a very sick or dehydrated cow may produce abnormal or thick milk. Such cows need to be identified, removed and/or communicated to management for appropriate action.

**As a milker**, you are the first line of defense! Good observation and communication with the rest of the dairy team (herdsman, hospital staff, and owner) is a critical part of your daily task.

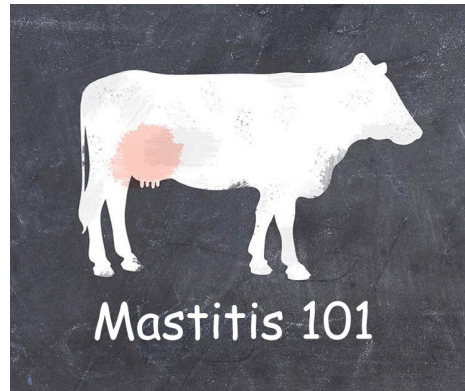
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## Benefits the dairy

(Each case of clinical mastitis costs money)

Specialist at the University of Wisconsin cites the following figures:

- Average cost of drugs used (include all drug costs): \$18.
- Average number of days with milk discarded: 6.
- Average production/cow/day discarded: 65 pounds.
- Milk price per pound: 14.5 cents.
- Total cost of discarded milk: \$57.
- Total cost per clinical case of mastitis: \$95.
- Estimated number clinical cases treated per month: 4 (this varies by herd).
- Monthly cost of clinical mastitis: \$380.



## Most cases are difficult to see

