

Mastitis in cows: Basic management strategies

What is Mastitis?

Inflammation of one or more quarters of the mammary gland or udder tissue in dairy animals.



What causes mastitis?

- Mastitis is primarily caused by contagious pathogens (*Staphylococcus* and *Streptococcus* species) and environmental pathogens (*Escherichia coli*).
- However, many other bacteria can also cause mastitis. Dairy animals in poor hygienic condition or traumatic/mechanical injury in the teat/udder can favour mastitis development.

What are the symptoms of Mastitis?

- A. Subclinical Mastitis:** Subclinical mastitis constitute 90-95% of all mastitis cases in dairy animals. It is difficult to identify except higher somatic cell counts in the milk and reduction in milk yield.
- B. Acute Mastitis:** Reduction in milk yield, increase in body temperature, loss of appetite and difficulty in movement due to pain in swollen udder



Swelling



Redness

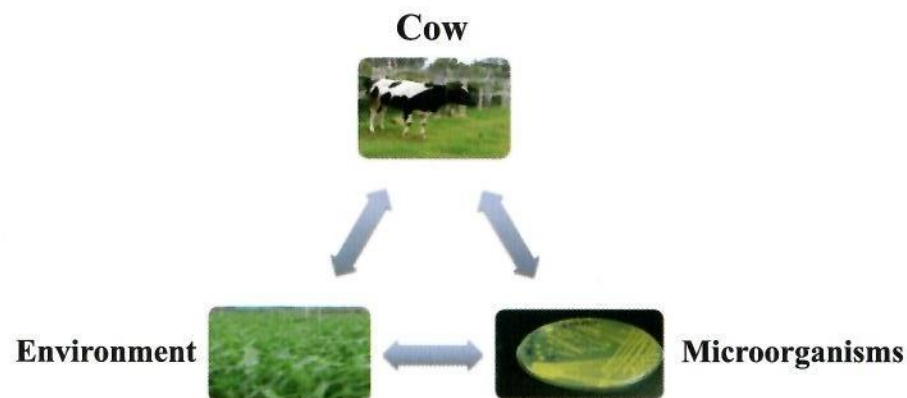


Watery milk

C. Clinical Mastitis: Clinical mastitis constitute 5-10% of all mastitis. Abnormalities in udder such as swelling, heat, hardness, redness, pain and watery appearance, flakes, clots, pus, blood in the milk.

Transmission

Mastitis is transmitted by contaminated hands or materials, bedding materials, feeding in same feeder, wet floor and milking machine.



How to detect mastitis ?

- ❖ Physical examination of abnormality in udder and milk.
- ❖ By using California Mastitis Test (CMT) farmers can diagnose subclinical mastitis in the farm.
- ❖ Laboratory diagnosis of mastitis milk by culturing the bacteria. Detection of antibiotic resistance pattern in bacteria can help in proper treatment with appropriate antibiotics.



Economic losses to farmers

- ❖ Clinical mastitis reduces the milk yield and causes financial loss of ₹ 7,824 per cow per month throughout the lactation period (Das *et al.*, 2018. *Int. J. Curr. Microbiol. App. Sci.* 7(3): 3651-54).
- ❖ Mastitis quickly spreads in the farm to other animals.
- ❖ It is very costly disease to dairy animals which affect the farmers economy.

What are the health concerns of mastitis ?

Animal health

- Loss of functional quarters
- Reduced milk production

Human health

- Poor quality of milk
- Transmits antibiotic resistant bacteria and antibiotic residues through milk

How to treat mastitis?

- ✓ Mastitis is treated by intramammary infusion or systemic administration of antibiotics or a combination of both.
- ✓ The antibiotics can be infused directly into the infected udder after milking.
- ✓ It is always best to contact Veterinarian for proper guidance, correct dosage of antibiotics and method of application. This will avoid misuse/abuse of antibiotics and complications of mastitis.
- ✓ Non antibiotic management of subclinical mastitis by Trisodium citrate 20gm/day/animal orally for 10 days.
- ✓ For clinical mastitis, depending on stage and severity appropriate antibiotics need to be used under the guidance of a Veterinarian.

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How to prevent mastitis?

- ❖ Early diagnosis and treatment of subclinical mastitis.
- ❖ Maintain good hygiene during milking.
- ❖ Clean all teats before and after every milking.
- ❖ Provide nutritious and healthy feed.
- ❖ Environment should be as clean and dry as possible.
- ❖ Separate healthy cows from infected cows.



Prevention is better than cure

- Periodical screening of animals for subclinical mastitis.
- Allow animals to stand for 20-30 minutes immediately after milking.
- This will save time, money and ensure better milk quality.

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