

Mastitis in Cattle: How to Reduce its Occurrence and Improve Farm Economics

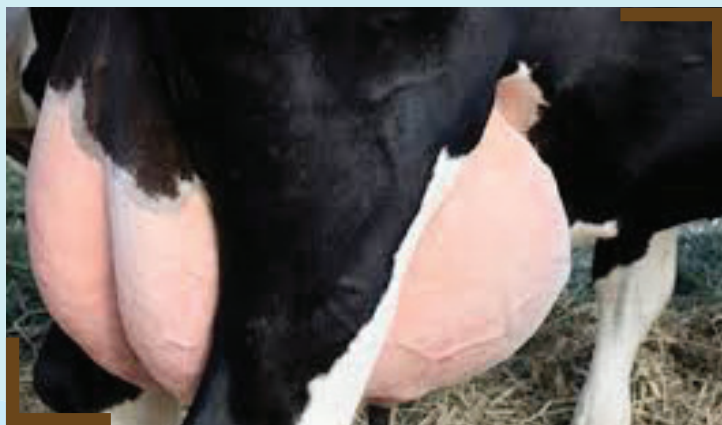
What it is: When your lactating cow shows a sudden drop in milk yield, swelling, edema and hardness of the udder, feels pain in the udder, has flakes in milk, early spoiling of milk, etc., it is considered as mastitis. Not all of these but even a single symptom is sufficient to consider development of mastitis in the cow. Harmful substances produced by mastitis causing microorganisms called toxins damage the milk producing tissues of the udder. Mastitis causing microorganisms as well as the inflammation process result in decreased milk production and compositional changes in milk from infected quarters or from the udder as a whole.

There are mainly two types of mastitis-

(i) Clinical mastitis and (ii) Sub clinical mastitis.

Clinical mastitis: Clinical mastitis is characterized by sudden onset, change of milk composition and appearance, decreased milk production, and the presence of the visible signs on the udder of your cow. Clinical mastitis becomes noticeable.

Sub clinical mastitis: Sub clinical mastitis has visible signs neither on the udder nor in the milk but you can see the start of decreasing milk production. It is more common in older lactating animals and also has severe impact on them while the first lactation heifers are quite less prone to it. Because of absence of external manifestation, it very often goes unnoticed and the diagnosis becomes very difficult.



Mastitis



Sloughing off of the mammary gland tissue because of mastitis

How it affects your farm:

Apart from loss in milk yield of your cow, mastitis costs you in various other ways.

- In case of acute (clinical) mastitis, you have to face heavy financial loss in terms of expenses incurred on treatment and medication;
- During the unproductive period you have to spend money for feeding, on hired labour and devoting your time on care and management of the cow without any return.;
- There will be a total loss of milk yield during treatment and withdrawal period.
- By not giving proper treatment the total loss will extend to the entire lactation period;
- As the disease goes unnoticed in sub clinical mastitis, the loss incurred can be either for the entire lactation or even for life time of the cow if the damage to the udder becomes irreversible. In such case, it will heavily cost you with one of your high yielder cow;
- With possible spreading of contamination to the other healthy cows of the herd may lead to further development of mastitis in them;
- You will lose market for milk because of its less demand caused by poor/inferior quality and fetching a lower price.

What may cause mastitis: Mastitis may be caused by the following causative factors -

- **Microorganisms-** A large number of microorganisms including bacteria (e.g. Staph. aureus), fungus (e.g. Candida) and algae (e.g. Prototheca);
- **Trauma/injury-** Various forms of trauma/injury done by - friction with a very rough floor, threshing by hoof of other cow, injury while trying to jump over a fence or concrete wall (as in a manger), fisting type of milking practice or even a polyp developed inside the teat canal;
- **Injudicious use of antibiotics-** Farmers tend to often discontinue the use of the course of antibiotics against mastitis prescribed by the veterinarian. They just stop it on seeing the disappearance of the visible symptoms. This is one of the causes of relapse of the disease and occurrence of sub clinical form of the disease. They also use antibiotics of their own choice without having a prescription from a qualified veterinarian. This kind of practice leads to increased incidence of fungal mastitis and development of bacterial resistance to the antibiotic given.

Sequels of mastitis:

- The udder of your cow becomes hard with nonfunctional tissues and although the cow is totally free from the infective cause, she will not be in a position to give a good milk yield.
- Damage done to the mammary gland and, even to the body system, by the toxins produced by the pathogens which are not destroyed by antimicrobial drugs.

Measures to be adopted to reduce the occurrence of mastitis:

- Strictly maintain farm hygiene. Regularly clean and disinfect the floor, manger & waterer and drainage system.
- Strictly maintain personal hygiene by washing hands before milking, wearing face mask, clean cloths/ apron, keeping nails trimmed, etc.;



Face mask, apron to be used during milking

- Wash the udder before milking and dry it by wiping with a clean cloth after milking is over;
- Never practice fisting method of milking and also never use oil on the teats to make them slippery during milking

Knuckling (Wrong hand milking)



Fisting method of milking

Mustard oil used during milking

- Check the pH of milk periodically using pH paper strip for detection of subclinical mastitis;
- Do routine testing of milk using California Mastitis Test kit;
- Always call a veterinarian for treatment of any kind of disease in your farm and avoid using medicine at your own choice.

What you should do if mastitis occurs:

Dos	Don'ts
Call a veterinarian without any delay as the udder tissues get continuously damaged. Stopping the damages at the earliest would save the remaining healthy tissues	Never try to treat at your own. Insertion of intra mammary infusions into teats/udder without proper knowledge would rather introduce more germs inside as well as would cause further damage to the udder tissues of your cow
Always handle and milk the affected cow in the last after completing the milking of other healthy cows in the farm.	Never use the same container to milk the affected cow.
Separate the affected cow from the herd	<ul style="list-style-type: none">• Never use the milk from the treated cow for sale or consumption till the withdrawal period is over• Never use the milk from the cow affected with sub clinical mastitis for sale or consumption
Complete the course of treatment, especially that of antibiotics, as prescribed by the attending veterinarian	