



Mycoplasmal Mastitis

Mycoplasmas are commonly found in the nasal cavity and reproductive system of healthy cows but stresses such as severe changes in weather, nutritional distress, and poor ventilation may allow the organisms to grow and enter other organ systems such as the mammary gland resulting in mastitis. *Mycoplasma bovis* is considered the most prevalent and clinically important mycoplasma species in dairy cattle that can also be readily transmitted from cow to cow during milking in addition to transmission via respiratory secretions as described above. A typical source of herd infection is purchased animals, especially non-lactating heifers or cows subclinically infected with mycoplasma. After calving, these animals may never develop clinical mastitis but may shed high levels of mycoplasma organisms in their milk or respiratory secretions.

Outbreaks of mycoplasma mastitis are often seen several weeks after an outbreak of respiratory disease in dairy herds. Frequently these outbreaks involve a larger portion of 1st lactation animals.

The classic signs of mycoplasma mastitis have been described:

- Sudden swelling of the whole udder or individual quarters
- Cows appear otherwise healthy but have severe mastitis
- Abnormal udder secretions - milk has sandy or flaky sediments in watery or yellowish fluid
- Multiple quarters involved
- Infected quarters that fail to produce milk or substantially decreased milk production
- Prolonged milking times
- No response to treatment

How can Mycoplasma be controlled?

Mastitis biosecurity programs can be used to decrease the risk of purchasing infected cattle. When purchasing cattle, bulk tank milk cultures from the herd of origin should be requested. Herd size and the portion of infected cows in the herd can influence the sensitivity of bulk tank milk cultures. Non lactating cows that calve after purchase should be isolated and milked last until a negative composite milk sample is obtained. Farmers that routinely purchase cattle should develop a biosecurity monitoring program in conjunction with their veterinarian. Submission of bulk tank milk for mycoplasma twice monthly would be appropriate for most herds and is cheap insurance.

The management of sick and fresh cows also contributes to the spread of this organism. Fresh cows should not be housed in the same pens or milked with the same equipment as sick cows or cows with mastitis. The feeding of waste milk from infected cows to calves is another source of transmission of this disease throughout the herd. Calves fed infected milk may develop pneumonia, joint infections and head tilts related to ear infections. Milk from infected cows should not be fed to calves. A solution is to pasteurize waste milk which, if properly done, will eliminate the problem with calves.

How can Mycoplasma be detected?

The standard laboratory diagnosis for intramammary infection is currently based on bacterial culture, using special media and growth conditions, from bulk tank milk, composite samples or quarter samples from cows with clinical and subclinical mastitis. Mycoplasmas may take 3–10 days to produce visible colonies. New diagnostic technology involving the detection of mycoplasma DNA from milk samples is also available from some labs.