



New York State Cattle Health Assurance Program
Mastitis Module Fact Sheet
Coliform Mastitis

The Disease

The invasion of one or more quarters of a cow's udder by bacteria of the type called coliforms can produce life threatening illness. These bacteria, *E. coli*, *Klebsiella*, *Enterobacter* and *Citrobacter* may live in the barn environment in bedding, runways or water troughs. Most clinical mastitis cases caused by these tough, durable organisms occur from two weeks prior to freshening through the first two months of lactation. The first two weeks after freshening is a particularly vulnerable time. Infection occurs when the teat end contacts a contaminated surface between milkings. Thus the physical defenses of the teat end are most important here and the disease is not highly contagious cow to cow. These organisms are common occupants of the intestinal tracts of animals and people and are therefore abundant in the environment.

The Consequences

Following the entrance of coliform bacteria the cow may have sudden onset of fever, loss of appetite, diarrhea, shivering and may go down. This is due to the poisons produced by the bacteria entering the cow's blood and lymph systems. Later the infected quarter may swell and be warm and painful. The discharge may be watery or bloody or there may be large thick clots. Most cows with coliform mastitis that survive will have little residual damage but a few become chronic or lose the affected quarter and some are culled due to continued poor health. Treatment with antibiotics is of relatively little value as the bacteria are killed by the cow's aggressive immune response. Supportive care with fluids and anti-inflammatories is of value. Treatment with oxytocin may help to remove accumulated toxins.

Prevention

- Keep the cows bedding clean and dry particularly the dry cows and maternity.
- Avoid the use of sawdust as it can support coliform bacteria. If sawdust is used avoid green sawdust and clean and replenish it often.
- Clean and dry the teat well prior to milking.
- Maintain the milking system and use good technique to avoid causing damage to teat ends.
- Damaged teat ends are difficult to clean adequately and a pre-milking teat dip may help.
- Clean teat ends well and swab with alcohol before using any intramammary infusion.
- Provide good footing, treat lame cows and avoid over crowding to keep cows from excessive down time or lying in unsanitary conditions.
- Good nutrition and control of periparturient metabolic diseases reduces the cow's susceptibility to coliform mastitis.