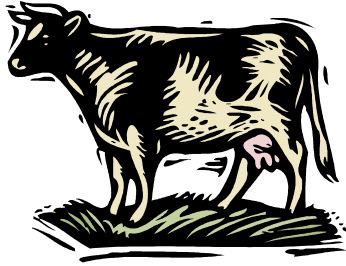


# Mill Creek Veterinary Services

(559) 651-1525

Dr. Jennifer Wessel



## **MYCOPLASMA MASTITIS:**

Mastitis-causing mycoplasmas are commonly found in the mucous membranes of the respiratory and urogenital tracts of healthy cows. However, stresses such as calving, extreme temperature variations, transportation, disease or external trauma may allow the organisms to enter other body tissues or directly into the mammary gland resulting in clinical mastitis. Thus, it is extremely important to realize that even though a dairy is not currently experiencing mycoplasmal mastitis, the organisms are more than likely present within the herd and the possibility of a mastitis outbreak always exists.

Most transfer of mycoplasma infection within herds occurs at milking time by means of milking machines, teat cups and hands. Some new herd infections occur from the introduction of replacements with infected udders. Also, treatment of mastitis provides a good opportunity for spread from cow to cow. However, an outbreak of mycoplasmal mastitis may occur in previously clean herds without introduction of animals or history of previous intramammary treatment.

### **Clinical Signs:**

1. An increase in severe clinical mastitis cases that resist treatment, but with little other effect on the cow.
2. The involvement of more than one mammary quarter, sometimes all four.
3. A marked drop in the milk production of affected cows.
4. Abnormal udder secretions that may vary from watery milk with a few clots to a colostrum-like material. Chronically infected cows may show a tannish secretion with flaky sediments in a whey-like fluid. Udder secretions may become purulent.

Cows which continue lactating produce less milk than expected for the current lactation, usually with normal appearance but with high somatic cell counts. They may shed mycoplasma organisms intermittently for variable periods. Infected cows may return to their expected milk production in the same lactation, remain infected in the dry period, and increase their milk production in the following lactation while shedding *M. bovis*.

### **Diagnosis:**

Microbiological culture of mycoplasma is made on petri plates. Direct inoculation and pre-enrichment samples are made. Plates are examined for colonies under a dissecting microscope. Growth may be seen after 3 days of incubation, but incubation proceeds 7 days before plates are diagnosed as negative. For bulk tank samples, pre-enrichment samples are made and incubated for 3 days prior to a direct inoculation. Since bulk tanks have a larger quantity of milk the enrichment helps multiply the organism within the sample.

## **Mycoplasma Mastitis (cont'd)**

### **Control**

There is no treatment for mycoplasma mastitis. Control of the disease relies on identification of infected cows by culture of composite or quarter milk samples from all milking and dry cows in the herd. All cases of clinical mastitis should also be cultured as well as all animals at freshening, including heifers. Slaughter of all infected cows is indicated for all positive animals.

Culture of bulk tank milk samples collected after milking each production group may be used as a method to locate groups in which mycoplasma infected cows exist. Then, individual composite milk samples can be used to identify the infected cows in those production groups.

Spread of mycoplasma can be greatly reduced by good milking and clean sanitation procedures. Premilking teat disinfection before applying teat cups and postmilking teat dipping should be used. Furthermore, teat dipping should also be used before and after intramammary treatment of nonlactating or lactating cows for organisms different than Mycoplasma. The use of rubber or plastic gloves and disinfection of gloved hands between cows is advised when milking or treating cows in a mycoplasma infected herd.

**Post-infection Prevention:** After eliminating all known positive animals from the herd it is important to continue weekly monitoring of bulk tank milk to detect the presence of mycoplasmas. The purpose is to monitor the success of control procedures and also to monitor the harboring of new infections. This monitoring should continue until pregnant heifers and all cows that were dry during the mycoplasma mastitis outbreak have calved.

### **Pre-purchase preparation:**

Great care should be used when purchasing cows and heifers. Milk from all replacements should be cultured for Mycoplasma as well as for Streptococcus agalactiae and Staphylococcus aureus before allowing replacements to commingle with the herd. When herds are purchased, it is a good policy to culture all suspected mastitic cows as well as the bulk tank. All actions should be based upon the understanding of the highly contagious nature, slow recovery rates and the ineffectiveness of treatment of mycoplasma infections.

Please call the office if you have any questions or concerns.