



Pasteurella spp.: A Practical Summary for Controlling Mastitis

Authored by Turner Swartz, former Ph.D. student, Dairy Science, Virginia Tech, and Christina S. Petersson-Wolfe, Associate Professor and Extension Dairy Scientist, School of Animal Science, Virginia Tech

Pasteurella spp. are contagious pathogens that are seldom reported as a cause of bovine mastitis. Mastitis caused by *Pasteurella* spp. usually appears as a thick, creamy-yellow, viscous secretion, sometimes with a foul odor. *Pasteurella* spp. are Gram-negative and similar in structure to other coliform mastitis pathogens. Additionally, when grown on blood agar, *Pasteurella* spp. have been found to have irregular, rough colonies that produce a musty odor.

Information in this publication was summarized from the National Mastitis Council's Laboratory Handbook on Bovine Mastitis (Hogan et al. 1999).

Where are these organisms found?

Reservoirs of *Pasteurella* spp. are the upper respiratory tract of mammals and birds.

How does *Pasteurella* spp. spread to the mammary gland?

The spread of *Pasteurella* spp. is still not understood, but most likely is cow to cow. Under suitable conditions, *Pasteurella* spp. has been found to spread from the respiratory tract of cows to the udder via the blood or lymph system.

How can you prevent and control mastitis caused by *Pasteurella* spp.?

Because *Pasteurella* spp. can grow in injuries, preventing teat injuries appears to be the best way to control this pathogen from causing mastitis. Due to its contagious behavior, if infection does occur, removing the infected cow from the herd is necessary to prevent the spread to other cows. Until an infected cow can be removed from the herd, the infected cow should be milked with a separate milking unit or segregated and milked last.

When are *Pasteurella* spp. mastitis infections most likely to occur?

New infections can occur at any time during lactation. Cows with teat injuries are at a higher risk. Furthermore, if an infected cow is confirmed, other cows could be at risk.

How likely is *Pasteurella* spp. to be cured?

Cows infected with *Pasteurella* spp. typically do not respond well to antibiotic therapy. As a reminder, veterinary consultation is recommended prior to the start of any treatment protocol. Furthermore, cows can become severely ill due to presence of endotoxins in blood, which can result in death.

Quick Notes

- *Pasteurella* spp. are contagious pathogens that are rarely seen in bovine mastitis.
- The spread of *Pasteurella* spp. is suspected to be from cow to cow.
- Preventing teat injuries and removing infected cows are the main ways to prevent and control this pathogen.
- *Pasteurella* spp. do not respond well to antibiotic therapy and can cause endotoxemia, which can result in death; thus, prevention is key.

References

Hogan, J. S., R. N. Gonzalez, R. J. Harmon, S. C. Nickerson, S. P. Oliver, J. W. Pankey, and K. L. Smith. (1999). *Laboratory Handbook on Bovine Mastitis*. Madison, WI: National Mastitis Council.