

Non-Coliform Gram Negative Mastitis Infections

by Kevin Nigon, DVM, Northern Valley Dairy Production Medicine Center

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Occasionally our laboratory will culture gram negative organisms from individual cow cultures. Often these are *Pseudomonas* or *Serratia* bacteria. These are both environmental pathogens that are found in water, wet bedding, soil, or plants. These bacteria can cause chronic infections which do not respond to any antibiotic therapy. From the Laboratory Handbook on Bovine Mastitis from NMC, the most effective means of preventing these infections is by keeping cows clean and dry to decrease teat end exposure. Effective practices include using inorganic bedding, avoid overcrowding, frequent removal of manure and urine, and preventing access to wet, muddy areas.

I also have seen situations where these organisms may contaminate drop hoses and spray nozzles in the milking parlor. These bacteria are often resistant to certain disinfectants even if they are in the milking parlor water supply. The best thing to do is to replace all rubber drop hoses and get new spray nozzles. This should be done on a regular schedule, preferably annually. Work with your dairy equipment and product supplier to try to find a disinfectant that may be more efficacious against these bacteria.

It is an excellent idea to culture clinical mastitis cases either on farm or with your veterinarian. Using on farm culturing will often not identify these bacteria other than to call them gram negative. Using your veterinarian's lab or a lab such as the University of Minnesota Diagnostic Lab will positively identify these. Work closely with your veterinarian to develop mastitis treatment protocols and search for sources of bacterial infections such as *Pseudomonas* and *Serratia* and eliminate these sources.