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## Miscellaneous microorganisms in bulk tank milk

Miscellaneous microorganisms are present in the environment (soil, water, plants, decaying organic matter, exudates of animals or contaminated treatment preparations) of every dairy farm and/or can be found in the infected udder or residents of the respiratory, reproductive, and digestive tracts. The potential always exists for these microorganisms to gain access to the mammary gland during favorable conditions. When these isolates are found, it is possible that the samples was not collected aseptically and care should be taken when deciding if an infection is occurring or contamination. Therefore, it is important to evaluate the bulk tank milk (BTM) culture results using all available information.

- Yeast- if causing intramammary infection, they are often eliminated spontaneously within 2 months. Avoid antibiotic treatment as this can exacerbate clinical signs.
- *Nocardia* species- hard nodules or extensive fibrosis may be found upon palpation. Udder secretion may be purulent and affected quarters may develop draining sinus tracts. Mild or high fever may be seen. Infections are refractory to antibiotic treatment.
- *Corynebacterium bovis*- is spread cow-to-cow at milking and primarily colonizes the teat canal and is generally considered mildly pathogenic causing mild infections with a slight increase in SCC and reduction in milk production. Pure culture from a milk sample, *C. bovis* can be the cause of subclinical or chronic mastitis.
- *Trueperella (Arcanobacterium) pyogenes*- can cause acute, purulent mastitis, most often seen during humid weather, with poor prognosis once established in which function can be lost. Infections occur most frequently in dry cows or heifers before calving.
- *Mycobacterium* species- can cause intramammary infections, and if the infection is confirmed affected cows should be removed from the herd.
- *Bacillus* species and other Gram-positive bacilli- *Bacillus cereus* and *B. subtilis* rarely cause intramammary infections. *B. cereus* infections may cause an acute and sometimes fatal gangrenous mastitis. Other Gram-positive bacilli may be isolated from BTM and can reflect poor aseptic technique upon sampling.

Many bacterial species may be isolated from BTM. It is important to utilize all information along with the culture report in order to identify problems.

## **References**

J Hogan, R Gonzalez, R Harmon, S Nickerson, S Oliver, J Pankey, and K Smith. Laboratory Field Handbook of Bovine Mastitis. National Mastitis Council, Inc. Revised 1999.

Using Bulk tank Milk Cultures in a Dairy Practice. National Mastitis Council, Inc. [www.nmconline.org/articles/bulktank.htm](http://www.nmconline.org/articles/bulktank.htm). Accessed 4/1/2015.