

# *Bulk Tank Culturing*

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Dairy producers in Colorado can have their bulk tank cultured monthly without lifting a finger. Samples collected by Dairy Farmers of America (DFA) tanker drivers are selected monthly by DFA laboratory personnel, delivered to the CSU Diagnostic Laboratory, and cultured. Preliminary results are reported in 3-5 days, and final results mailed in 14 days. The program has helped many producers monitor their milk quality and identify problems promptly. Recent problems with *Mycoplasma mastitis* in some herds make this a good time to revisit the objectives, advantages, and limitations of routine monthly bulk tank culture.

## *Program Objectives*

- 1) Screen herd for *Mycoplasma*, *Streptococcus agalactiae*, and *Staphylococcus aureuse*, organisms that can be introduced and spread rapidly in herds without appropriate diagnostic and management procedures.
- 2) Identify causes of elevated bacteria counts. Standard Plate Counts performed by milk handlers or processors report only the total number of bacteria present. Bulk tank culture identifies and quantifies the bacteria, helping determine the source of elevated bacteria counts.
- 3) Provide a report card of quality milk production. Producers can track milk quality, monitor trends in numbers and types of bacteria, and take corrective action when needed.

## *Program Advantages*

- 1) The program is automatic—after initial signup, no more action is needed.
- 2) Results reviewed by diagnostic lab and VTH mastitis experts. We can consult your records to provide current advice for producers and veterinarians.
- 3) Researchers at CSU Diagnostic Lab recently developed a sensitive and rapid test (PCR) for *Mycoplasma* in milk. The test is labor intensive and more expensive, but can be applied in certain circumstances for rapid identification.

## *Program Limitations*

- 1) DFA lab personnel are conscientious and careful, but they may not know which samples are representative of all cows in the herd.
- 2) Monthly sampling will not detect introduction of contagious mastitis pathogens introduced after the sample was selected. A full month may elapse before the next sample finds the organism.
- 3) Bulk tank sampling may not be sufficiently sensitive to detect a few infected cows in a herd of 500 or more. Dilution of organisms may prevent detection.

These limitations may explain why some bulk tank cultures could fail to identify *Mycoplasma* when infected cows were present in the herd, allowing the organism to spread further before it was identified. We are currently reviewing the sampling and culturing procedures to maintain the best program possible. We will make specific recommendations for more aggressive culturing for herds in active expansion. **Please note that any herd finding *Mycoplasma* after the introduction of new cows has neglected a much more important and reliable aspect of herd biosecurity—culturing cows before their introduction to the herd!!**