



Study conducted by the University of La Pampa, Argentina



## CASE STUDY

# Mastitis Detection Representative Sampling

*How to detect mastitis-related bacteria within groups of cows through pen sampling and in individual milk cultured cows with high somatic cell counts.*

### CHALLENGE:

A dairy farm in La Pampa, Argentina, had a history of elevated somatic cell counts (> 350,000 cells/ml) and a high incidence of clinical cases of mastitis. These issues were the subject of a case study completed at the University of La Pampa, Argentina. The leading question was whether the QualiTru sampling system effectively detected mastitis-related bacteria within groups of cows through pen sampling and in individual milk cultured cows with high somatic cell counts.

### SOLUTION:

QualiTru's inline sampling system collected representative milk samples from seven groups of 170 cows, with a total of 25 samples. Cows with high somatic cell counts or with clinical mastitis and others within the groups were individually sampled and compared to the inline sample findings. The individual cow and milk line pooled composite samples were cultured for aerobic bacterial isolation and mycoplasma using standard approved methodologies.

### RESULTS:

Results showed that 19 out of the 25 pooled inline samples agreed with at least one of the individual samples, which accounted for a 76% correlation between the two methods. The positive results allowed the veterinarian to identify the individual sick cows by pen, saving time and costs for testing the entire herd. It was concluded that, in general, the milk inline sampling device is useful in detecting mastitis-causing organisms shed by positive cows. There were some false-negative results linked to *Staph spp.*, perhaps due to dilution or lack of lab technique accuracy. The inline system, although not perfect, provides a reliable mechanism to detect individual cows shedding either *Staphylococcus* or *Streptococcus spp.*, or both.

### BENEFITS:

The QualiTru inline sampling system has proven to be a useful epidemiological surveillance tool for mastitis within different milking groups. Early diagnosis of mastitis while still subclinical can reduce the operating costs of testing every cow when somatic cell counts in the bulk tank begin to rise. A mastitis management plan that includes weekly to bi-weekly pen sampling is a reliable and effective way to monitor herd health and maximize financial returns.

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[View video of case study](#)