



Farm Calls Through the Ages

Milk Monitoring Saves Herd

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Milk Monitoring Program Saves Herd

Monitoring Program Saves Herd from Potential Mastitis Disaster

by Carrie Koplinka-Loehr

Michael Zurakowski, DVM and Sr. Extension Veterinarian with Quality Milk Production Services (QMPS) at Cornell's Animal Health Diagnostic Center, could tout the benefits of their Bulk Tank Monitoring Program (BTMP) 'til the cows come home, but for one New York dairy farmer, his experience speaks even louder.

In September 2014, a dairy farmer in eastern New York brought a dozen cows from his mid-sized herd to a show. As usual, the farmer carried his own portable milking equipment, but when it malfunctioned, he had no choice but to use the machines provided. When he returned to his farm, he put his cows back into the herd.

This farmer was a member of the Bulk Tank Monitoring Program, which provides bi-monthly milk quality screenings. So in October, a sample from his bulk tank was collected and delivered to the AHDC's QMPS laboratory in Cobleskill. The technician began checking for *Mycoplasma* species, *Streptococcus agalactiae*, *Staphylococcus aureus*, *Klebsiella*, and five other typical pathogens that cause mastitis, a potentially fatal infectious disease of the mammary gland.

Mastitis is one of the most common diseases of dairy cattle in New York and the U.S., and the most costly. Annual losses from reduced production, decreased milk premiums, unusable milk, and treatment are estimated at \$2-3 billion.

In this case, the bulk sample tested positive for *Mycoplasma*, known informally as Myco. According to Zurakowski, who directs BTMP, *Mycoplasma* is a normal organism of the respiratory tract but can lodge in the udder and cause infection. In the past five to seven years, incidents of *Mycoplasma* infection have increased due to movement of animals between farms, cows stressed from crowding, and the organism spreading through milking machines.

There's no treatment for *Mycoplasma*. It is a unicellular organism without a cell wall, resistant to common antibiotics. That's why BTMP tries to detect pathogens early and stop their spread, ensuring not only milk quality but animal health. Zurakowski described BTMP as "a positive program that really hands off. Results keep coming in and we tell farmers, 'this is what's going on.' But if results are bad, all the bells and whistles go off and we're chasing after them with phone calls, sampling their cows, looking for a positive I.D. We drop everything."

This is exactly what happened in the case of the NY dairy farmer. They screened milk from each of the 12 animals that had been in the show, and one was infected. "We isolated her from the herd," explained Zurakowski, "then screened the bulk tank again and *Mycoplasma* was still present." The farmer concluded she had spread the disease to others who weren't in the show, so they tested all 200 individuals in the herd and found three more tested positive.

Once the four infected cows were identified, the farmer opted to remove them from the farm to avoid further spread of the disease. Without the screening program, the disease could have easily contaminated the entire herd. Zurakowski and his team monitored the herd weekly to ensure tank samples continued to be negative, and after a few weeks with clean results, stretched the sampling interval to every other month.

BTMP works closely with the NYS Cattle Health Assurance Program, Dairy One, and the major milk co-ops to ensure the quality of the state's milk. For more information about BTMP: <https://ahdc.vet.cornell.edu/sects/QMPS/Services/bulktank.cfm>

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