



TaviVets Dairy Digest

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Milk Quality

Herds with low somatic cell counts (SCC) tend to be more profitable than herds with high SCC. Increased profit comes from reduced mastitis treatment and veterinary costs and higher milk production per cow. Additionally, milk with lower somatic cell counts has a longer shelf life and results in a higher yield of cultured dairy products. Herds producing high quality milk with low SCC set a standard of excellence for the entire industry. Careful milking procedures, good milking equipment maintenance, and excellent herd management using individual cow SCC testing all contribute to a herd's low SCC. **August 1, 2012 the new SCC penalty level will be lowered to 400,000 from 500,000.** If no action is taken by Ontario dairy producers there is a potential for SCC violations to be 3.8 times the present violation rate. It is important to act now to ensure your herd SCC level is low and thus avoid an SCC penalty.

Somatic Cells

Somatic cells are very important defence cells naturally found in the udder of the dairy cow. In fact these cells in the udder are essential to the survival of the cow in the face of bacteria in the udder. The count of the somatic cells in milk is an accurate indication of the presence of bacteria in the udder. The lower the SCC the lower the amount of bacteria present in the udder.

The normal defence cells in the udder are neutrophils. These cells seek out bacteria, engulf them and then kill the bacteria with enzymes.

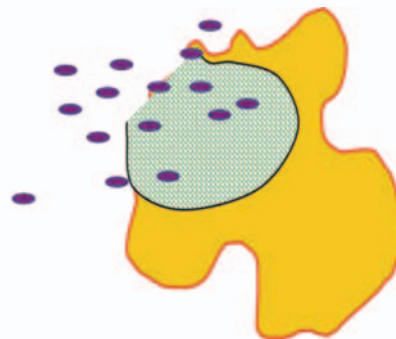
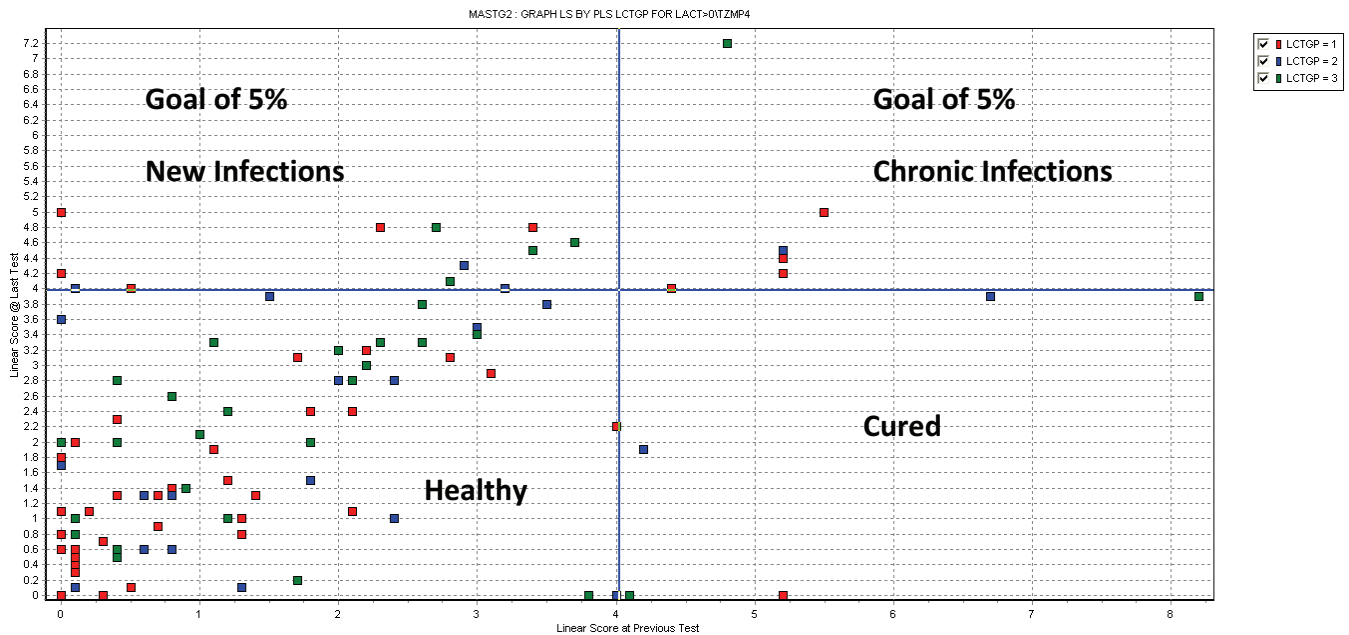


Figure 1 - Neutrophil Engulfing Bacteria

The goal of a dairy herd should be to have a bulk tank SCC count of <150,000 with 100,000 being a very achievable goal.

A survey involving Quebec dairy herds revealed the average SCC count of 250,000. In herds where 100,000 SCC was achieved there was a recoverable financial gain of \$150.00 per cow in the herd.

DairyComp 305 is an ideal tool to evaluate milk quality on your farm. When your herd is tested by CanWest DHI the production data as well as SCC information is downloaded to our computer. Analysis of your herd SCC allows us to evaluate your milk quality program.



Example Graph of SCC

Quadrant 1 depicts new infections (cows that were low last test but now have an SCC >200,000). The goal is to minimize new infections to ~5% each test day. **These are the cows that should be considered for culture to identify the offending bacteria.**

Milk Culturing in Clinic

Our clinic uses the 'Minnesota Easy Culture System' to identify bacteria in milk samples. Our registered veterinary technician, Jen Knapp as well as our veterinarian Dr. Andrew Zwambag has been perfecting this culture system for us. We have received very positive comments about the service. Producers are pleased with the quick turnaround. Once milk is plated, growth of bacteria can be found as early as 12 – 18 hours. This time frame varies according to the type of bacteria cultured. E. coli, which is often involved in acute watery mastitis, will grow in this early time frame. The frustration of culturing cows and waiting a long time for results has been reduced.

Organisms frequently isolated from clinical cases are illustrated in figure 1. This data comes from our milk cultures for 2010 and 2011. The coliforms have been divided into Klebsiella and E coli in our results. These two

organisms are associated with very severe toxic mastitis. As well approximately 50% of the 'no growth' results are in fact E coli.

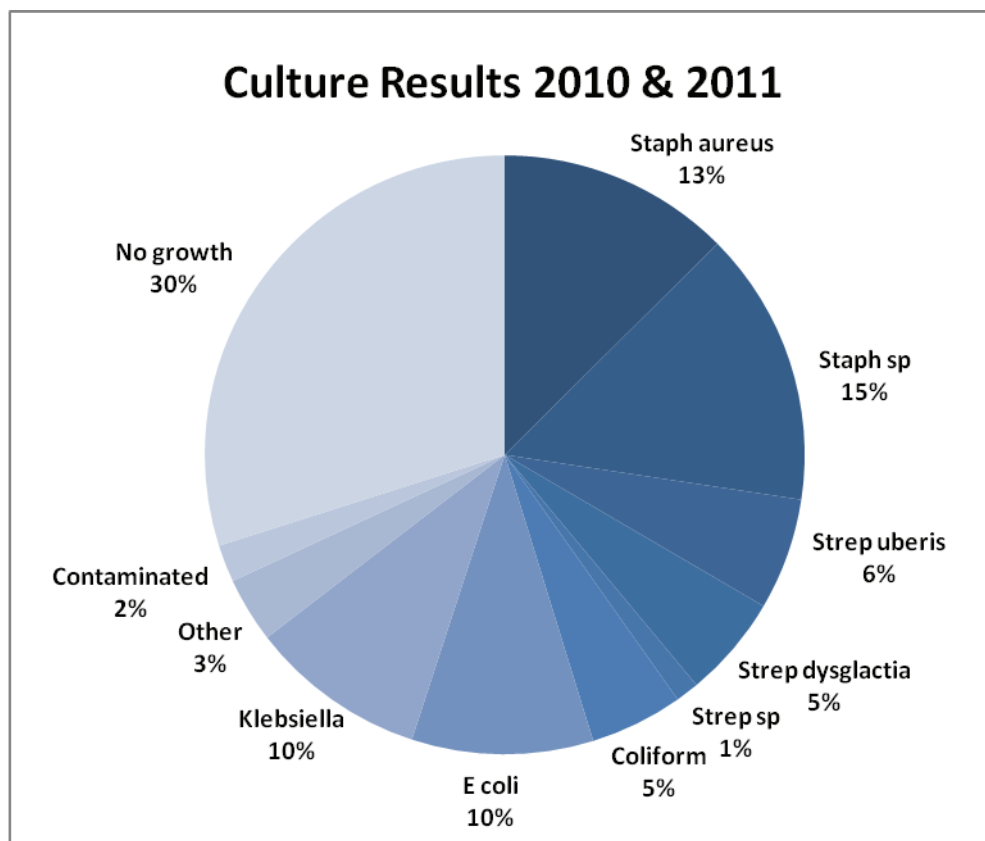


Figure 1

Culturing of abnormal milk, either acute flare-ups or high SCC cases, is an important first step in mastitis investigation. There is a very strong link between species of bacteria and treatment success. Proper sampling technique is crucial to quality of sample and quality of results. Sample collection needs to be performed before treatment is administered.

Talk to us about your herd SCC and how milk culturing can be of benefit in your herd.

CQM Corner

We have held one in-class training session in late January and are holding another mid-February. Both sessions are full. If you are interested in taking in-class training let Kim know. If we get enough interested producers we will hold another session in March.

Everyone who has taken the in-class training to date has purchased a CQM binder from Tavistock Veterinarians. This binder contains an inventory list for all products intended for use in cattle that Tavistock Veterinarians sells. It also contains copies of labels for all these products. This will help you with Record #9, Master Drug Inventory List. You have to highlight the products you use from Tavistock Veterinarians and then complete the inventory list with products you purchase from other sources such as: teat dips, udder washes, fly

sprays, udder linaments, powders or sprays for feet etc. The binder also contains sections for your Standard Operating Protocols (SOPs), Corrective Action Plans (CAPs), prescriptions and treatment protocols, and treatment records.

Unfortunately as we add new products to our inventory, the binders will no longer be up to date. You should add new products to the Record #9 Inventory sheet in the binder and keep a copy of the label. Your herd health veterinarian will also bring a new product list when he renews your prescriptions and reviews your treatment protocols annually.

Electronic Version of the Newsletter

If you wish to receive this newsletter electronically, please email Sarah at sgregory@tavivets.ca to be added to our email list. Also, if you have an employee or know of someone else who would like to receive this newsletter, please let us know.