

- *Monitoring clinical mastitis and sub-clinical mastitis infection rates*
- *Analyzing cultures and SCC reports*
- *Dry-off and within lactation treatment procedures*

DAIRY-UPDATE

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Somatic Cell Count and Milk Production

By Scott Cieslar

In April, a letter was mailed by Dairy Farmers of Ontario (DFO) outlining the changes to the maximum somatic cell count (SCC) levels. The DFO letter stated some key steps you should take if you want/need to reduce your SCC.

- *Stall and animal environment management*
- *Pre-milking, milking and post-milking procedures*
- *Management of high SCC cows*

Reviewing these procedures with your farm management team (veterinarian, nutritionist, and suppliers) would be useful.

Following are some other key areas that should be examined to ensure that SCC penalties will not be a concern to you.

MILK LOSS

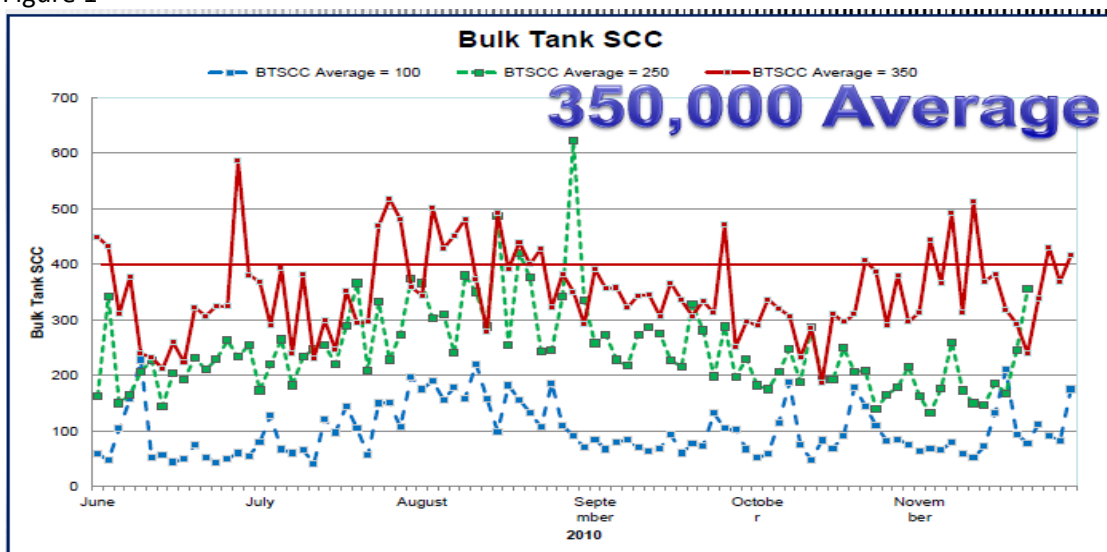
A presentation by Dr. Hand at this year's Ontario Bovine Practitioners meeting highlighted the relationship between SCC and milk production. Milk loss represents the single biggest economic impact of elevated SCC. The 'Strategic Solutions Group' has developed a mobile application you can download to quickly assess the potential losses. This is available on the iTunes app store:

<http://itunes.apple.com/md/app/spiltmilk-by-ssg/id525901873?mt=8>

SCC PEAKS

It is interesting to note in Dr. Hand's presentation, that even with a herd average of 250,000 SCC, you would expect the average to exceed 400,000 several times throughout any given year. Figure 1 illustrates the SCC peaks.

Figure 1

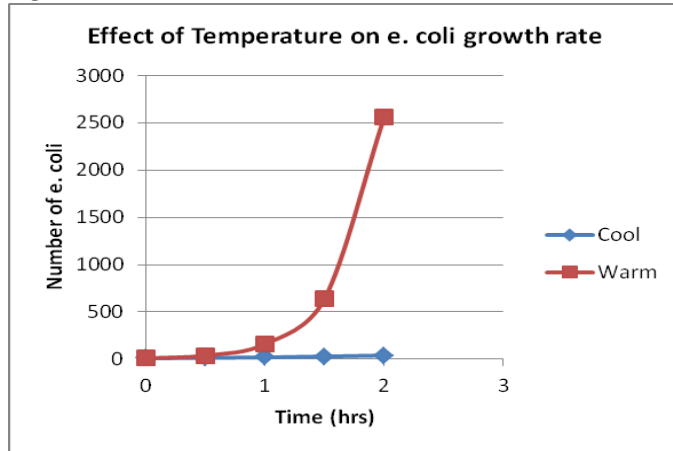


Hand et al., 2012

OUTSIDE TEMPERATURE

These peaks are most likely to occur during the summer months. Figure 2 illustrates the impact of E. coli growth at 2 different temperatures. It is easy to see how the bacterial burden in the environment is exponentially increased as temperatures increase and approach the optimal temperature for bacterial growth. Couple this with the impact of heat stress on the animal and you optimize the chance for intramammary infection resulting in elevated SCC.

Figure 2



NUTRITION FOR LACTATION

Nutrition is integral to immune function. Energy status of the dairy animal is severely compromised during early lactation and this negative energy balance is probably the single biggest factor contributing to immune suppression around calving. Ensuring cows maintain intake through the transition period is paramount to a successful transition into lactation so that the immune system is able to cope with the many challenges it is faced with. Proper formulation of the dry cow diet and early lactation is important, but equally important is the management of groups. Moving cows close to parturition can negatively impact intake and send the animal into a large negative energy balance, predisposing the animal to a wide array of metabolic disorders and making her susceptible to infection.

NUTRITION FOR DRY PERIOD

The far off dry cow or the recently dried off cow is often a neglected area of the farm. The cows are no longer generating income and don't seem to need much in terms of care once they are fully dried off. It is easy to meet the energy and protein needs of the far off dry cow, but what is often overlooked is the need for proper mineral supplementation. Mineral status can be quickly depleted if proper

supplementation is not achieved. It is very difficult to restore the status within the 3 weeks prior to calving. It is more economical and biologically advantageous to simply ensure proper supplementation throughout the dry period, which will lead to improved calving health and reduced incidence of mastitis post calving.

In closing, there are many management and nutrition factors that will impact the SCC count on your farm. It is important to utilize all members of your management team to ensure optimal udder health and ensure that the lowered SCC penalty range will not be a concern on your operation.

DAIRY UPDATE is published in the interest of helping dairy producers become more profitable. We welcome your comments.

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Have you checked feed inventories?

**If you would like help calculating
your feed inventory, please
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