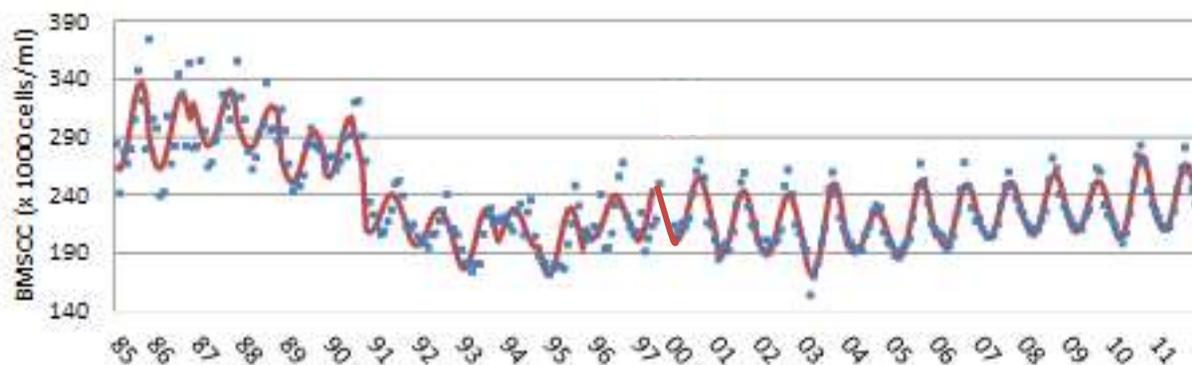


It's Getting Hot Outside

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The birds are chirping, the sun is shining, the land is starting to dry out, and everyone is just itching to begin work on the fields. Unfortunately, with the excellent weather comes some bad: the summer is a time for high risk of mastitis. Yearly, herds across Ontario feel the heat of high rates of mastitis in the summer, and this is reflected in peak provincial averages for bulk milk SCC (BMSCC):



Why does this occur year-in, year-out? There are several reasons, chief among them being the heat and humidity of the summer:

1. Bacteria love to grow in warm, moist conditions, and our Ontario summers are a perfect storm.
2. If not properly abated (i.e. adequate fans and soakers), cows experience significant heat stress, which may compromise their immune systems.

Compounding this is the competing demands of field work that could potentially pull one's attention away from monitoring udder health and consistently employing good management practices to prevent mastitis. Deficiencies in known best practices to prevent mastitis tend to be amplified during the summer.

With the above in mind, here is a top ten list of things that should be done to minimize mastitis risk during the summer (adapted from experience and the National Mastitis Council's 10-point mastitis control program, NMC 2011):

1. Keep cows cool – fans need to be pointed at cow-level (both dry and milking) wherever cows are (e.g. stalls, feed bunk, holding area). Sprinklers go a long way to keeping cows cool at the bunk and in the holding areas.
2. Keep cows clean and dry – ensure that stalls are raked out several times per day and new bedding is added regularly.
3. Maintain optimal stocking densities – lower cows per square foot = lower manure per square foot = less risk of environmental mastitis.

4. Don't forget about dry cows! Research has shown that, in some herds, up to 60% of all mastitis infections seen in the first 100 DIM originate from the dry period (Bradley and Green, 2004). Some management areas of focus:
 - Ventilation
 - Stall/pack management – if you kneel down on the bedding and your knees get wet, more bedding is needed
 - Adequate stocking densities
 - Dry cow antibiotic therapy
 - Internal teat sealant
 - Controlling other metabolic and infectious diseases at calving
5. The incidence rate of clinical mastitis due to E.coli is highest in the summer (Olde Riekerink et al., 2007), therefore consider vaccinating against E.coli.
 - Research has shown the vaccine is economically beneficial if greater than 1% of all cow lactations experience mastitis due to E.coli (DeGraves and Fetrow J., 1991).
6. Evaluate udder prep routines ensuring:
 - Consistency – both between and within milkers
 - Cleanliness – pay attention to getting the teat ends completely clean prior to unit attachment. Recall, most mastitis infections are coming from the environment (e.g. manure) (Shock, 2014)
 - Timing – ensure that pre-dip contacts the udder for 30 seconds, udders are stimulated a minimum of 12 seconds, and that units are attached around 60-90 seconds after the udders are first stimulated.
 - Wear gloves and use approved pre- and post-milking teat disinfectant (ensuring complete coverage of teats)
7. Culture all cases of clinical mastitis – you'll never succeed in preventing mastitis if you don't know the causative agents.
8. Monitor SCC on a regular basis – the DHI service (or in-line technology for newer milking systems) are invaluable services that allow you to effectively monitor infection dynamics (e.g. new, chronic, fresh cows etc..).
9. Now would be the right time to ensure that your milking system is functioning properly.
10. Consult with your veterinarian early and often. This includes evaluating the current situation, setting goals, making changes, and re-evaluating the situation to see how the changes have affected mastitis incidence.

Unfortunately, there is no one “magic bullet” to preventing mastitis infections. A tireless and consistent application of best management practices will go a long way to ensuring that cows stay healthy throughout this high-risk summer period.

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