



CEDAR GROVE VETERINARY SERVICE NEWSLETTER



AUGUST 2016

DO YOU KNOW WHAT YOUR BULK TANK SLIPS ARE SAYING ABOUT YOUR MILK QUALITY?

It happens like clockwork every week, the milk hauler stops by, you gossip a little, and he/she leaves you a slip from the cheese factory. While thinking about which farmer got his hay rained on for the fourth time in a week, you may glance at the weekly slip noting your milk production, SCC, and current component levels. But how many of you look at the other aspect of that slip such as the SPC, LPC, MUN and coliform counts? Or are those just jumbles of letters than mean nothing to you? Regardless of whether you do or don't totally understand what all those mean, it's always good to review the meanings of these tests and understand how they affect your milk quality.

Standard Plate Count (SPC). The SPC is the number of bacterial colony-forming units in 1 mL of milk that is plated and incubated for 48 hours at 90°F. Many dairies routinely maintain SPCs of 1000 or less, and counts under 5000 should be easily maintained when teats are appropriately cleaned and milk is cooled quickly. Many milk processes have implemented penalty levels at 50,000/mL. The legal limit in the US is 100,000/ mL.

These counts, similar to SCC, are reported as 1 (for SPC of 1000/mL) or 50 (for counts of 50,000/mL).

Lab Pasteurized Count (LPC).

This test shows the number of bacteria present per mL after laboratory pasteurization at 143°F for 30 minutes. Bacteria that commonly come from the mammary gland are removed, leaving bacteria which may come from the environment or from incubation in the milking system. There is some discussion about significant levels, but an LPC above 200 is a clear indication of a system that is improperly cleaned. Some dairies have maintained LPC counts below 50 on a year-to-year basis.

Coliform (coli). Coliform counts are run on specific media. Results will depend on cleanliness of the cows, and will be highly elevated if incubation is occurring during milking. Generally, counts below 100 per mL are considered acceptable. Very good herds can have counts less than 10/mL. Coliform counts between 100 and 1000 per mL generally indicate poor milking hygiene. Counts above 1000/mL indicate incubation is occurring in the

DO YOU KNOW YOUR VACCINES?

Calf-guard

Use: For vaccination of healthy newborn calves or pregnant cows as an aid in preventing diarrhea (scours) caused by bovine rotavirus and bovine coronavirus.

Dose: 3 mL PO (Calves) IM (Cows)

Dosing: Calf Vaccination: Administer a single dose into the back of the calf's mouth. Cow Vaccination: Healthy cows should receive 2 doses administered 3-6 weeks apart during late pregnancy. Cow Revaccination: Cows should be revaccinated with 2 doses during each subsequent pregnancy.

Special Notes:

In calves, vaccination should occur as soon as possible after birth. Vaccination of calves older than 1 day may not be effective.

In cows, ideally, the second dose should be administered within 30 days prior to calving.

milking equipment, and is an indicator of overall poor system cleaning

Milk Urea Nitrogen (MUN). This is another value that can show up on some bulk tank slips, but it has very little to do with milk quality. MUN is a measure of how dietary protein in the ration is being utilized. Values should range from 11 to 18 for the herd. If your MUN is outside of this range, it is best to consult your nutritionist to determine if the dietary protein is adequate. It should also be noted that MUN can vary between labs that report the value and trends in the MUN are more reliable than a single value.

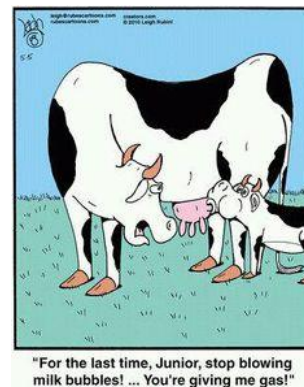
Monitoring changes in SPC, LPC, and coliforms in the milk is important since it is a good way to keep an eye on the functionality of your milking systems. Any problems should be discussed with your milking system specialist since they will be the most familiar with your particular milking system. Even though milking system specialists are the experts, your daily observations about your milking system can help them narrow down the search for problems.

The wash cycle is the cornerstone to most milking systems. The major components of milk are water, lactose, butterfat, protein, and minerals. Lactose is soluble in warm water, and is one of the primary reasons for rinsing a system as the first step of washing with a warm-water rinse of between 100 and 140°F. Butterfat is soluble in alkaline detergent, and protein is soluble in a chlorine solution. The chlorinated alkali cleaner should start with a temperature of 160°F and should be dropped from the system at 120°F. The wash cycle should last a minimum of 5 minutes for adequate cleaning. The third step in conventional wash systems is an acid rinse to remove salt and minerals. All parts of the milking system, including the non-sanitary side, should drain completely between each of the normal wash cycles.

Aside from observing the wash cycle, every producer should be aware of how the air injector is functioning, the amount of time it takes for the receiver jar to drain, and if the filters are being changed

regularly. Noting changes on a daily basis in the milking system is a good way to detect problems early in onset. Finally, it may be wise to consider doing strategic sampling of milking from several locations in the milking systems to isolate the source of the problem. These locations may include the receiver jar (at the start and in the middle of milking), exit of the plate cooler, and the bulk tank.

Knowledge is power, especially when it comes to operation of your milking system. The more you can tell your milk system specialist about the normal operation of your systems and abnormal observations you have made, the faster a solution can be found to problems that arise.



The Importance of Stockmanship on Farms

In the last two newsletters, we have provided a lot of information regarding the new VFD regulations and changes in antibiotic laws. Antibiotic residue concerns have been at the forefront of most producers' minds and has pushed other issues such as animal welfare to the background. However, animal welfare is still an important issue with animal handling being one of the more important concerns. The ability to move and handle cattle is referred to as stockmanship. Stockmanship skills are good for everyone. Research has found that 19% of the variation in milk production on farms can be explained by the stockmanship skills with a 1780 lb higher rolling herd averages being observed in herds with stockmanship training. Moreover, heifers brushed daily for 5 minutes between 6 and 49 weeks prior to calving has a 19% increased milk let-down and kicked less compared to non-brushed heifers. While we are not asking that all heifers should be brushed every day, there is something to be gained from quiet and calm cow handling skills. If you are interested in pursuing stockmanship skills for you or your employees, please contact us at the veterinary clinic. Merck does provide a DairyCare 365 program that can provide this training and other training modules that will benefit the health and welfare of your animals.

