milk QUALITY SPECIALIST newsletter

2nd QUARTER 2012
VOL. 4 ISSUE NO. 2

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7 Tips to Jump Start Milk Quality Improvements on Your Dairy

Are you in a milk quality rut? Are your somatic cell counts (SCCs) or bacteria counts not where you want them to be? Do you know you need to address milk quality on your dairy, but you don't know where to start? Take a look at these seven tips to help guide you in the right direction to see some immediate improvements to the quality of milk harvested and shipped from your dairy!

#1 Clean Out Your Freestalls

Studies comparing low SCC herds (<150,000) to high SCC herds (>250,000) found that stalls were cleaned an average of 2.2 times per day for low SCC herds, but only 1.6 times per day for high SCC herds. Regular daily freestall cleanings are critical to maintaining low SCCs. Also, it is recommended that the top layer of fresh bedding, no matter which bedding material you are using, is fully replaced every 4-5 days.

However, one freestall maintenance protocol that is often forgotten is digging out the back one-third to one-half of your freestall beds periodically. In sand bedding, you will know it is time to dig out the back 10 - 12 inches of sand from the stalls when you see a dark layer of sand, just below the surface. If you can't remember the last time you replaced the sand in your freestalls, it is probably time to do so.

Management practices that promote cow cleanliness and reduce teat-end exposure to environmental bacteria will reduce the risk of mastitis infections.

Take Advantage of the Technology Exchange Program

From now until December 1, 2012 dairy producers have the opportunity to trade-in their old, outdated milking equipment components for the latest technology available on the market.

Upgrade your milking units, your pulsation system, or your detachers at very special Technology Exchange pricing! Eligible items include:

- Classic 300E Milking Units
- IQ Milking Units
- Direct Acting or Apex Pulsators
- DeMax/DemaTron Stanchion Detachers
- DeMax/DemaTron Parlor Detachers
- Touchstone Parlor Detachers

Updating some of your basic milking equipment - at a great price - helps to provide you an instant return on your investment, and will likely provide some significant - and immediate - benefits to your milking efficiency and milk quality performance.

Ask your local GEA Farm Technologies dealer, carrying the WestfaliaSurge product line, about pricing details for your operation!

#2 Upgrade Your Milking Equipment

Properly functioning milking equipment is essential to meeting your milk quality goals. Many dairies know it may be time for an equipment upgrade, but they try to keep their equipment going as long as possible, at the detriment of teat health and milking efficiency. There may be only so many times you can rebuild your pulsators - before it is time for new ones.

Ask your local GEA Farm Technologies dealer for an equipment inspection. It may just be time to clean pulsators, change vacuum filters and check detacher settings - ensuring all milking equipment is operating properly for your herd's specifications. Or, it may be time for an equipment upgrade.

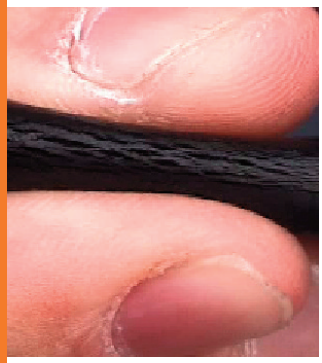
To prevent any future risk of machine-induced mastitis infections, regular, scheduled maintenance on your milking system is highly recommended by professionals throughout the industry. Far too many udder health problems are caused by milking systems simply needing routine maintenance.

Milking equipment is used more hours per day than any other equipment on the dairy operation, and it is used to harvest the primary product marketed from a dairy. It is critical that it is continually maintained to optimize your herd's milking efficiency and milk quality performance.

#3 Replace Rubber Goods & Hoses

Rubber goods such as liners and short milk tubes are prone to deterioration and cracking - providing an ideal place for bacteria to grow and hide from cleaners and sanitizers. Hoses that are pinched by shut-offs or bent excessively have a limited life as well before they begin to deteriorate.

No matter how well your system is cleaning, it will not be able to properly clean worn rubber or hose components with cracks and tears. A smooth, well cleaned and sanitized surface is the best way to limit bacteria count problems. Changing rubber goods and hoses should be part of your scheduled maintenance program to prevent any future issues.



By pinching the liner stem, it is easy to see the small cracks that appear as the liner ages and deteriorates.

By bending hoses and short milk tubes you can see cracks and tears, especially where these items bend or are pinched by shut-offs.

By cutting the liner lengthwise you can inspect the inside for cracks and soil deposits.

The Influence of Milking Routine on Performance

Variable	Cows per hour per operator	Monthly rate of clinical mastitis (%)
Written Milking Routine		
Yes	46.9 cows	5.0%
No	35.6 cows	7.1%
Training Frequency		
Never	33.6 cows	9.6%
At Hiring	41.6 cows	4.8%
Frequently	49.4 cows	5.8%
Complete Milking Routine (includes pre-dipping, forestripping, and drying before unit attachment)		
Yes	40.8 cows	5.5%
No	35.3 cows	10.3%
Forestrip		
Yes	40.9 cows	5.8%
No	32.9 cows	9.4%

Study based on 101 freestall farms in Wisconsin with an average herd size of 377 cows. (Adapted from Rodrigues, et al. 2005)

Written routines, with frequent training sessions, that include a complete set of milking procedures provide TWO BIG ADVANTAGES to dairy producers:

1) They will likely milk more cows per hour - increasing parlor throughput.

2) They will likely decrease their rate of clinical mastitis - improving the overall milk quality of the herd.

Have Your Milking Routine Professionally Evaluated

Sure, you have a milking routine. You may have had trainings on the routine, or discussed it during team meetings. But, is that routine actually being implemented by every shift, at every milking session - the same way? Producers of high quality milk know that consistent milking procedures, performed as part of a consistent milking routine are critical.

Ask your local GEA Farm Technologies dealer to perform a milking routine evaluation to make sure proper pre-milking hygiene steps are being performed; teatcups are applied to visibly clean, dry, well stimulated teats; milk flows rapidly and efficiently after attachment; and, milking units are removed in a timely manner.

There is no "one perfect" routine that fits every dairy. By working with an outside evaluator, you can customize a routine that fits your operation, without sacrificing any effects on milk quality or parlor efficiency.

And, most importantly, the critical timing of your milking routine can be fine-tuned to assure the highest quality milk is being harvested - day in and day out.

GEA Farm Technologies dealers have access to milking procedure posters and helpful guide books (in Spanish and English) that will help to reinforce key messages. Also, your evaluator can help with continual follow-up training and evaluations to assure old habits are broken and proper processes become part of everyone's daily routine.

Cull Cows with Chronic Mastitis

Cows with chronic mastitis problems act as a reservoir of infection for the rest of the herd, they cost you money in treatment costs and lost milk production, and they spend more time in the hospital barn requiring time-consuming care - increasing your labor.

Cows that should be considered for culling include:

- Cows with persistently high SCCs.
- Cows that do not respond to favorably to treatment and continue to flare-up repeatedly with clinical mastitis.
- Cows with infections that persist in spite of dry cow treatment.
- Cows with Mycoplasma mastitis.

Of course, other factors must be considered before culling (type of infection, milk yield, replacement options, etc.) but, many times removing a few highly problematic cows will yield big dividends on your SCC report and will be well worth the loss in the long run.

Culling should never be considered a substitute for solving the underlying problem with high SCCs or increased cases of clinical mastitis on your dairy. Culling is just one component to a comprehensive mastitis control plan.

Did you know?

Treatment of clinical cases of *Staphylococcus aureus* in chronically infected cows is not cost effective because cure rates are less than 35%. And, typically, if the clinical signs disappear, the infection simply returns to a subclinical state. Culling these chronically infected cows is often the best option.

-Staph. aureus One Tough Bug, Dairy Today Editors, May 2011

#6 Have Your Dealer Evaluate Your Water Quality and CIP System

The quality of water on your dairy directly influences the performance of the hygiene chemicals used to clean and sanitize your milking system and bulk tank. As a result, if the cleaning process is not performing, bacteria can thrive within the system and the quality of milk that flows through the pipeline is negatively affected.

The grains per gallon (gpg) of hardness in your water supply and the parts per million (ppm) of iron should be tested every six months. Water conditions can vary monthly due to changing well levels, the water source, and many other factors. And, water quality has the biggest influence over which chemical products should be recommended and the dilution rates for those products.

At the same time your water is evaluated, your dealer should also evaluate the six requirements for proper CIP cleaning to be sure chemical contact time, water temperature, water volume, chemical balance, solution velocity, and rapid drainage are in place and performing optimally.

With any one of these elements missing the entire cleaning system may fail - resulting in higher bacteria counts.

#7 Be Sure Your Teat Dip is Meeting Your Herd's Needs

Teat dips can provide the ultimate protection from intramammary infections between milkings and can effectively kill pathogens during the pre-milking process. But, are you using the right teat dip to meet your herd's needs or the changing environment?

Your teat dip may need an adjustment based on the season. Wet, spring weather can warrant a dip with a higher iodine percentage or a dip that provides barrier protection. Winter weather oftentimes requires a teat dip with a higher percentage of skin conditioners.

The type of bedding you use can also impact your post teat dip decision. Quick-drying dips may be the best option to prevent bedding, such as digested solids or other alternative bedding materials, from sticking to teats.

Other factors to consider are:

- What does your herd's current teat-end/teat skin condition look like?
- What pathogens are affecting your clinical mastitis rate?
- How is your dip applied...by dip cups, spray wand, or foamer? The application method may affect the dip choice for your herd.

GEA Farm Technologies offers one of the most expansive teat dip product lines and our hygiene representatives have a great deal of experience when it comes to prescribing the right dip to maximize the milk quality potential on your operation.

Resources: D. Bray, University of Florida, Dairy Update Quarterly Newsletter, *It's Spring Cleaning Time Again!*, Spring 2012; W.N. Philpot, S. Nickerson, *Winning the Fight Against Mastitis*, 2000; P. Ruegg, M. Rasmussen, D Reinemann, *The Seven Habits of Highly Successful Milking Routines*, 2005; G. Jones, *Guidelines to Culling Cows with Mastitis*, May 2009; Virginia Cooperative Extension.

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