



Dairy farmers spending less time on each cow

The continuing squeeze on profit margins is putting increasing pressure on farmers to harvest more milk, more quickly. This can, however, jeopardize the health of udders. But there are ways to minimize the risk of bacteria growth and mastitis.



Nathalie Albrecht

“With farms getting larger, parlour efficiency is becoming increasingly important,” says Francesca Neijenhuis of Netherlands-based Wageningen UR Livestock Research, “but this means that farmers spend less time on pre- and post-milking routines.” This despite the fact that researchers are emphasizing the importance of pre-milking routines to ensure both teat hygiene and harvesting efficiency. With correct procedures, total labour time and throughput are not adversely affected.

Mastitis – a significant cost
Francesca continues: “Research also shows that 15-40% of cows suffer from clinical mastitis during a single lactation. Herd-level udder health impacts somatic cell count (SCC) and bacterial count in the bulk tank, which can affect the price farmers get paid by dairies. Mastitis can also lead to a decrease in yield, higher treatment costs and increased culling.” The teats are the first line of defence to protect cows from mastitis in high yield farms. But due to the high

infection pressure to which teats are subjected in modern milk production, help is needed. “Being dairy farmers ourselves, we have learned much about good milking practices,” says Nathalie Albrecht, Product Manager at DeLaval. “Over the years, these have crystallized into what we call The 12 Golden Rules - these cover everything from pre-milking routines such as inspecting udder health and pre-milking, to post-milking teat dipping, cleaning and monitoring milk quality.”

Keeping teats soft and supple

Reports from the field all point in the same direction: farmers are increasingly being pressured to produce more with less. The result is that they often try to minimize pre- and post-milking routines. This is why DeLaval works to support farmers with products that not only disinfect and sanitize, but also help keep teats in a soft, supple condition.

Teats that are stressed can become dry and chapped. And when teat skin develops cracks, bacteria have a greater chance to colonize and develop. “Our teat dips provide a little bit extra,” says Nathalie. “Naturally, they do an excellent job when it comes to disinfection/sanitizing, but they also help keep teats in good condition.”

Used in cosmetic products

This is not just a question of adding emollients, but of eliminating aggressive carriers. For example, DeLaval iodine-based teat dips with ACT™ technology use a carrier that, with a pH of 5, is so mild it can be used in cosmetic products. Yet despite the neutral pH, the disinfectant properties are as good as traditional dips.

“This formulation technology,” says Tom Hemling, VP Research & Development at DeLaval, “enables skin conditioning ingredients such as glycerin and sorbitol to produce a more positive impact on the skin as opposed to just overcoming harsh properties common in traditional formulations.” This can be seen in the table which compares the skin conditioning performance of two teat sanitizers; both products contain 1% available iodine as the active germicide.

“The product formulated with ACT, contains 4% glycerin, while the competitive product contains 10% glycerin, but uses harsher, traditional complexing agents,” explains Tom. Teat skin and teat end condition have been evaluated using a 5-point scale (1= best) and combined to provide a total teat score. In this comparison, the ACT product out-performs the competitive product despite the fact that the competitive product contains more than twice as much glycerin. “Because the chemistry is so mild, our formulations do not dry out the skin. And this helps prevent bacteria growth,” Tom explains.

More free iodine, more effective

“But no matter how good the conditioning properties of a teat dip,” says Nathalie, “it is the disinfecting effect that farmers tend to focus on.”

In iodine-based formulations, it is the free iodine which works against bacteria growth.

“It’s not easy to explain,” says Tom, “but basically we have found a way to free up more iodine. In traditional formulations, most of the iodine is physically bound to the complexing agent, and only a small portion of it is free to counteract the bacteria.

“Conventional teat dips contain only 1 or 2 parts per million (ppm) of free iodine. However, thanks to a number of innovations, we’ve been able to increase the amount of free iodine to 6-8 ppm.”

Although the use of a teat sanitizer will never result in a sterile teat, a higher free iodine concentration results in fewer mastitis-causing pathogens remaining on the teat.

A few seconds per cow

As many farmers have discovered: preventing mastitis is key to securing strong profit margins. “Correct pre- and post-milking routines don’t take many extra seconds per cow,” says Nathalie, “and repetition makes perfect – it soon becomes a habit that improves both herd health and your business.”

By Paul Jackson



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Figure 1: Comparison of ACT with "Old Technology"

