

Tools Designed to Bring Improved *Management of Udder Health*

The costs incurred for treatment and from lost production due to mastitis have made it one of the biggest challenges facing the average dairy producer. Selecting cows that are more resistant to udder infections is therefore a priority. The use of somatic cell scores has been a practical management tool that has been used in many countries for the past 40-50 years. In the '90s this data became the basis for the first fitness trait to receive genetic evaluations worldwide. More recently data from mastitis incidences have been added so that many countries now have mastitis resistance proofs. However, genetic selection is only part of the answer. Here we bring you a number of management tools that are designed to help improve udder health.

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Attention to udder health is a key element in dairy cattle management.

For any cow, but especially the cow in transition phase, swelling is never your friend. The buildup of swelling and congestion in the udder before and around calving time can impact blood circulation and slow the process of reaching peak production. It's uncomfortable for the cow and may even leave her more prone to infections and mastitis. Canadian company Udder Comfort has developed a range of products based on essential oils that help to soften udders and deal with problem swelling.

The products are available as a lotion or in a spray-on format. In addition to the spray bottle, a back-pack is now available with a spray wand that provides fast and easy treatment for large numbers of cows. 'We use Udder Comfort for our fresh cows, especially 2-year-olds,' says Tom Kestell from Ever-Green-View in Wisconsin. 'We don't have much mastitis or extreme edema. We use this product on fresh udders to speed up circulation and bring out any swelling they might have.' Softer, more pliable udders can make a

significant difference to how quickly 2-year-olds adapt to being milked, especially with robot milking. Robot owners report that the fetch time – the time it takes to train a 2-year-old to go to the robot for milking – can be dramatically reduced. 'The Udder Comfort heifers came in with udders full of milk, but so soft, no edema, and faster robot attachments. First lactation robot fetch time was cut by 70%; from 2-3 weeks to under a week. That's huge,' says Josh Lingen who milks 240 cows through robots in Minne-

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'The liver has a critical role in the synthesis of the precursors of antibodies for the immune system.'

showing high levels of SCC in the last two milk controls for example. This protocol has demonstrated its effectiveness during a trial involving 21 different farms, with a significant reduction in the level of SCC (-200,000 cells) for 2nd and later lactation cows before 300 days in milk, the most sensitive animals. Both products rely on Natual's knowledge of plants and their benefits to ensure health and performance in various situations (Artichoke and Curcuma in Epatral; Ginseng, Yucca and Echinacea in Parabol).

MILK-METER

Collecting individual cow production data is a critical part of good cow management and the very basis of genetic improvement. However, milk-meters often interfere with milk flow and can cause some fluctuation in vacuum. At least that was until the release in 2018 of the NEDAP SMARTFLOW meter. It is specifically designed to avoid any obstruction to milk flow that could cause vacuum drop. The Nedap SmartFlow is the first milk-meter that is completely wireless: It uses advanced technologies that make power supply, the measuring principle and data communication completely wireless. As a result, the Nedap SmartFlow excels in cost and maintenance efficiency and in ease and speed of installation. And it eliminates malfunctioning due to poor or faulty wiring. It has smart functionalities such as a data-memory and control system that monitors whether the device is correctly installed, functions properly, cleans properly and has a data connection. Data is transferred via ultra high frequency communication. It functions as a sensor for automatic cluster take-off. Based on recorded flow rate, it controls automatic pulsation and stimulation for efficient and comfortable milking. Another feature of the Nedap SmartFlow is the immediate kick-off detection, ensuring that the milking process of the individual cow stops immediately when the teat-cup or cluster sucks air. ●

sota. 'Our first-calf heifers adapt much faster to visiting the robots on their own, due to little or no udder edema, less irritation, less stress, all of which make happier, healthier, more productive cows with fewer problems, more milk and lower SCC,' explains Chad Fredd from Grapeview Dairy, New York. 'We find 2x/day for 3 days optimal for fresh cows, 5-7 days for heifers.'

SPRAYER

Mastitis-causing bacteria enter the udder through the teat canal via the sphincter muscle at the end of the teat. The most at-risk time is immediately following milking while the muscle is still relaxed from the milking process. Accordingly, a standard practice worldwide is the use of chlorine, iodine or lactic acid based teat dips to create a protective barrier film on the surface of the teat to help protect from bacteria entering the teat canal. However, teat dipping can be time consuming. DeLaval, the dairy equipment company founded more than 130 years ago in Sweden, markets a robotic teat sprayer. The DeLaval Teat Spray Robot TSR automates the process of pre- and post-milking teat spray application. It provides an accurate, consistent and optimal application of teat spray while cutting labor costs. It has a capacity of 7 seconds/cow or 514 cows per hour, and according to company data, has a return-on-investment pay-back of 2 years. The DeLaval TSR sprays teats in exactly the same way each time, ensuring a calm and predictable atmosphere for the cows. The robot has 6 different spray pattern options to ensure accurate delivery of spray, and it delivers the right amount of teat dip on every teat every time, creating savings by optimizing the amount

of teat dip being used. The TSR is self cleaning, has adjustable spray volume, and operates quietly, and is compatible with most external rotary dairies. Zwemmer Dairy at Elkton, Michigan, uses one TSR robot to post-spray its 2,200-cow herd. Farm owner Carmen Zwemmer likes the flexibility of choosing different spray patterns. 'The TSR sprays close to the udder. The product ends up on the teat and not all over the place. Compared to other robots, I'm impressed with the accuracy, and the maintenance is relatively low,' comments Carmen. 'The fact that it saves a person per shift is huge. Anyone in the dairy industry knows that it's hard to find reliable people. The robot shows up for work every day!'

NATURAL

Natural, a brand of animal feed supplements from the French company Neutral, has been working on ruminant health since 1971 using natural ingredients. Udder health is one of the main issues in dairy farming, with a substantial number of mastitis cases affecting all herds; clinical but most especially subclinical forms. To contribute to the maintenance of natural udder defenses, Natual works with a protocol including first Epatral, a liquid supplement for the draining and detoxification of the liver, and then Parabol, a bolus targeting a specific stimulation of udder defenses and the reduction of the somatic cell count (SCC) in milk. The liver has a critical role in the synthesis of precursors of antibodies for the immune system. Cleansing the liver of toxins or metabolic waste is very important to ensure all its functions are optimal, including feed conversion for milk production. Then, a specific support with Parabol can be given individually to the animals