

Drenching On The Rise

Experts see a trend to “rumen therapy” to reduce costly problems with transition cows

By Linda Shindruk

For generations, dairymen have given buckets of warm water to new fresh cows, knowing that calving was a tough job and resulted in large fluid loss. Re-hydrating the cows simply made sense.

Today, researchers and dairy producers know more about the science behind calving, confirming the value of re-hydration. Improvements in drenching equipment and better ingredients in the drench have also occurred, making drenching easier and more profitable to even the smallest dairy operations.

Transition cows go through tremendous metabolic changes in the days immediately before and after calving, putting them at high risk for a number of metabolic disorders that can cost dairy managers big dollars. These costs include veterinarian treatment costs, added labor, the discarding of milk due to antibiotic treatment if needed, lost milk during lactation, higher culling rates and, occasionally, death losses.

According to dairy experts, it makes sense to provide cows that aren't eating well with nutrients designed to help them cope with metabolic changes.

Dr. Robert B. Corbett, an El Paso, Texas-based dairy veterinarian, says re-hydration through drenches is critical, both to preventing fresh cow transition problems, and also to treat sick cows. He says nutritional supplementation through drenching is rapidly becoming a common practice.

“The price of replacement dairy heifers has steadily increased, and as a result, dairy owners are holding onto less profitable cows in an effort to salvage them and decrease the number of replacement heifers that have to be purchased,” he says.

“The rumen has the capability of holding a large amount of water, as well as being able to transport it across the rumen wall into the bloodstream. This allows fairly large volumes of fluid to be placed into the rumen for future absorption.”

“Drenching can be used to improve the recovery chances of sick cows, and to enhance the milk production of early lactation animals.”

According to Michael Hutjens of the University of Illinois Department of Animal Science, transition cow feeding programs are a key to high production, optimal health and cow longevity.

In his published paper “The Transition Diet Debate”, Hutjens says that cows nearing calving have 20 percent higher energy needs,



New drenching equipment makes it easy for a single person to drench a cow safely in a matter of minutes.

which equates to an extra four pounds of dry matter. However, dry matter intake can be dropping 10 to 30 percent at the same time.

Hutjens recommends drenching with from five to 15 gallons of fluid immediately after calving and again 12 and 24 hours later if needed.

Generally, propylene glycol has been used as a drench for both fresh cows and sick cows. A developing trend in the industry, however, is to utilize probiotic drenches, which contain yeast and minerals.

“Propylene glycol is a pure energy source but it has the effect of inhibiting feed intake,” explains nutritionist Dr Brian Mitchell, DVM, president of Animal Tech Products and developer of the Ruma-Tech line of cow health products. “Probiotic drenches are essentially appetite promoters.”

Mitchell explains that the rumen's role as a large fermentation vat relies on specific microbes and enzymes to break down and process feed into useful nutrients. “Probiotic additives promote healthy microbial environments in both the rumen and the lower gut. They contain no medications, and, unlike antibiotics, require no prescription or withdrawal of meat or milk.”

William A. Zimmer, D.V.M., President of Bio-Vet, Inc. says successful drenching includes adequate hydration (5 gallons minimum and preferably ten or more.), dense

nutritional supplementation from sources that are available to the cow, an available energy source (when needed), and microbials that are alive to support rumen function.

“Certain incompatibilities can preclude packaging microbials and nutritional components for a drench in the same container,” he says. “Microbials should be separate from the nutritional components and added when the drench is mixed, so that they are alive and viable when administered to the cow.”

“A drench that meets the transition needs for a cow results in better rumen function, reduced incidence of metabolic and other disorders, improved feed consumption and ultimately improved production,” notes Dr. Zimmer.

Characteristics that make a drench work well and assure its success on the farm include:

- Ease of mixing.
- Highly soluble ingredients that won't settle out between mixing and administration.
- Nutritional components that are highly available to the cow, especially energy and calcium sources.
- Viable microbials to help with rumen function.

“PYCK-ME-UP™ Fresh Cow Drench



B & B Mfg. president Bernie Mulder discusses operation of the Drench-Mate® II with Lynden, WA producer Ed DeGroot

from Bio-Vet is utilized widely and meets these crucial criteria," says Dr. Zimmer.

Ruma-Tech, PYCK-ME-UP™ and other drenches are increasingly being used on a regular basis with easy-to-use drenching equipment such as the Drench-Mate®, made by B&B Manufacturing in Lynden, Wash.

"We saw a need for equipment which would allow one person to drench safely and easily," says Bernie Mulder, president of B&B Mfg. "A lot of dairymen weren't drenching because it was a tedious job which took a couple of people and they were afraid of drowning cows."

Mulder sells a range of equipment, from a hand-operated single-dose system up to a large motorized multi-dose system which can drench two cows at once. They all come with a fixed-length hose which makes it easy to ensure the end of the hose is in the rumen before the drench is administered. The volume of drench is controlled with a simple, reliable metering system.

Ralph Bredl, owner of Harmony Ho Holsteins in Stratford, Wisconsin, drenches his cows using Ruma-Tech products and DrenchMate® I, a single-dose, hand-pump system.

"If the rumen is working well, lots of other things go well too," Bredl says. "Anytime a cow is less than perfect, we drench her."

"Mineral-based probiotics play a key role in keeping a cow healthy. If you can maintain rumen function through traumatic events like disease and calving, your cows stand a much better chance of recovering."

Bredl says he used to rely on his vet to drench sick cows with a funnel and a hose. "It was all very mysterious, like stealing gas out of a pick-up truck in the middle of the night," he says.

He experimented with several drenching products, until four years ago when he settled on DrenchMate® I.

"Other products were hard to use, you weren't sure what you were doing and we would kill a cow occasionally," he says. "With DrenchMate®, we haven't killed a cow in four years."

Bredl says he considers drenching as part of a whole movement, a result of societal pressures that are forcing farmers to re-evaluate their processes. But it's a trend that is bringing him positive results.

"Our mortality rate has dropped, our cows return to full productivity quicker, and the toxicity resulting from coliform mastitis is reduced quicker," he says.

"Drenching is like jump-starting a dead battery. The results are very quick and you're avoiding IV and antibiotics," he says. "It's rumen therapy."

Preston, Minnesota-based dairyman Todd Hendrickson is also a Drench-Mate® user and a solid supporter of drenching. For a year, he's been drenching all his fresh cows within 12 hours of calving and drenching sick cows as required. He says he's seen dramatic results.

"Displaced abomasums (DAOs) were the main reason I decided to try it," he says. "I was having DA troubles before, but since

I started drenching they've been virtually eliminated and my vet bills are significantly lower."

Hendrickson says his cows are also performing better. "They're staying on feed better after calving and they're about 10-12 pounds higher on peak milk now than they used to be," he says. "They get to peak a lot faster than they used to and they also come back into heat faster than before."

Hendrickson admits he had his doubts about the Drench-Mate® equipment. "It's easy to use, but it's still another chore to get done, and for the first six weeks I wondered if it was worth it," he says. "But a couple of months down the road you really start to see the results, and it's sure well worth the time and effort."

Lynden, Washington dairy farmer Ed DeGroot has also been drenching regularly for a year. DeGroot has been dairying for 13 years and currently milks 1,500 cows in three Lynden-area locations.

"We were looking for a way to fight fresh cow problems, because we were getting too many DAOs," DeGroot says. "We tested our fresh cows for calcium levels and saw they were low, so we decided to try drenching regularly."

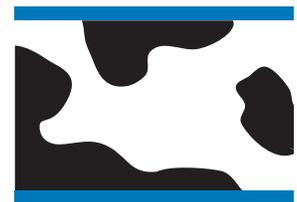
DeGroot uses a Drench-Mate® II, a larger model that uses a motorized pump and stores the drench in a 55-gallon towable poly tank.

DeGroot says he's a firm believer in regular drenching because of its results on his bottom line. "I have fewer DAOs since I started drenching regularly and my vet bills have gone down," he says.

DeGroot explains that drenching has also helped him to salvage rather than replace cows. If he has to cull a fresh cow that's sick, he'll typically get \$300 to \$400 for it. The same cow in a healthy state would fetch \$1,000. Replacing a cow is around \$2,000.

"If I save one cow, I've paid for my DrenchMate®," DeGroot says. "You know, the bigger a dairy gets, the harder it is to manage cows individually. Drenching regularly is like insurance for us."

Drench-Mate®



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