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Information for Today's Agri-business Professional

Improve your calf health: Focus on four key areas

In 1975, I learned a valuable lesson in newborn calf health. It was the first spring after my father passed away and I was solely in charge of calving our beef herd in northern Minnesota.

Things went smoothly for about the first third of the season. Then, as the warmer April weather and more calves arrived, so did a scours outbreak. I was not in veterinary school yet, but my instincts told me to get the calves onto fresh ground and out of the sloppy, confined barnyard where the cows spent winter.

Using a tree skidder with a large v-plow, I plowed open lanes in the deep snow covering adjacent pasture. I fed the cows and their calves on this "new ground" and almost immediately, the scours disappeared.

Today, this approach to calving beef cows is part of the Sandhills Calving System. Developed and researched on ranches in western Nebraska, it involves calving cows in limited groups on small, fresh sections of pasture, opening up new calving lots every seven to 14 days. Ranchers who use this system have dramatically reduced calf scours in their herds by creating a clean environment for all newborn calves – not just the ones that are born at the beginning of the season. When you can eliminate contact between early- and late-season calves, the younger calves are not exposed to the disease-causing pathogens shed by the older calves.

The principles and outcomes of the Sandhills systemdirectly correlate with my experience decades ago. We in the dairy industry can learn from the Sandhills approach. Regardless of calves' future destiny, those little bovines have the same biological systems and vulnerabilities in their first weeks of life.

We see scours and respiratory challenges in dairy herds raising calves in group settings, particularly if it takes a while to stock a pen. When newborns are exposed to older calves and the organisms they shed, the younger calves are highly vulnerable to disease. The same thing can happen in under-maintained maternity pens and individual calf pens.

So how can we apply our learnings from the Sandhills approach? We can start by paying careful attention to:

1. Colostrum delivery

Beef calves often are standing and nursing their dams within an hour of birth. In the same light, we should strive to milk fresh cows and deliver their colostrum as soon as possible after birth; ideally within 2-4 hours. Sanitation is a critical factor in this process because you don't want to introduce vulnerable calves to bacteria along with their first feeding.

If there is a challenge with either the speed or cleanliness of colostrum delivery – or both – colostrum replacers are a viable alternative. Although more expensive up front, they can pay for themselves when it comes to calf survival and health. Also, be sure to finish a colostrum (or colostrum replacer) feeding once it's started, via either bottle or esophageal tube feeder. Don't come back an hour later to see if the calf will nurse.

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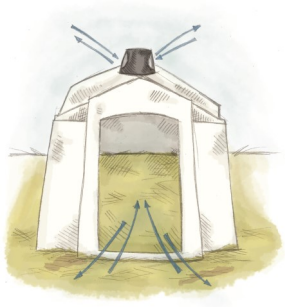
2. Sanitation

Whatever you can do to create an environment of "fresh ground" will prove beneficial to new calves. Creating this fresh ground includes: cleaning maternity pens between calvings, meticulously bedding and cleaning group pens, and providing at least 40 square feet per calf in group housing. Hutches should be relocated to fresh ground and sanitized between calves. Monitor all calves closely for disease and treat them quickly. If calves become ill, remove them from group pens until they recover.

Feeding equipment can be another disease-sharing culprit. Use the same sanitation methods as you do for milking equipment. Develop a simple, consistent routine for cleaning and sanitizing feeding equipment. This protocol should include physical cleaning to prevent buildup of biofilms. Work with your veterinarian or another advisor to routinely evaluate sanitation effectiveness of both housing and feeding equipment with adenosine triphosphate (ATP) swabbing.

3. Ventilation



Entering the world in the great outdoors is a natural advantage for beef calves. Your ventilation goal should be to match the freshness of outdoor air as closely as possible. Hutches can offer this environment, although you may need to adjust vents for interior air movement. In hot weather, using blocks to elevate hutches can help create more air movement.

In group housing, air quality becomes exponentially more important. Providing deep, dry, clean bedding and replacing it on a regular schedule is critical. Positive pressure tube ventilation systems can help promote air quality.

4. Nutrition

A beef calf nursing its dam will consume about 6 or more quarts of milk in a 24-hour period. Having access to feedings around the clock results in routine gains of 2 pounds per day in their first 69 days of life. In comparison, preweaned dairy calves are traditionally raised with feeding rates as low as 4 quarts a day over two feedings.

This explains why the dairy industry has been moving in the direction of more biologically normal feeding programs to deliver a higher level of nutrition to preweaned calves and increase the number of feedings calves receive per day. A growing number of studies show this approach to preweaned feeding produces calves with optimal healthand growth rates.

As you examine your calf raising protocol, look for ways to mimic the principles of the Sandhills Calving System. The results could help you gain new ground with the health and productivity of your calves.

DCHA Gold Standards
Comerford, John 2017. "Beef Cow Nutrition Before and After Calving." Penn State Extension Beef Nutrition and Health Bulletin, http://extension.psu.edu/animals/beef/nutrition/articles/beef-cow-nutrition-before-and-after-calving

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