

A STORY OF A STEAK

RESPONSIBLE BEEF

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PRE-CALVING MANAGEMENT PLANS: FOUR STEPS TO ENHANCE CALVING SEASON SUCCESS

As producers prepare for calving season, it's important to review a list of key management principles. While even the best planned strategies can hit road bumps, thinking ahead and being prepared will help guarantee a successful calving season.

Kevin L. Hill, D.V.M., Merck Animal Health, explains that a few key factors can have a big influence on a better calving season. "Cow nutrition is always vital to getting healthy, vigorous calves on the ground, but it's also important to plan out available calving areas, prepare for adverse weather, and make sure newborn calves get colostrum," says Dr. Hill. "These simple steps can get a producer's season off to a great start."

Step 1: CHECK ADEQUACY OF LATE-TERM COW NUTRITION

Every sound cow-calf management plan includes a good vaccination program, but a solid nutrition program is critical to ensure that a cow will respond to those vaccinations. Cows that are deficient in vital nutrients during pregnancy will produce lower-quality colostrum and have calves that may be set for a lifetime of low performance and compromised health.

"If a cow is lacking protein, energy, minerals or vitamins, she will not have the building blocks needed to produce antibodies for herself, or to fully load her colostrum with antibodies and immune cells that are critical to calf survival," says Dr. Hill.

A three-year study at the University of Nebraska titled "Effects of pre- and post-partum nutrition on reproduction in spring calving cows and calf feedlot performance" was conducted to evaluate the influence of supplemental protein on calf health and growth rates. Results indicated that feeding supplements or high-quality forages to pregnant cows had a profound effect on the long-term health and productivity of the calf. Cows that were supplemented weaned more live calves, and those calves also weighed an average of 29 pounds more at weaning. In addition, subsequent performance of the steer calves and reproductive performance of the heifer calves was significantly improved in the supplemented group.

Step 2: PLAN CALVING AREA ROTATION

Calving on clean ground and separating older calves from newborn calves will benefit producers by reducing the incidence of infectious disease. Dr. Hill says producers should be sure to save the cleanest and driest pastures on the ranch for calving and never calve on the same ground that has been used for feeding in previous months.

"Disease-causing organisms are normally amplified in calves as they age, thereby creating a real risk for younger calves, even when they show no symptoms of disease," says Dr. Hill. "Older calves become the primary reservoir of infection for their younger siblings."

Because older, healthy calves can shed enough bacteria and virus into the environment to make a newborn calf sick, Dr. Hill says it is extremely helpful to partition calving grounds into several paddocks.

"After the first one to two weeks of calving, the calved pairs stay in the first paddock and the pregnant cows should be moved onto the next paddock," says Dr. Hill. "This process is repeated every one to two weeks until calving is complete, which ensures that older calves will not contact and infect younger calves."

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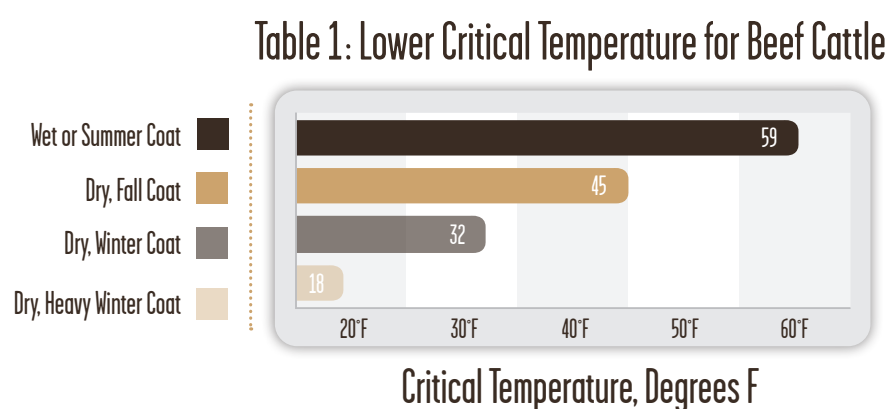
— Kevin L. Hill, D.V.M., Merck Animal Health

Step 3: PREPARE FOR ADVERSE WEATHER

Because of the unpredictable nature of weather during the calving season, producers should be prepared to provide shelter from wind and wet weather. Calves that stay dry and are out of the wind can withstand very cold weather. It's important to be aware of the wind chill cattle are experiencing and know when those temperatures fall below the critical line.

"Any type of wind break, deep bedding or shelter that a producer can provide during periods of extreme temperatures will be valuable in reducing the amount of stress and heat loss these calves will experience," says Dr. Hill.

The point of cold stress depends on the amount of insulation provided by the hair coat. As Table 1 shows, this insulation value changes depending on the thickness of the hair coat and whether it is dry or wet. (Source: Rusche, Warren. "How Does Cold Stress Affect the Energy Needs of a Beef Cow?" iGrow, SDSU Extension, 2011)



Step 4: MAKE SURE THE CALF GETS COLOSTRUM

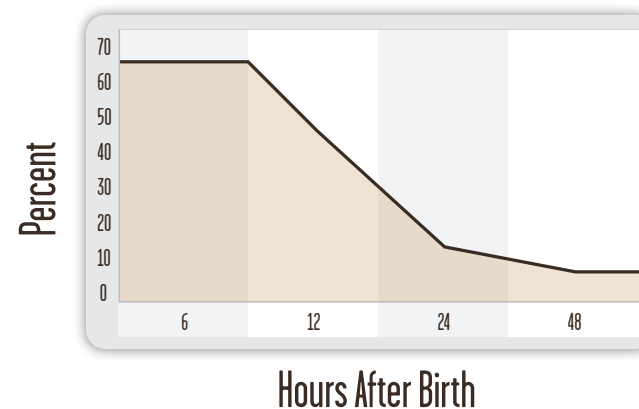
Colostrum, the first milk produced by the cow, is nature's way of protecting young calves from disease until they are old enough to adequately protect themselves. Dr. Hill says calf immunity is dependent on ingestion of colostrum, because antibodies are unable to pass from the cow to the calf in the uterus.

"They must get the colostrum in the first few hours after birth," says Dr. Hill. "Any delay significantly decreases the amount of antibody protection that will be transferred."

Graph 1 shows how the calf's ability to absorb these complex immunoglobulins starts to decrease soon after birth. (Source: Besser and Gay, 1994. Vet. Clinics of North Amer.)

Dr. Hill says a good rule of thumb is to assist any calf that has not stood and nursed within two hours after birth. "The dam should be milked out and the colostrum given via tube to the calf, or a high-quality colostrum replacer can be used if colostrum is not available," says Dr. Hill.

Graph 1: Effect of Time of Colostrum Feeding on Percent Immunoglobulin Absorption



Good nutrition, clean calving grounds, protection from adverse weather and good colostrum transfer are not always easy to achieve, but the producers who master these management keys will enjoy better calf health, survivability and peace of mind during the calving season.