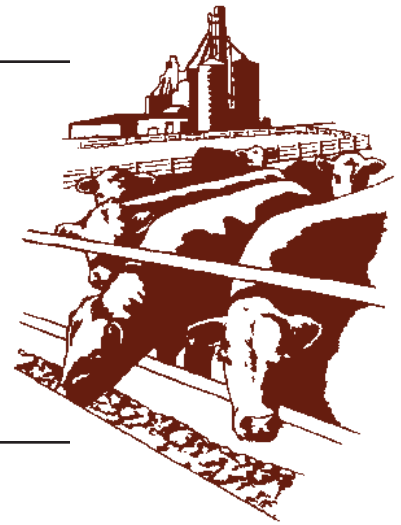


Beef Cattle Handbook



BCH-3055

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Prevention of Calf Scours

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The best preventive for calf scours is a management system that maximizes the chances that newborn calves receive an adequate amount of high-quality colostrum with antibodies directed against scours-causing organisms. Ensuring that calves receive adequate high-quality colostrum within 2 to 4 hours of birth is key. Many factors influence the quantity and quality of colostrum that the calf receives from the dam. These include age of dam, precalving nutrition, precalving vaccination, calving difficulty, and calf vigor.

Nutritional Management

Studies have shown that precalving nutrition has a measurable impact on calf survival. In 1975, Corah et al. reported that pregnant cows fed 70 percent of their calculated energy requirements during the last 90 days of pregnancy produced calves that experienced increased sickness and death rates.

Calves born to first-calf heifers that were restricted either in protein (Carstens et al. 1987) or energy (Ridder et al. 1991) had reduced ability to produce body heat soon after birth. This likely results in calves that are more susceptible to cold stress. Also, calves born to 2-year-old heifers whose body condition score is below optimum (<4 on a scale of 1 to 9) are less vigorous and have reduced serum immunoglobulin (antibody) levels at 24 hours of age (Odde 1988).

Cattle producers must meet the nutrient requirements of the pregnant cow if she is to deliver a healthy calf with maximum opportunity to resist environmental stress and disease. Since first-calf heifers have different nutrient requirements than older cows and tend to get

less feed when fed with the herd, we recommended that 2-year-olds be sorted from older cows. An excellent tool that can be used to ensure nutrient requirements are met is body-condition scoring of all cows. Those on the low side could be sorted off for better or more feed before calving. Targeting cows for a medium body-condition score of 5 and for first-calf heifers an even higher score of 5.5 to 6.0 at calving is important. The scale used here is 1 to 9, thin to fat (Richards et al. 1986).

Precalving Vaccination

Ideally, we would like to know the infectious agent of every disease case on the ranch. Certainly, this is a goal that we might move toward. However, even in the best of circumstances, that is difficult to achieve. Several vaccines are on the market that advertise protection for calves against infectious scours by vaccinating the pregnant cow, thereby boosting the colostral immunity of the calf.

Most of us would agree that if we identify *E. coli* as a scours problem in newborn calves, vaccinating cows before calving to prevent or reduce the risk of this problem would be indicated. Should a particular product be recommended for every herd? Probably not. Recommending precalving vaccination against scours is a function of herd management, history, risk of disease, cost of vaccine, and accessibility of the cattle. We know that vaccination alone is seldom enough. In many large, extensively managed cow herds, there is less opportunity to vaccinate cows just before the calving season (with the exception of first-calf heifers). These herds are also more likely to be calving in larger areas, where expo-

sure to infectious organisms may not be as great as when calving in more confined areas. Typically, producers become interested in vaccinating against any disease after a problem with that disease.

Clean Calving Environment

The incidence of infectious disease is a function not only of immunity level, but also the level of exposure to infectious agents. Exposure to infectious organisms is highest in confined environments. Some procedures that may help reduce the level of exposure to organisms include:

- Clean area to assist delivery
- Washing teats on the cow that has an assisted delivery
- Clean esophageal feeder between uses on calves
- Clean and dry maternity pens
- Movement of pairs out to clean pasture as soon as possible after calving

Note: First-calf heifers are frequently maintained in confined environments because they require more assistance at calving. Remember, these calves may be more susceptible to disease to start with, so for them, increasing the level of exposure by confinement increases the risk of disease.

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