

CALVING EASE

February 2009

Sam Leadley, Attica Veterinary Associates

Calving Management

Two elements of calving management can make a big difference in newborn calf health. They are stress and pathogen exposure.

Managing Stress

Deliveries requiring assistance are common among Holstein dams. In a large-scale calving study (7,380 calvings) many dairy heifers and cows required assistance at calving. Among these dams “more than half (51.2%) of calves born to first-calf heifers (primiparous dams), compared to 29.4% of calves born to second-lactation and later cows (multiparous dams), required assistance during calving.” They monitored these calves for 120 days to evaluate both death and sickness rates.

Calves born with calving assistance scores of 4 and 5 (using the 1-5 scoring system for dairy cows) were classified as “severe” calving assistance or dystocia. The chances of severe-assistance calves dying was over six times that of calves requiring no or little assistance. Let us compare calves requiring “severe” assistance compared to those requiring no or little assistance. For “severe” vs. normal, chances of respiratory disease was 1.6 times and digestive disease was 1.3 times. Thus, stress at calving has been documented to affect not only death rates but sickness rates as well.

There are a number of good management practices that occur before calving that can reduce the chances of a hard calving (for example, choice of sire, size at breeding). In addition, management practices at calving can make a difference in how much assistance is needed.

First, timely diagnosis and intervention in hard calving cases can affect the amount of assistance needed and therefore the amount of stress on calves. “Three general causes of dystocia are fetal-maternal size mismatch, fetal malpresentation, and maternal related causes (Arthur and Others, 1989). Dystocia incidence in primiparous dams is most often due to mismatched fetal-maternal size, whereas dystocia in multiparous cows is more frequently secondary to fetal malpresentation or maternal causes.” Thus, in many of these cases extended labor as well as lack of adequate lubrication in the birth canal increase the

amount of assistance required. Therefore, best management practices include (1) observation of closeup dams for labor signs, (2) examination of dams not making “normal” progress once in labor, and (3) timely intervention to reduce the amount of intervention needed for a successful birth.

Second, the amount of stress on the calf can be reduced by using proper intervention techniques. The best management practice is to have one or more well-trained and experienced persons available or on-call to assist on hard calvings.

Managing pathogen exposure

Clean is always better than contaminated or dirty. This includes the cow, the bedding and the air. And, if calving assistance is needed, following aseptic practices as closely as circumstances will permit is better.

Dr. Shelia McGuirk (Univ. Wisconsin) uses the phrase, “manure meals” to describe the problem of early exposure of calves to the pathogens in adult cow manure. One of her suggestions for reducing “manure meals” is to remove the calf from the dam and calving environment quickly after birth. But, what is the ideal amount of time for a calf to spend with her dam? Maybe it depends. From the perspective of the dam’s reproductive health more time could be beneficial. For the calf, if the dam is actively licking and mothering the calf more time together may result in greater stimulation for the calf for both breathing and circulation.

In contrast, pathogen exposure for the calf can go up rapidly the longer she remains with her dam and in the calving environment. The longer the dam breathes on and licks the calf the greater the calf’s pathogen exposure. Once the calf stands and is ready to walk her chances of getting coliform bacteria in her mouth go up a lot. A best management practice is to get the calf away from the dam at this point. Some dairies provide a place where the dam can reach the calf but the calf is prevented from licking and sucking of the cow’s haircoat, falling into cow manure, and sucking on dirty teats. That is, she gets fewer manure meals.

Also, calves without navel disinfection (navel dipping with 7% tincture of iodine solution) have an 11 percent higher death loss than those that are disinfected. For every 100 cows, that means an extra 5 deaths among heifer calves. Calves without navel disinfection have a 14 percent higher rate of treatable pneumonia than those that are disinfected. For every 100 cows, that means treating an extra 6 calves. Dipping navels on newborn calves is a best calving management practice.

References: J.E. Lombard, F.B. Garry, S.M. Tomlinson and L.P. Garber, “Impacts of Dystocia on Health and Survival of Dairy Calves.” *Journal of Dairy Science* 90:1751-1760, 2007. Arthur, G. H., D. E. Noakes, and H. Pearson. 1989. *Veterinary Reproduction and Obstetrics*. Pages 178–179 in Part III: Dystocia and Other Disorders Associated with Parturition. General Considerations. Types of Dystocia Within the Species. 6th ed. Bailliere Tindall, London, UK.

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