

Neonatal Calf Survival

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Introduction

Enhancing the survival of newborn calves should be a primary goal of all beef and dairy operations. For cow/calf operations, the number of live weaned calves sold is a primary determinant of income. For most dairy operations, calves represent the next generation of milk producing animals. However, keeping young calves healthy and growing is a complex task. Newborn calves, like all newborn animals, face numerous different challenges to their health and survival, including surviving the birthing process, acquiring colostrum, and defending against infectious disease. National surveys demonstrate that in both beef and dairy operations it is common for five to 10% of live born calves to die before weaning.

Because of the importance of newborn calf health to cattle producers, and because of the many challenges that need to be overcome in this area, ILM has focused numerous projects on neonatal calf health issues. As in other project areas we strive to integrate our educational and research efforts to provide better information to veterinarians and producers who work to improve calf health.

Educational projects

We have focused considerable effort on education for producers and livestock workers. These have included seminars and presentations to producer groups and veterinary practice groups within Colorado and neighboring states. Historically, we focused most of our efforts on beef cattle producers, but over the last five years it has become apparent that calf problems in the dairy industry need as much attention as in the beef industry.

In our Livestock Worker Training Program, the module that teaches appropriate management of cows with dystocia to enhance the survival of baby calves has helped many producers improve their success in calf delivery.

We have provided a Manual on Dairy Dystocia Management to instruct the dairy workers on how to manage dystocia in dairy cows to decrease negative impacts on both cows and newborn calves.

We have collaborated with the Integrated Resource Management, IRM on a Caring Management Manual to assist cattle producers on better management to avoid calf death and decrease loss. Chapter 6 on Calving and Handling Calving Difficulties is provided on a PDF for your viewing. If you are interested in the 8 Chapter Calving Management Manual please contact; Dr. Bob Mortimer or Dr. Jack Whittier.

Completed Studies

Arterial blood sample collection from the newborn calf. Adams R, Holland M, Aldridge B, Garry FB, Odde KG. *Vet Res Comm*, 1991; 15(5):387-394.

Hematologic values in newborn beef calves. Adams R, Garry FB, Holland MD, Aldridge BM, Odde KG. *Am J Vet Res*, 1992; 53(6):944-950.

Physiologic differences between twin and single born beef calves in the first two days of life. Adams R, Garry FB, Aldridge BM, Holland MD, Odde KG: *Cornell Veterinarian*, 1993;83:13-29.

Neonatal septicemia in calves: 25 cases (1985-1990). Aldridge BA, Garry FB, Adams MR. *J Am Vet Med Assoc*, 1993;203(9):1324-1329.

Role of colostrum transfer in neonatal calf management. Current concepts in diagnosis. Garry FB, Aldridge BA, Adams R: *Comp Cont Ed Pract Vet*, 1993;15(8):1167-1175.

Clinicopathologic measurements in newborn beef calves experiencing mild to moderate degrees of dystocia. Adams R, Garry FB, Holland MD, Odde KG: *Agri Pract*, 1995; 16(6): 5-11.

Comparison of serum immunoglobulin concentrations in newborn calves fed one of four different sources of bovine immunoglobulins. Garry FB, Adams R, Cattell MB, Dinsmore RP. *J Am Vet Med Assoc*, 1996;208(1):107-110.

Postnatal characteristics of calves produced by nuclear transfer cloning. Garry FB, Adams R, McCann JP, Odde KG: *Theriogenology*, 45:141-152, 1996.

Neonatal calf resuscitation for the practitioner. Garry FB, Adams R. *Agri Pract*, 17(3):25-29, 1996.

Clinical use of portable glucose meters in bovine practice. Cebra CK, Garry FB, Adams R. *Agri Pract*, 17(10): 7-11,1996.

Treatment of neonatal calf diarrhea with an oral electrolyte solution supplemented with psyllium mucilloid. Cebra ML, Garry FB, Cebra CK, Adams R, McCann JP, Fettman MJ. *J Vet Int Med*, 12:449-455, 1998.

Current Research Focus

Dystocia in the dairy industry is a very significant problem both because it is a frequent occurrence and because it has profound negative impacts on newborn dairy calves. We have recently completed a study of dairy operations in Colorado, to evaluate the effects of dystocia on newborn calf survival. Dystocia not only increases the occurrence of stillbirths, but also decreases calf survival by increasing calf disease problems throughout the first three weeks of life.

Impacts of dystocia on dairy calves. Lombard JE, Garry FB, Tomlinson SM, Garber LP. *J Dairy Sci*, submitted 2006.