The Importance of Fluid Retention in Calves

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Calf diarrhea is a sign of a variety of gastrointestinal illnesses in young calves, with many different causes. Bacteria like Salmonella and E.coli, viruses like rotavirus, and internal parasites like coccidia can cause gastrointestinal illnesses and diarrhea in neonatal (< 10 days old) calves. These gastrointestinal illnesses are commonly referred to as “scours.” Most often, scours is a problem in the first month of life.

Formation of diarrhea draws large amounts of body fluid into the gut lumen. The calf quickly becomes dehydrated, electrolytes are unbalanced and energy reserves become depleted. Scours, diarrhea and other digestive problems are the leading cause of death in the first month of life in dairy heifer calves.

Reducing Fluid Loss from Calf Diarrhea - In 2014, Jaguar Animal Health sponsored a Dairy Calf Roundtable in Kansas City. At the meeting, Rodrigo Bicalho, DVM, PhD, Associate Professor of Dairy Production Medicine at Cornell University College of Veterinary Medicine, stated, “The more we study this sign [diarrhea] the more we understand it is complex, multifactorial, and hard to prevent. But regardless of its cause, reducing the dehydration associated with diarrhea is key.”

Because diarrhea is symptomatic of underlying gastrointestinal illness, the sooner that fluid loss can be limited, the sooner the calf will recover. Relieving the physiological stress of dehydration from diarrhea allows the calf to deploy more of its energy reserves toward fighting the underlying cause, and gives the calf’s natural immunity and other interventions more time to work.

In recent years, researchers have shown that calf diarrhea significantly impacts the future health and productivity of the calf, heifer and adult cow (Soberon, et al., 2012). Regardless of the cause, action should be taken, especially if there is an outbreak across the herd. Calves that have serious episodes of diarrhea can be negatively affected for the rest of their lives.

There are several different varieties of diarrhea. Secretory, malabsorption, and inflammatory diarrhea are the major types. The severity of a case of diarrhea may be scored using the University of Wisconsin Calf Scoring System. This information will be helpful to your veterinarian if she or he cannot be present at the farm, will help you determine the need for any action and will also tell you the effects of any intervention.

Prevention – Over the long run, prevention is the best and least expensive treatment for any early calfhood condition, especially scours. The extra work and other losses caused by scours can be prevented through good management practices. At the herd level, these include:

- Cleanliness of the equipment, housing and facilities
- Good personnel hygiene
- Proper training of personnel

The Economic Impact – Practical experience and research reveal that healthy calves make healthier, happier and more productive cows. The economic effects—including unnecessary early deaths and delayed weaning—are far reaching. Persistent diarrhea on the farm has significant negative effects not only on the herd, but also on employees. Leading producers certainly pay close attention to economic losses resulting from calf diarrhea.

References:

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  - Calving environment
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- IV Catheterization
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  - How to identify need
  - How to complete
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  - Dehydration
  - Causes of Scours
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