

Prevent Salmonella/Winter Dysentery from Cutting into your Profits

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Is your herd nutritionally prepared to fight off the common challenges that can occur as the seasons change? As we wipe our brows, thankful that summer heat stress is over, it's time to look forward, considering the upcoming season (winter) and begin modifying dairy rations accordingly. Fall is already here and winter is fast approaching. Have you taken steps to insure that your herd will not be affected by Salmonella/winter dysentery?

Winter Dysentery- What is it?

Winter dysentery is a term used to describe a non-nutritional diarrhea or scours in lactating dairy cattle. The exact cause of winter dysentery is not known, but a Salmonella strain may be the culprit. Although some cows may drop in milk production during a bout of winter dysentery, herd production is usually not impacted to any great extent and cows recover within a few days. It may take a week or two, however, for the disease to pass through the herd, which can be quite messy, especially in stall barns.

Salmonella – What is it?

Salmonella is a serious problem in dairy cattle and appears to be growing in prevalence. More than 2000 Salmonella serotypes have been identified and most are potential animal and human pathogens. Salmonella are gram-negative bacteria that do most of their damage inside the cells of the intestine.

Severe diarrhea is the most common symptom of salmonellosis in calves and can be fatal. It is less common in lactating cows, but when it does occur can be devastating. Cows with Salmonella infections may exhibit severe diarrhea, fever, depression, loss of appetite and sudden death in the more acute cases.

A study reported at the American Dairy Science Association (ADSA) meeting in July of 2001 discovered that Salmonella was found in at least one sample on each of the initial 12 farms investigated. Salmonella was isolated from 8.0% of healthy lactating cows, 19.8% of cows due to calve within 2 weeks and 13.5% of lactating cows within 2 weeks of freshening. In the environment, Salmonella was found in 13.5% of samples from calving pens and 24% of samples from sick cow pens. This study shows that Salmonella is likely to be present on all dairies and suggests that transition cows may be the most vulnerable.

Fighting Salmonella

Overcoming a Salmonella issue can often be a difficult prospect. While antibiotics can be effective, they aren't necessarily effective in all cases. Additionally, when cows are treated with an antibiotic the dairyman is required to discard milk. Vaccines have also shown promise, but [again] not in every case. Finally, nutritional strategies can be adapted such as changing

fiber sources in forage, increasing fiber levels, etc. However, these measures are often impractical. One promising technology derived from glycomics (the study of carbohydrate chemistry) has shown great promise in the battle against Salmonella. This technology, mannan oligosaccharides (often referred to as MOS), has shown the capacity to bind and remove Salmonella from the GI tract.

Bio-Mos[®], from Alltech, is a compound derived from yeast and founded using this new technology. With over 400 research trials in all animal species, Bio-Mos[®] has been shown to maintain gastrointestinal health and support good performance. Research at Penn State (*Heinrichs et al; J.Dairy Sci. 86:4064-4069; July, 2003*) compared a medicated and MOS-added milk replacer for calves. Addition of Bio-Mos[®] effectively replaced antibiotics and resulted in similar calf performance. Both treatments improved fecal scour scores versus control, where scours were primarily nutritional rather than infectious. Furthermore, research at the University of Kentucky (*Franklin et al; J. Dairy Sci. 88:766-775; September, 2005*) indicated that Bio-Mos[®], when fed 3 weeks prefresh improved immune response to rota virus at calving.

Bio-Mos[®] for Lactating Dairy Cows

Bio-Mos[®] is successfully used in many dairies that have experienced problems with bacterial challenges. It is fed at the rate of 10-20 grams per head per day. This product is not an antibiotic and milk from cows fed Bio-Mos[®] does not need to be discarded.

For more information

Contact your local Renaissance Consultant for additional information or call 1.800.346.3649.

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