


BCRC BEEF SCIENCE CLUSTER

RESEARCH

Facts

IN PROGRESS


Canada's Beef Science Cluster

 Animal health issues of primary focus in Phase I of the Beef Science Cluster are Johne's Disease and concerns related to the use dried distillers' grains with soluble (DDGS) in feedlot rations.

Objective: Develop effective and economical management, diagnostic, and treatment tools to reduce the costs and losses incurred by major production limiting diseases and animal health issues that affect primary production sectors.

Johne's disease is a bacterial disease caused by *Mycobacterium avium* subspecies *paratuberculosis* (MAP, for short). Cattle are believed to be infected at a young age, but symptoms generally do not appear until animals are mature. Johne's disease damages the lining of the intestine. This impairs nutrient absorption and results in intermittent diarrhea, loss of weight and body condition, and eventual death or culling. Similarities between the symptoms of Johne's and Crohn's disease have led to speculation that these two diseases may be related.

Current diagnostic tests do not reliably detect MAP infected animals before they become visibly ill. Some vaccines have been developed; these do not completely prevent infection but do reduce MAP shedding. The development of a better diagnostic test and/or vaccine would be very helpful in preventing and controlling this production limiting disease in beef cattle.

-  An improved diagnostic test for Johne's disease
-  A calfhood vaccine and early detection test for Johne's disease

Dried distiller's grains with solubles contain low levels of starch and high levels of fiber, protein, nitrogen, phosphorus and sulfur compared to traditional feed grains. This has potential animal health ramifications. Although the low starch and high fiber levels in DDGS may reduce the risk of digestive upsets, liver abscesses and lameness, the small particle size of DDGS may actually increase the risk of these problems. On the other hand, high dietary sulfur levels can cause a neurological disease called polioencephalomalacia (PEM) in feedlot cattle. Feedlot nutritionists and managers would benefit from more knowledge regarding the animal health ramifications of incorporating DDGS into feedlot rations.

-  Do DDGS affect feedlot cattle health?

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