

BCRC BEEF SCIENCE CLUSTER

RESEARCH

Facts

IN PROGRESS

Do DDGS affect feedlot cattle health? ANH.03.09

Project Title: Effect of Alternative Feeding Dried Distillers Grains on Animal Health in Feedlot Cattle

Researchers: Dr. Steve Hendrick, University of Saskatchewan, Dr. Eugene Janzen, University of Calgary, Dr. John McKinnon, University of Saskatchewan, Dr. Tim McAllister, AAFC Lethbridge and Dr. Calvin Booker, Feedlot Health Management Services

Background: The widespread use of dried distillers' grains with soluble (DDGS) in feedlot rations may have implications for cattle health. The lower starch and higher fiber levels of distillers' grains (compared to traditional feed grains) may benefit rumen, liver and hoof health. However, DDGS products are very finely ground, which means that the fiber may not be as effective in stimulating proper rumen function. The increased concentration of some minerals in DDGS may also have negative effects (e.g. higher sulfur levels in DDGs may increase the risk of polio).

Objective: To evaluate animal health and performance impacts of finishing yearling cattle on rations containing variable levels of wheat-based DDGS.

During the fall of 2009, 10,000 yearling feeder cattle will be placed into an Alberta feedlot and fed a ration containing 20-60 per cent wheat-based DDGS. Individual animal growth, lameness and health treatments will be recorded, as well as autopsies of animals that die or are euthanized. Liver, brain, rumen, hoof, and other samples from each autopsy will be examined for pathological lesions that could be specific to diet. At slaughter, all animals will be evaluated for rumen and liver lesions and carcass measurements will be collected. In two related studies, cattle receiving diets containing wheat, corn or blended DDGS at the University of Saskatchewan will be blood-sampled before, during and at the end of the feeding period. Cattle fed triticale DDGS at the Lethbridge Research Centre will be followed to slaughter, and liver, brain, rumen and hoof samples can be collected and analyzed for pathological lesions. Dietary sulfur levels will be studied in a metabolic trial. Heifers will be fed wheat-based DDGs supplemented with defined levels of sulphur, and rumen, blood and urine parameters will be examined.

Implications: Identifying animal health and performance concerns associated with DDGS is important to develop best management practices and feedlot nutrition strategies.

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