DDGS Prove to be a Valuable Ingredient in Beef Cattle Rations

Summary

Coordinated studies were recently conducted by Ag Canada in Lethbridge, Alberta, and North Dakota State University (NDSU) at its Carrington and Fargo, ND, locations to compare the effects of low- and medium-fat levels in dried distiller grains with solubles (DDGS) on feedlot performance. The studies measured dry matter (DM) intake, average daily gain (ADG) and feed efficiency at the growing phase and DM intake, ADG, feed efficiency and carcass traits at the finishing phase.

Results of the trials indicated:

Growing phase – No difference in any of the areas of performance, with the exception of:
- An increase in DM intake (P=0.002) and ADG (P=0.03) with low-fat DDGS in the Lethbridge trial.

Finishing phase – No difference in any of the areas of performance, with the exception of:
- An increase in feed efficiency (P=0.03) with medium-fat DDGS in the Lethbridge trial.

Based on this data, producers should feel confident in their use of DDGS as a foundational ingredient in beef cattle rations.

Research Details

A total of 395 feeder cattle were used in the three locations – Lethbridge (160), Carrington (154) and Fargo (81). The Carrington and Fargo trials used corn- or barley-based diets, and the Lethbridge used barley as the grain source. All studies used corn silage.

The oil content of the two types of DDGS were 4-5% (as fed) for low-fat and 8-9% (as fed) for medium-fat for all trials. The DDGS used in all three trials was sourced from the same ethanol plants. DDGS inclusion rates in the Carrington and Fargo trials were 25% (DM basis) for both growing and finishing phases. DDGS inclusion rates for the Lethbridge trial were 10% and 20% in the growing ration and 5% and 10% (all DM basis) in the finishing ration.

Why is Oil Removed from DDGS?

Ethanol plants remove a portion of the corn oil (fat) in DDGS for higher-value biodiesel and feed fat markets, which has resulted in the increased variability in the oil content of DDGS. Partial removal of oil from DDGS allows for greater concentration of the remaining constituents such as protein, fiber and minerals.

Additional *Information*

NDSU NORTH DAKOTA AGRICULTURAL EXPERIMENT STATION

The complete NDSU study results can be found at:
www.ag.ndsu.edu/carringtonrec/documents/livestockrd/Docs2015/

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The Ag Canada final report can be found at:
www.ndethanol.org in the resources tab

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Scientists involved in these studies have no conflict of interest in any of the grant organizations.

Benefits of DDGS

- Excellent source of protein and energy
- Incomparable palatability
- Competitively priced
- Highly versatile and safe feed

Studies supported by:

NORTH DAKOTA CORN COUNCIL

NDEC North Dakota Ethanol Council

U.S. GRAINS COUNCIL