

UNL research finds feeding corn coproducts to reproducing cows positive

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University of Nebraska-Lincoln research finds feeding reproducing cows corn coproducts is beneficial to their post calving gain, reproduction and may improve beef production sustainability.

Dried distillers grains plus solubles or wet corn gluten feed are co-produced during the fermentation process of ethanol or corn sweetener, so they are a readily available, economical feed choice for Nebraska cattle producers.

Little information is available when it comes to feeding coproducts to reproducing cows, said Rick Funston, beef cattle reproductive physiologist at the West Central Research and Extension Center at North Platte.

“There’s been a lot of research on feeding coproducts from the corn ethanol and corn sweetener industries, but most of that has been in feedlot cattle, not in breeding females,” Funston said. “We wanted to look at the impact of feeding coproducts to first-calf heifers.”

UNL animal scientists conducted feeding trials on 134 first-calf heifers between calving and artificial insemination. The experiment was replicated over two years to determine the effect of additional bypass protein and dietary fat from feeding dried distillers grains plus solubles or wet corn gluten feed.

The first-calf heifers were fed diets equal in energy and crude protein with varying levels of by-pass protein and dietary fat.

Institute of Agriculture and Natural Resources researchers found that feeding first-calf heifers dried distillers grains plus solubles or wet corn gluten feed in amounts that do not exceed protein needs do not have any negative effects on reproduction. In fact, they are beneficial.

Funston said the various diets did not affect pre-breeding body weight of the cows. However, scientists did find that the first-calf heifers consuming the wet corn gluten feed diet had a greater

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average daily gain during the supplementation period compared to the cows fed the diet containing dried distillers grains plus solubles.

In addition, researchers observed a 24% increase in cyclicity before synchronization which resulted in a 9% greater artificial insemination conception rate in heifers fed the diet containing dried distillers grains.

“You can feed relatively small amounts of this inexpensive coproduct in a cow diet, and balance with moderate to low quality hay,” Funston said. “In these challenging economic times, producers should evaluate a diet containing coproducts if they are readily available and reasonable priced.”

Researchers also found that male and female calf weaning body weight were similar between treatments, but female calves from dried distillers grains plus solubles-fed cows had a greater age-adjusted body weight than those from cows fed the diet containing wet corn gluten feed.

Overall, they found that wet corn gluten feed improved cow average daily gain before breeding and dried distillers grains plus solubles increased reproductive response of the first calf heifers and adjusted weaning body weight of female offspring.

Further research will identify the appropriate level and duration of supplementation. This will look at additional mechanisms to decrease production costs and further enhance reproduction.

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