

WRINKLE

A NEW UNDERSTANDING IN NUTRITION

DakotaGold

Issue 20190019

Distillers Grains or Corn: What Should I Feed My Cattle?

RESEARCH SUMMARY

Comparing the nutritional value of feed ingredients can be complicated. Each ingredient has a unique nutrient profile and as a result, feeding value varies depending on which ingredient we use or how value is defined. Variables such as inclusion and ingredient variability also factor into the discussion. In order to get an accurate comparison, we would ideally feed the ingredients to livestock and then evaluate performance.

BACKGROUND

Researchers at the University of Nebraska (2011) assigned different treatments to 120 cross bred beef steers for an 84-day growing study. Treatments included dry rolled corn, dry distillers grains (DDGS), or wet distillers grains (DWG). Diets were formulated to contain the same amount of energy regardless of treatment to truly evaluate growth performance related to the type of treatment fed to the cattle. In addition to weight, researchers measured dry matter intake and calculated feed efficiency. They used these production measures, along with known total digestible nutrient (TDN) values of the ingredients in the diet in order to calculate an estimated TDN value for each type of distillers feed. Total digestible nutrient values estimate digestible fiber, protein, fat and carbohydrate contents of a feedstuff.

RESULTS & DISCUSSION

Based on cattle performance, dry distillers grains had 14% more TDN compared with corn. Additionally, wet distillers had 20% more TDN than dry rolled corn (Figure 1).

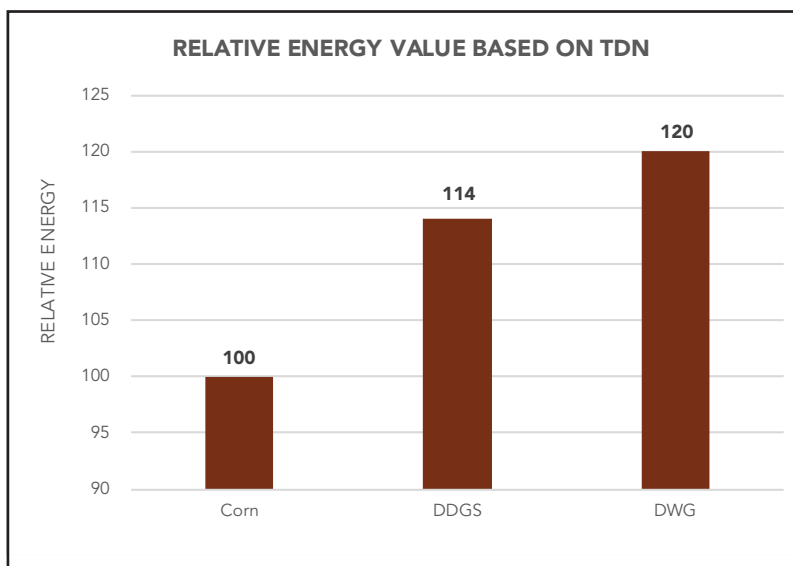
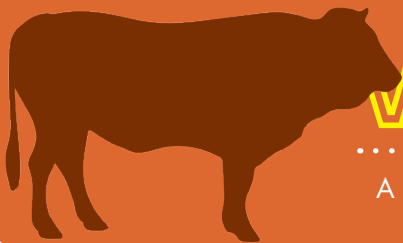


Figure 1. Relative energy value of corn, dried distillers grains, and wet distillers grains

Research indicates the higher concentration of fat in DDGS and DWG contributed to the advantages in energy for these treatments. However, the digestibility of the nutrients such as fiber, and the type and concentration of the protein likely contributed to the improved TDN value in these rations. Finally, the lower starch and greater digestible fiber content of the DDGS and DWG may have resulted in a healthier rumen environment with a higher pH compared to the corn-based diet.

*These results are not a guarantee of nutritional value, as laboratory results are influenced by factors beyond the control of POET Nutrition.



WRINKLE

A NEW UNDERSTANDING IN NUTRITION

DakotaGold

Issue 20190019

RESULTS & DISCUSSION (CON'T.)

The same research group evaluated a series of experiments in 2015 to further demonstrate the value of distillers grains compared with corn. In three different studies designed to compare corn with DWG, cattle fed DWG had similar intake, better daily gain, and a better feed:gain ratio (Figure 2).

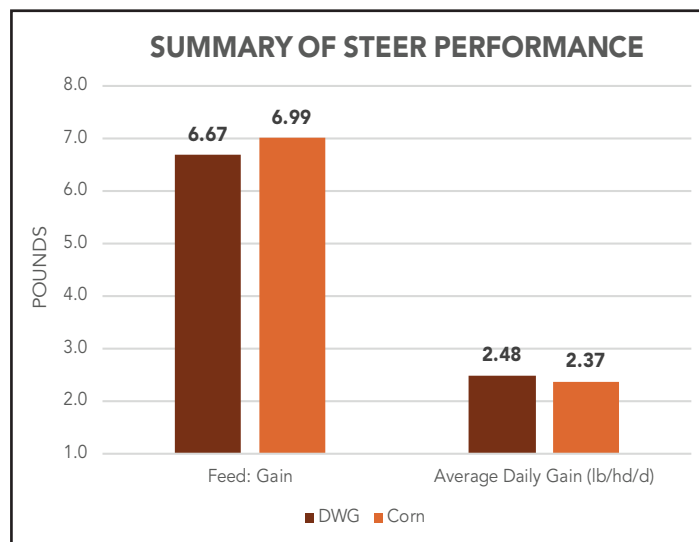


Figure 2. Summary of steer performance when fed wet distillers grains or dry rolled corn

This response suggests that in order to achieve similar performance when feeding either 15 or 30% DWG in the diet, producers would need to feed up to 57% of the diet as dry-rolled corn. Economically, this means that feed costs would increase between five and 20% when choosing to feed dry rolled corn instead of DWG. This summary of research reinforces the value of distillers and supports previous research which suggested greater feeding value of wet or modified distillers.

SUMMARY

This research demonstrates that feeding distillers grains can effectively replace corn in growing steer diets fed a forage-based ration while still maintaining energy values in the diet. This could prove especially important for cattle growers in crop years where forage quality is below normal quality or in short supply. Other variables such as improved fiber or protein digestibility could lead to even greater differences between corn and distillers feed products. The research also shows that producers can realize an economic advantage by choosing wet or dried distillers grains over corn.

In addition to dry and wet distillers grains, POET Nutrition proudly offers Dakota Gold in a pellet or cube form called ProPellets as an additional option for beef producers. ProPellets provides the same quality protein and energy as Dakota Gold in a convenient pellet and cube form which minimizes waste and improves handling for feeding applications.

If you would like additional information on this study or more details on the nutritional profiles of the Dakota Gold line of feed products, including availability of dry or wet distillers grains, please contact POET Nutrition or visit dakotagold.com.

Ahern, N. A., B. L. Nuttelman, C. D. Buckner, T. J. Klopfenstein, G. E. Erickson. 2011. Use of dry-rolled corn, dry or wet distillers grains plus solubles as an energy source in high forage diets for growing cattle. Neb. Beef Report. 20-21.

Ahern, N. A., B. L. Nuttelman, T. J. Klopfenstein, J. C. MacDonald, G. E. Erickson. 2015. Comparison of wet or dry distillers grains plus solubles to corn as an energy source in forage-based diets. Neb. Beef Report. 34-35.