

# WRINKLE

A NEW UNDERSTANDING IN NUTRITION

DakotaGold

Issue 20180010

## Do Distillers Grains Provide Ample Protein?

### RESEARCH SUMMARY

Research from the University of Nebraska demonstrates that supplementing beef steers with either SoyPass or urea has minimal effect on cattle performance. Furthermore, feeding more expensive sources of protein increases feed costs and reduces producer profitability. This research provides insights on how producers can improve profits by including distillers in their feeding program.

### BACKGROUND

Producers and nutritionists often perceive that supplementing distillers grains with additional sources of degradable or undegradable protein will improve cattle performance. Nebraska researchers designed two experiments to better understand the effects of feeding a readily degradable source of nitrogen (urea) or a source of "bypass protein" (SoyPass) on steer performance. In both studies, cattle received a combination of wet distillers grains and one of the other sources of protein.

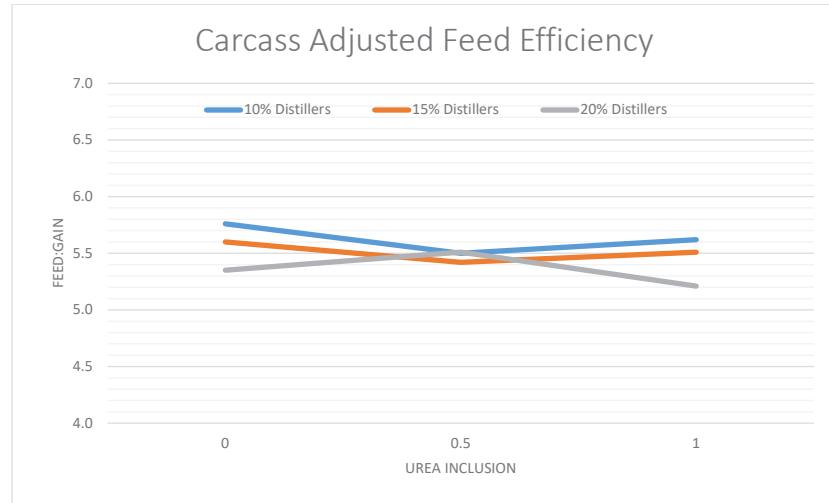
This research challenges this perception and demonstrates that distillers grains contains an ideal combination of both types of protein.

### RESULTS

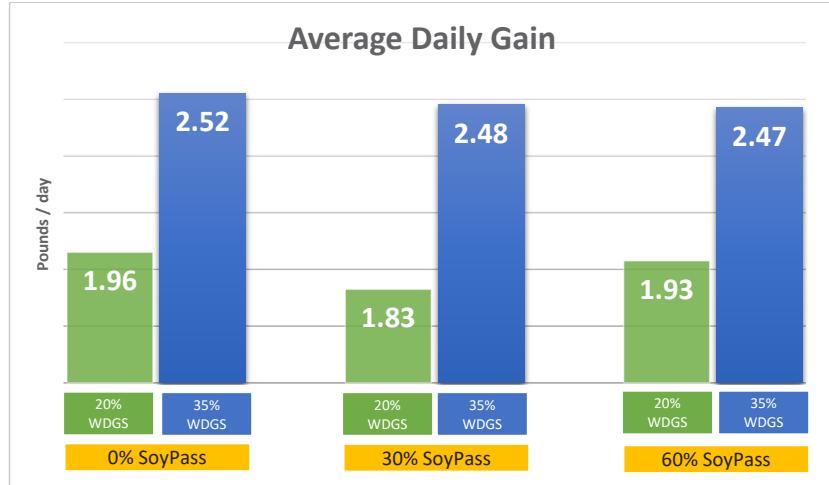
When feeding 10 or 20% distillers, supplementing urea did not improve cattle performance. However, when feeding 15% distillers, researchers observed a slight benefit to urea addition (Figure 1, top right).

Similar to the urea study, substituting distillers grains with SoyPass did not improve growing cattle performance. Average daily gain of growing cattle did not differ when researchers replaced up to 60% of the distillers grains with SoyPass. However, cattle fed greater distillers inclusions did gain more than those fed lesser inclusions of distillers grains (Figure 2, right).

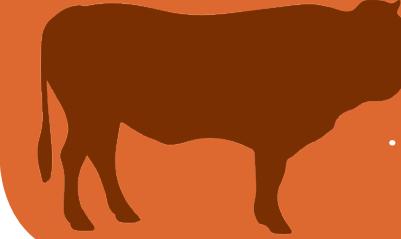
**(Figure 1) - Effects of distillers grains and urea on feed efficiency in finishing cattle**



**(Figure 2) - ADG for steers fed wet distillers grains and SoyPass**



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



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## RESULTS (CONT'D)

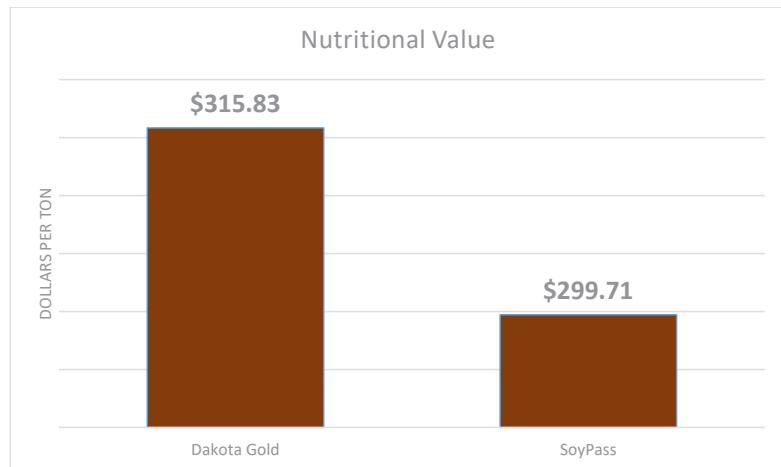
Although providing additional protein did not negatively affect cattle performance in this research, the feeding practice of supplementing an ingredient such as SoyPass could negatively affect profitability.

Using Sesame Software (Wrinkle Issue 20180006: Open Sesame to Unlock Dakota Gold Treasure), we see that because of the combination of energy and protein, Dakota Gold provides over 5% more nutritional value than SoyPass (Figure 3, right). This means improved income over feed costs when feeding Dakota Gold.

## CONCLUSIONS

These experiments suggest that the balance of ruminally degradable and undegradable protein in distillers grains supports optimal animal performance. If distillers grains did not provide an optimal balance, then researchers would have observed improved performance related to supplementation of either SoyPass or urea. Furthermore, feeding more expensive sources of protein increases feed costs and reduces producer profitability.

**(Figure 3) - Nutritional value as determined by Sesame based on crude protein and net energy**



Researchers continue to characterize the nutrient profile of distillers grains. Knowing this information will help nutritionists precisely formulate livestock diets which minimize feed costs and improve animal performance. Please visit [www.dakotagold.com](http://www.dakotagold.com) to learn more about some of latest research from POET Nutrition.

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