



**Category 4: Agriculture, agronomy, animal science, agriculture meteorology**

***11. Exploiting the Synergy between Ethanol and Distillers Grains***

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<http://www.animalscience.unl.edu/faculty.cgi?facultyID=1039463183&who=Faculty>

The University of Nebraska has been considered a leader in researching grain milling byproducts used by beef cattle. The beef cattle industry is the largest segment of agriculture in Nebraska, and use of byproducts is critical for competitiveness of Nebraska agriculture. This research area is rapidly changing as the ethanol industry continues to blossom in Nebraska. We must maintain the competitive advantages that ethanol plants, grain producers, and cattle operators currently experience. Despite all of the research focus in the past on byproducts, more is needed. Four specific areas of this project focus on: 1) performance of cattle fed modified wet distillers grains and evaluation of economics of use of modified wet distillers grains, 2) evaluation of diets that contain only byproducts compared to traditional grain based feeding programs, 3) management of sulfur in diets containing distillers grains, and 4) metabolism of distillers grains in combination with other ingredients (i.e., different corn types and roughage types) by feedlot cattle. The key for Nebraska is use of wet byproducts because our feedlots are very near the ethanol plants. No other state has this synergy of cattle, corn, and ethanol. The focus of this project is to address multiple questions remaining on how best to utilize byproducts, and how to maximize use in the future to maintain our clear advantage.

The goal of this project is to improve the use of feed byproducts produced from ethanol production, increase the use, and evaluate the economics for Nebraska agricultural producers. Specific objectives will address current limitations to more widespread use. This project focuses on a few different areas that are necessary to maintain our competitive advantage and synergy between corn, ethanol, and cattle in Nebraska. These objectives are: 1) to evaluate performance of cattle fed modified wet distillers grains and evaluation of economics of use of modified wet distillers grains, 2) determine if feedlot cattle can be fed diets that contain only byproducts and compare performance to traditional grain based feeding programs, 3) determine methods to decrease sulfur toxicity in diets containing distillers grains, and 4) metabolism of distillers grains in combination with other ingredients (i.e., different corn types and roughage types) by feedlot cattle.