A three-year initiative that created a beef cattle advisory committee to oversee a research partnership between the Nebraska Corn Board and University of Nebraska resulted in a number of important breakthroughs when it comes to feeding distillers grains to cattle.

The initiative, which wrapped up this year, allowed an advisory committee to work with university researchers to more quickly identify research projects that would benefit cattle producers.

The Nebraska Corn Board then provided funding for the projects. This reduced the lag time between research projects and doubled the amount of research conducted during the initiative.

“We were very pleased with how everything came together, as it allowed the corn checkoff to fund key research and more quickly advance the understanding of feeding distillers grains to cattle,” said Kelly Brunkhorst, director of research for the Nebraska Corn Board. “While this initiative has ended, the Nebraska Corn Board continues to fund research and further expand our knowledge and understanding of feeding distillers grains to cattle. We believe distillers grains, which are produced by ethanol plants, give Nebraska cattle producers a tremendous advantage in the marketplace, so the more we know the better.”

Some of the key results for feedlot cattle include:

Drying distillers grains increases production cost, greenhouse gas emissions and does not have as positive an impact on cattle performance compared to using wet distillers grains. Modified distillers grains, meanwhile, is intermediate to wet and dry distillers grains. Understanding this has huge implications for Nebraska as Nebraska cattle producers can utilize wet distillers grains due to the proximity of corn, cattle and ethanol plants. “The research provided excellent results on comparing these types of distillers grains,” said Galen Erickson, a beef feedlot specialist with the University of Nebraska.

A rumen degradable sulfur concept was established and better explains hydrogen sulfide production, which can cause the polio observed with high sulfur diets from distillers grains feeding. “Based on metabolism work on sulfur funded through the research initiative, we have

degradabilities for different distillers grains, and hydrogen sulfide production in different feedlot diets containing distillers," said Erickson. "Likewise, we have recommendations on polio incidence as dietary sulfur and rumen degradable sulfur increase in feedlot diets."

Some of the key results for cattle on forage include:

The energy value of distillers grains in forage based-diets was relatively unknown and a major need by the industry. "Thanks to research conducted through the initiative, this is now known and is well established," said Aaron Stalker, a beef range specialist with the university. The comparison was also made to other major energy supplements in forage diets, such as corn.

Research also found that replacing nitrogen fertilizer by supplementing distillers grains to grazing cattle will have major implications and has been effective in intensely grazed pastures. "Plus, supplemented cattle have greater removal of nitrogen, from supplement compared to fertilizer, and perform better," Terry Klopfenstein, professor of animal science added.

While many important strides were made over the last three years, the Nebraska Corn Board recognizes that additional research needs remain when it comes to distillers grains.

"Ethanol production technology continues to advance," Brunkhorst said.

For example, some ethanol plants are extracting corn oil for other uses and that changes the distillers grains. "We need to understand that and devote resources to additional research," Brunkhorst said, "but we have limitations simply because our budget is limited by what is available via the corn checkoff, which is the lowest of all leading corn states."