Meeting the Nutritional Needs of Swine

with Dried Distillers Grains and Next Generation Feed Products

Background on DDGS

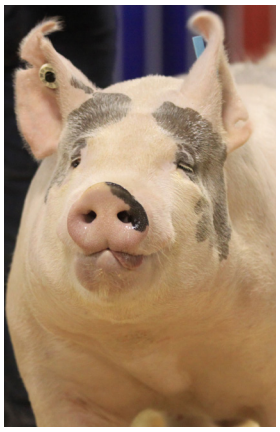
Distillers grains (DGs) often marketed as dried distillers grains with solubles (DDGS) are a co-product of the ethanol production process and an important source of energy and nutrients that continues to be produced in large quantities by the dry-grind fuel ethanol industry. They are rich in the protein, fat, minerals, yeast, and vitamins that animals need, making them a very popular feed ingredient for cattle, swine and poultry alike.

These distillers grains are widely used as feed for livestock and are marketed as DDGS, modified distillers grains with solubles (MDGS), wet distillers grains with solubles (WDGS), or condensed distillers solubles (CDS or corn syrup). Approximately 40 million metric tons of DDGS are produced annually. Pork producers recognize the product as an economically beneficial and nutritionally valuable source of protein and energy.

Swine & Distillers Grains

There are multiple advantages to feeding distillers grains. Drying them increases shelf life, allowing DDGs to be transported longer distances. Distillers grains can also be sold wet to local feeders. While the shelf life is not as long, the nutritional value is maintained and these wet distillers grains are generally more economical due to savings on drying costs. In addition to these benefits, these feed products also aid in production efficiency.

As improvements in operating efficiency of biorefinery ethanol plants occur, new products and innovations are continuously being developed. There are several new corn fractionation technologies being deployed in dry mills in the US. These technologies create value by separating out the various components of corn to allow improved utilization of the subsequent product streams. By separating corn into its most valuable components, there is opportunity for the nutritional needs of individual animal species to be better met and the subsequent protein and oil streams to have improved utilization. While corn and the current distillers grain products are advantageous when fed in combination, and will continue to be a great choice, swine at different stages of growth may further benefit from specifically fractionated feed products that have the ability to provide nutrients at more optimal levels than products currently produced. Fractionation allows ideal rations to be developed for swine in life stages.



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Where the Industry is Headed

Research has found that DDGS can be easily incorporated into swine grow-finish diets. "We use DDGS at a 20% inclusion rate in our grower and finishing diets in our hog operation. We have gone up to 30% inclusion rates if the economics allow. DDGS are a great source of protein and our hogs grow extremely well on diets that include DDGS.," says Iowa pork and corn farmer Bob Hemesath. DDGS are a cost-effective alternative feed ingredient and have become the most economical choice among alternative feed ingredients.

High protein DDGS contain 40-50% protein and possess higher metabolic energy than in DDGS. However, it is important to note that crude protein is a poor measure of amino acid concentration and digestibility. Fortunately, the deficiencies in lysine, threonine and tryptophan can be easily compensated with adequate amounts of crystalline amino acids in the diet. With ongoing research and feeding trials, resources and materials for producers and nutritionists are being developed. In particular, further opportunities for swine include developments in providing the correct level of protein, the utilization of next generation fibrous feed products, new research into the benefits of syrup and yeast from distillers grains, and specialized feed targeted to specific growth stage, an example of precision farming coming to the swine industry.

It is important to note that while some ethanol plants may invest in the biorefinery technology and produce these new products, others may not, which presents an opportunity for cattlemen to continue using the traditional DDGS products available to them but also explore new options.

While there is much more to come on next generation feed products, it is important to remember the value of current distillers grains products as well as corn grain. Any new products will require ongoing research and feeding trials to determine cattle response and performance and communication within the swine industry to help producers make the choices that best serve their bottom line. For these reasons, the corn, ethanol and animal agricultural industries are co-dependent upon one another for their success and mutual prosperity. The National Corn Growers Association (NCGA) and its affiliates are proud to play an integral role with two important industries that impact the health of rural America.

References

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