



Validating Net Energy of Wheat DDGS

With feed prices hitting record levels over the past 12 months, pork producers have been taking a hard look at how to best utilize novel feed ingredients and co-products from the grains industry. As pork producers utilize more co-products, detailed knowledge is required related to the net energy (NE) value and amino acid content of these co-products to ensure one can attain predictable growth and carcass composition and effectively reduce feed costs.

Over the past five years the availability of wheat DDGS has increased substantially throughout the Prairie Provinces. Current recommendations for feeding wheat DDGS include utilizing a step-up inclusion strategy in nursery diets, allowing pigs to adapt to the flavour and fibre content. In order to attain proper pig performance feeding wheat DDGS should be restricted to 15% and 30% of nursery and finishing diets, respectively. Due to the moderate level of unsaturated fatty acids and relative high fibre content in wheat DDGS, a partial removal strategy must be incorporated 3-4 weeks prior to slaughter.

For producers to realize the potential for large feed cost savings and profit associated with high dietary inclusions of wheat DDGS in grower-finisher diets, a project lead by Dr. Eduardo Beltranena (Alberta Agriculture & Food), and funded through Swine Innovation Porc, set out to empirically validate the NE value of wheat DDGS under commercial pig growing conditions.

The project followed 1,056 pigs over 5 phases fed 6 different feeding programs providing assumed NE values for wheat DDGS of 1.5, 1.7, 1.9, 2.1 and 2.3 Mcal NE/kg. Increasing the assumed value of wheat DDGS NE had no effect on weight gain for any growth phase (except day 0-20) and overall, average days on trial and the percentage of pigs shipped to slaughter during the last four weeks. However, feed disappearance for any growth phase and for the overall trial generally increased and feed efficiency decreased as assumed wheat DDGS NE increased from 1.7 to 2.1 Mcal/kg.

By using the 2.1 Mcal/kg NE value for wheat DDGS, compared with the 1.7 Mcal/kg value, average feed cost could be reduced by \$28.5 mt. This would translate into a reduction in the cost/kg gain of \$0.04 and an increase in margin over feed cost of \$6.00 per market hog.

Benefit to the Industry

Based on overall feed disappearance and feed efficiency responses, NE of wheat DDGS was estimated at 2.1 and 2.15 Mcal/kg respectively. Having validated the NE value for wheat DDGS provides greater confidence in diet formulation under commercial pig production conditions, providing a greater opportunity for feed cost savings and reducing nutrient excretion.

Feeding Wheat DDGS to Growing-Finishing Pigs

<http://www.prairieswine.com/feeding-wheat-ddgs-to-growing-finishing-pigs/>

Energy Value of Wheat DDGS

<http://www.prairieswine.com/energy-value-of-wheat-distillers-grains-with-solubles-for-growing-pigs-and-adult-sows/>

Energy and Nutrient Digestibilities in wheat DDGS fed to growing pigs

<http://www.prairieswine.com/energy-and-nutrient-digestibilities-in-wheat-dried-distillers%E2%80%99-grains-with-solubles-fed-to-growing-pigs/>



Conseil canadien du porc

Swine innovation Porc is a corporation of the Canadian Pork Council



Agriculture and Agri-Food Canada / Agriculture et Agroalimentaire Canada

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