Assessment of protein quality in a corn co-product based on growth of young pigs.


Abstract. # 295

Increased ingredient prices have re-invigorated interest in assessment of alternative co-products from ethanol production for use in pig nutrition. Mechanical fractionation of corn for ethanol production generates a co-product called Hi-Pro Meal (HPM). With 50% protein and 2.5% fat, HPM is an attractive alternative to soybean meal (SBM) in swine diets.

Methods

Crossbred pigs weaned at 3 wk were fed standard UW Starter and Grower diets until ~ 8 to 10 kg. Pigs fed the Ctl diet had higher gain and improved feed efficiency compared with pigs fed HPM diets. Additional Lys (+Lys, Trp+Lys) suppressed growth. Additions of Trp, Thr and Met (++AA) improved gain and feed efficiency.

Conclusions

Increased ingredient prices have re-kindled interest in assessment of alternative co-products from ethanol production for use in pig nutrition. Mechanical fractionation of corn for ethanol production generates a co-product called Hi-Pro Meal (HPM). With 50% protein and 2.5% fat, HPM is an attractive alternative to soybean meal (SBM) in swine diets.

Experiments

Experiment 1

Pigs fed the Ctl diet had higher gain and improved feed efficiency compared with pigs fed HPM diets. Additional Lys (+Lys, Trp+Lys) suppressed growth. Additions of Trp, Thr and Met (++AA) improved gain and feed efficiency.

Experiment 2

Pigs fed the Ctl diet had higher gain and improved feed efficiency compared with pigs fed HPM diets. Additional Lys (+Lys, Trp+Lys) suppressed growth. Additions of Trp, Thr and Met (++AA) improved gain and feed efficiency.

Acknowledgements

Appreciation is expressed to the Wisconsin Corn Growers Association for research funds and to Badger State Ethanol (Monroe, WI) for supplying HPM.

Introduction

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Objective

Utilize a pig growth assay to assess replacement of SBM by HPM in swine diets.

SBM:HPM AA Ratio

Amino Acids

Arg His Ile Leu Lys TSA TAA Thr Trp Val

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