Growth performance of nursery pigs fed diets containing increasing levels of high-protein corn distillers dried grains (HP-DDG)

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Introduction

- New technologies to improve production efficiency and generate novel co-products
  - High protein DDG

- Espinosa et al. (2018) suggested greater amino acid and energy digestibility in HP-DDG than DDGS

- Potential use in nursery pig diets?
Objectives

To determine the optimal dietary inclusion rate of a high protein distillers dried grains source in phase 2 and 3 nursery diets based on pig growth performance
Materials and Methods

• Mixed sex pigs (n = 360; Body weight = 6.79 ± 0.02 kg)
• Randomized complete block design
  • 40 pens, 9 pigs/pen, 10 pens/trt
  • Four dietary treatments (0, 10, 20, 30% HP-DDG)
• Diets contained the same ME and SID Lys, Met, Thr, Trp content

<table>
<thead>
<tr>
<th>Phase 1 (d 0-7)</th>
<th>Phase 2 (d 7-21)</th>
<th>Phase 3 (d 21-42)</th>
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<td>Common diet</td>
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<tr>
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Results

- Linear reduction in ADG, ADFI, and G:F
- Possibly due to branched-chain amino acid (BCAA) antagonism
Conclusions

Increasing dietary levels of HP-DDG up to 30% caused a linear decrease in ADG, ADFI, and G:F, which is likely due to excess dietary Leu reducing Val and Ile utilization.