

Effects of feeding diets containing spray dried corn condensed distillers solubles (CDS) and associated fractions on growth performance of early-weaned pigs. J. Knott*, G. Shurson, M. Hathaway, and L. Johnston, *University of Minnesota*.

Growth performance trials were conducted to determine the effectiveness of corn condensed distiller's solubles (CDS) by-products as a potential replacement for carbadox and porcine plasma in phase 1 diets. Trial 1 utilized 560 barrows (5.06 kg) for a 6-wk feeding period and 441 barrows and gilts (6.19 kg) were fed for 5-wks in Trial 2. Dietary treatments for both trials were: negative control (NC), NC + 15% distiller's solubles (DS), NC + 7.5% yeast cream (YC), NC + 15% residual solubles (RS), NC + 55 ppm carbadox (AB), NC + 6% porcine plasma (PP), and NC + AB + PP (PC). Experimental diets were fed for the first 10-d post weaning (phase 1). Common phase 2 diets were fed for 11-d, and phase 3 diets were fed for the remaining 21-d in Trial 1 and 14-d in Trial 2, respectively. In trial 1, pigs fed the PC diet had greater ADG ($P < 0.05$) during phase 1 compared to pigs fed NC, DS, YC, RS, and AB diets, but ADG was not affected during phase 2 or 3, or overall. Pigs fed DS and RS diets tended to have a greater relative increase in ADG ($P = 0.09$) during the subsequent phases of growth compared to pigs fed the other diets. Diet had no effect on ADFI and G:F for phase 1, 2, or 3, or overall, or on relative changes in ADFI and G:F during phase 2 and 3. In trial 2, overall ADG was not affected by treatment, but pigs fed the PP and PC diets had higher ADG ($P < 0.05$) and ADFI ($P < 0.05$) during phase 1. Pigs fed PC had higher ADFI ($P < 0.05$) for the overall 5-wk feeding period than pigs fed NC, DS, YC, and RS diets. Pigs fed PP and PC had lower relative change in ADG during phase 2 than pigs fed the other diets, but pigs fed NC had a lower relative change in ADG ($P < 0.05$) during phase 3 compared to pigs fed PP. Relative change of ADFI and G:F was not affected by diet in phase 2 and 3. These results suggest that feeding the NC diet or diets containing DS, YC, and RS fractions provides similar growth performance to pigs fed diets containing carbadox, but lower ADG and ADFI compared to pigs fed diets containing porcine plasma. Feeding diets containing DS and RS during phase 1 may improve subsequent growth.

Key Words: Distiller's solubles, Early-weaned pigs, Growth

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