

Effects of DDGS in growth performance and carcass characteristics of growing-finishing pigs

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The objective of this study was to evaluate effects of DDGS sources differing in quality to growing-finishing pigs on growth performance and carcass characteristics. Pigs ($n = 448$; $BW = 62.7 \pm 0.11$ kg) were fed one of 4 experimental diets (14 pens/treatment; 8 pigs/pen) using a 2-phase feeding program to a final BW of 115.8 ± 0.23 kg. Diets consisted of a corn-soybean meal diet (CON), and diets containing 20% DDGS from a source with high CP and digestible Lys (DLys) content (29.5 and 0.68%, respectively; HDDGS), 20% DDGS from a mid range CP and DLys source (28.6 and 0.60%, respectively; MDDGS), and 20% DDGS from a source with low CP and DLys (27.6 and 0.52 %, respectively; LDDGS). Diets were formulated on a digestible AA basis containing equal levels of DLys achieved by adjusting soybean meal inclusion. All diets contained 0.15% L-lys HCl. Diets were formulated with NRC (1998) AA digestibility values for corn and soybean meal, and source specific DDGS AA digestibility values obtained in a previous study. Overall ADG was decreased for pigs fed LDDGS (0.96 kg/d; $P < 0.05$) compared to those fed the control diet (1.00 kg/d). However, ADG of HDDGS and MDDGS-fed pigs (both 0.98 kg/d) were not different from CON. Pigs fed HDDGS and LDDGS (2.83 and 2.84 kg/d, respectively, $P < 0.05$) had lower ADFI than CON (2.98 kg/d) but not MDDGS (2.90 kg/d). Overall G:F was higher for HDDGS than CON, but there were no differences among the other treatments. Water disappearance and water:feed ratio were measured in 6 pens per treatment and did not differ among treatments. There were no differences in final BW among dietary treatments, but dressing % for HDDGS and MDDGS (74.9 and 74.8%, respectively) was reduced ($P < 0.05$) compared to CON (75.5%), but not for LDDGS (75.4%). Last rib backfat depth was reduced ($P < 0.05$) for pigs fed HDDGS compared to CON but there were no differences in % carcass lean among dietary treatments. These results suggest that DDGS sources of lower CP and DLys may reduce pig performance, while higher quality DDGS sources can support performance similar to a corn-soybean meal diet. Feeding diets containing 20% DDGS from some sources may also reduce carcass dressing percentage but has no effect on % carcass lean.

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