

## Effects of co-products from the ethanol industry on pig performance and carcass composition

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An experiment was conducted to investigate pig performance and carcass composition of pigs fed diets based on distillers dried grains with solubles (DDGS), high-protein distillers dried grains (HP DDG), and corn germ. Eighty-four pigs (initial BW: 22 kg) were allotted to 7 treatments with 6 replicates per treatment and 2 pigs per pen. Diets were fed for 114 d in a 3-phase sequence. The control diet sequence was based on corn and soybean meal. Two diet sequences were formulated using 10 or 20% DDGS in each phase. Two additional diet sequences contained HP DDG in amounts sufficient to substitute 50 or 100% of the soybean meal used in the control sequence (20 and 40%, 15 and 30%, and 10 and 20% HP DDG in phase 1, 2, and 3, respectively). The last 2 diet sequences contained 5 or 10% corn germ in the diets fed in each phase. Results of the experiment showed that for the entire experiment, ADG, ADFI, G:F, and final BW were not affected by the inclusion of DDGS or HP DDG in the diet. However, final BW increased (linear,  $P < 0.05$ ) and ADG tended to increase (linear,  $P = 0.06$ ) as corn germ was included in the diet. Hot carcass weight (HCW), dressing percentage, and carcass composition were not influenced by the addition of DDGS to the diets. There was no effect of HP DDG on HCW, dressing percentage, lean meat percent, and 10<sup>th</sup> rib backfat, but LM area and LM depth were reduced (linear,  $P < 0.05$ ) as HP DDG was added to the diet. Hot carcass weight, dressing percent, LM area, and LM depth was not influenced by the inclusion of corn germ in the diets, but there was an increase in lean meat percent and a decrease in 10<sup>th</sup> rib backfat as corn germ was included in the diets (quadratic,  $P < 0.05$ ).

In conclusion, DDGS and corn germ do not negatively affect pig performance or carcass composition if included in diets fed to growing-finishing pigs in amounts of up to 20 and 10%, respectively. Also, HP DDG does not affect pig performance, but may reduce LM area and LM depth if substituting all the soybean meal in the diets.

Key words: Corn germ, DDGS, High-protein DDG