

**Effects of adding saturated fat to diets with sorghum-based distillers dried grains with solubles on growth performance and carcass characteristics in finishing pigs.**

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A total of 112 barrows (avg BW of 72 kg) was used in a 65-d growth assay to determine the effects of adding a source of saturated fat (beef tallow) into diets with sorghum-based distillers dried grains with solubles (DDGS). The pigs were sorted by ancestry and blocked by BW with seven pigs/pen and four pens/treatment. Treatments were a corn-soybean meal-based control and diets having 40% DDGS (US Energy Partners, Russell, KS) with none, 2.5, and 5% added tallow. Feed and water were consumed on an ad libitum basis until the pigs were slaughtered (avg BW of 130 kg) to allow collection of carcass data and jowl samples. Fatty acid composition of the jowl samples was used to calculate iodine value (IV) as an indicator of carcass firmness. The corn-soy control supported greater ADG ( $P < 0.03$ ) and ADFI ( $P < 0.001$ ) with no difference in G:F ( $P > 0.32$ ) compared to the DDGS treatments. Increasing fat additions from none to 5% in diets with DDGS did not affect ADG ( $P > 0.69$ ) but improved G:F (linear effect,  $P < 0.02$ ) by 10%. Hot carcass weight (linear increase,  $P < 0.05$ ), dressing percentage (linear increase,  $P < 0.06$ ), and last rib backfat thickness (linear decrease,  $P < 0.04$ ) responded positively as fat addition to the diets was increased from none to 5%. However, changes in IV suggested deposition of softer fat in pigs fed DDGS ( $P < 0.001$ ) even when saturated fat was added to the diet. For the control, DDGS + no tallow, DDGS + 2.5% tallow, and DDGS + 5% tallow, ADG was 961, 885, 877, and 894 g/d, ADFI was 3.3, 3.2, 2.9, and 2.9 kg/d, G:F was 291, 277, 302, and 308 g/kg, hot carcass weight was 93, 90, 91, and 92 kg, dressing percentage was 71, 69, 69, and 71%, last rib backfat thickness was 19, 20, 18, and 18 mm, and IV was 68, 72, 73, and 74, respectively. Adding beef tallow to diets with DDGS improved efficiency of growth and several carcass measurements but resulted in less saturated carcass fat.

**Key Words:** Distillers Dried Grains, Iodine Value, Pig