

ANIMAL SCIENCE

Title: Corn distillers dried grains (DDGS) for growing-finishing swine – NPB #06-142

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Scientific Abstract: Two-hundred and forty pigs growing-finishing pigs were used to evaluate the feeding value of distillers dried grains with solubles (DDGS). Treatments consisted of 0, 5, 10 and 15% dietary DDGS inclusion. Treatments did not affect average daily gain (ADG), average daily feed intake (ADFI) or gain:feed (G:F) during the grower 1 period ($P > 0.05$). During the grower 2 period ADG and ADFI linearly decreased as DDGS increased ($P < 0.05$). No differences among treatments were detected throughout the feeding phase finisher 1 for ADG, ADFI, and G:F ($P > 0.05$). During the finisher 2 feeding phase, there was a linear reduction in ADG and ADFI in response to dietary DDGS inclusion ($P = 0.01$). Overall, linear reductions in ADG, ADFI and G:F were recorded as dietary DDGS increased ($P < 0.05$). Backfat and longissimus muscle area decreased as dietary DDGS concentration increased ($P < 0.05$). Overall, growth performance was reduced as dietary DDGS inclusion increased from 0 to 15%. The reduction in performance may have been partially explained or exacerbated by the elevated fiber concentration detected in the source of DDGS used in this study. Live weight and hot carcass weight decreased as dietary DDGS increased ($P < 0.05$). Dressing percentage did not differ among treatments ($P = 0.72$). After 10 d of retail display, no differences were observed among treatments for color or color change ($P > 0.05$). No differences in shear force were observed ($P = 0.34$). Total unsaturated fatty acids increased and total saturated fatty acids decreased ($P < 0.05$) as dietary DDGS increased. Treatments did not affect sensory characteristics ($P > 0.05$). The results of this investigation suggest that dietary DDGS inclusion altered fatty acid profile of the backfat of pigs by reducing total saturated fatty acid and increasing total unsaturated fatty acid concentration. Increasing concentration of dietary DDGS did not affect color, chemical composition or sensory characteristics of the LM.

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