

PORK QUALITY

Title: Determining Pork Fat Quality as Measured by Three Methods with an Industry Standard Marketing Plan for Pigs Fed 20% DDGS – **NPB #12-045**

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Scientific Abstract

An experiment was performed to evaluate the effects of dried distiller's grain with solubles (DDGS) and marketing cuts in a commercial swine facility on growth performance, fat quality and the relationship between iodine values determined by three methods in two fat depots. Pen (n=40) was the experimental unit with 20 replications per treatment and 22 pigs per pen. Pigs were randomly allotted to 1 of 2 dietary treatments in a 2 x 3 factorial arrangement of treatments with 2 levels of DDGS (0 and 20%) and chosen for 1 of 3 marketing cuts. The first, second and third cuts removed 4, 8 and 12 head from each pen, respectively. Carcasses were sampled for fat tissue at the anterior tip of the jowl and posterior to the sternum on the belly edge 1 day postmortem. The inclusion of 20% DDGS in the diet did not affect growth performance. Marketing cut significantly ($P<0.0001$) affected final BW, ADG, ADGI and G:F. Total SFA ($P<0.0001$) and MUFA ($P<0.0001$) concentrations were lower in belly and jowl fat from control diet hogs. Total PUFA ($P<0.0001$) and PUFA:SFA ($P<0.0001$) increased with 20% DDGS in the diet in belly and jowl fat. Inclusion of DDGS significantly increased iodine value (IV) in belly and jowl fat regardless of method of determination. Belly fat had significantly ($P<0.0001$) lower IV compared to jowl fat for two methods (titration and GC) suggesting pigs have varied degrees of physiological maturity at specific fat depots during the finishing phase. These results suggest that feeding 20% DDGS increases IV, but does not slow growth performance and time of marketing impacts growth and IV of pork lipid tissue in the jowl and belly.

These research results were submitted in fulfillment of checkoff-funded research projects. This report is published directly as submitted by the project's principal investigator. This report has not been peer-reviewed.

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