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Overview

In recent years, feeding dried distillers grains with solubles (DDGS) to pigs has enabled pork producers to save money. DDGS serves as a partial replacement for other more expensive ingredients such as corn, soybean meal, and inorganic phosphorus and is often valued at 80 to 90% the price of corn.

Effects of feeding DDGS and Pork Fat Quality

Body fat in the pig mimics the fat composition in the diet. When high levels of DDGS are included in grower-finisher diets, backfat and belly firmness is reduced. Belly firmness is typically measured by draping a belly, skin-side down, on a stainless-steel bar, and the distance between ends is recorded. The shorter the distance, the less firm the belly (Figure 1). Conversely, a longer distance indicates



Figure 2 Belly from pig fed 30% DDGS

a more firm belly (Figure 2). When increasing levels of DDGS are included in the diet, pork fat iodine value (IV) is increased. Iodine Value is a measure of the proportion of unsaturated fatty acids in pork fat. A high IV value indicates high levels of unsaturated fatty acids and is soft compared to low IV values that indicate a firmer fat.

What causes soft pork fat?

The main cause of softer pork fat when feeding DDGS is its high (10%) corn oil content, and corn oil contains approximately 60% is linoleic acid. This fatty acid is unsaturated. Unsaturated fatty acids have a lower melting point, which means they are softer compared to saturated fatty acids.

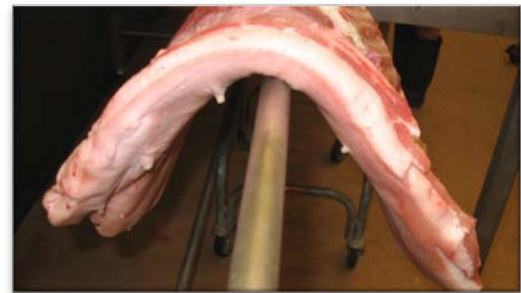


Figure 1 Belly from pig fed corn-soy diet

Why is soft pork fat a concern?

Soft pork fat may have a negative impact on carcass handling and fabrication, processing yields, product attractiveness, and acceptability in some export markets. Soft pork fat may also cause challenges in bacon slicing and processing and it is resulting in some pork packer/processors setting limits for accepting market hogs from producers based on carcass IV. However, the current suggested IV standard of 70 for back fat is being questioned and is not universally accepted across the U.S. pork industry.

How can we prevent soft pork fat?

A producer's ability to meet pork fat quality standards depends on the level and length of time DDGS is fed. University of Minnesota research has shown that feeding grower-finisher diets containing 30% DDGS and withdrawing it 3 weeks prior to harvest will achieve acceptable pork fat quality. Other strategies include working with your nutritionist to formulate diets on an Iodine Value Product basis or adding CLA to the diet.