

Study: Distiller's grain safe for pigs, even with sulfur content

March 21 2012

University of Illinois research reports that swine producers can feed distiller's dried grain with solubles (DDGS) to their pigs without concern for sulfur content.

"When you buy DDGS, you don't have to be concerned about the level of sulfur it contains because there doesn't appear to be any impact on pig performance," said U of I [animal sciences](#) professor Hans Stein.

According to the researcher, DDGS, a co-product of the [ethanol industry](#), is used as a [feed ingredient](#) in diets fed to swine.

To maintain a stable pH in fermentation vats, [ethanol producers](#) use sulfuric acid, which results in a sulfur content in the DDGS that varies according to how much sulfuric acid was used. Until now, the effect of low levels of sulfur in the [diet](#) on growth performance in pigs fed DDGS had not been determined, he said.

"Sulfur is toxic to cattle. If there is 0.4 percent sulfur in the diet, [cattle](#) start getting sick," Stein said. "Because there hasn't been any work on sulfur toxicity with swine, we wanted to determine how sulfur affects palatability and performance in pigs."

In a recent study, Stein's research team compared a low-sulfur (0.3% sulfur) DDGS diet with a high-sulfur (0.9% sulfur) DDGS diet. The same DDGS was used in both groups. The researchers compared palatability and growth performance of the pigs fed the low-sulfur and

high-sulfur diets.

"We conducted four experiments: two with weanling pigs and two with growing-finishing pigs," said Stein. "In both weanling pigs and growing-finishing pigs, there was absolutely no difference between the two. The levels of sulfur we used in our experiments had no impact on palatability or pig growth performance."

Stein said that the results of this research would be useful to producers interested in incorporating DDGS into swine diets, but further research is needed to determine whether excess sulfur from a high-sulfur DDGS diet is deposited into swine tissues.

This research was published in the [Journal of Animal Science](#). Researchers included Hans Stein of the U of I, Beob Kim of Konkuk University in Seoul, South Korea, and Yan Zhang of the National Corn to Ethanol Research Center in Edwardsville, Ill. Funding was provided by the National Pork Board, Des Moines, Iowa.

Provided by University of Illinois at Urbana-Champaign

Citation: Study: Distiller's grain safe for pigs, even with sulfur content (2012, March 21) retrieved 25 April 2024 from <https://phys.org/news/2012-03-distiller-grain-safe-pigs-sulfur.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--