

Research proves new soybean meal sources are good fish meal alternatives

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Two new sources of soybean meal are capturing attention throughout the country. University of Illinois research indicates that fermented soybean meal and enzyme-treated soybean meal may replace fish meal in weanling pig diets.

"The price of fish meal has exploded and is causing producers to search for new options for weanling pig diets," said Hans H. Stein, U of I professor of animal sciences. "Pigs are traditionally fed diets containing relatively large amounts of animal proteins such as fish meal from weaning up to 40 pounds when they can digest traditional soybean meal."

The fermentation and enzyme treatment process helps remove some of the [antigens](#) found in traditional soybean meal and other compounds that are not easily digested by weanling pigs. Stein said these new sources of soybean meal may be the answer producers are looking for to keep costs down without sacrificing digestibility of important [amino acids](#).

"In our study, we measured the digestibility of amino acids in these two new sources of soybean meal in comparison to fish meal, casein and [soy protein](#) isolate," Stein said. "We observed that enzyme-treated soybean meal has even better digestibility of amino acids than conventional soybean meal. It appears the enzyme treatment increases digestibility. Fermented soybean meal has the same digestibility as standard soybean meal, so we now know that [fermentation](#) doesn't reduce digestibility."

Stein said both fermented and enzyme-treated soybean meal products are

readily available in the United States and are currently cheaper alternatives to fish meal.

"With the high cost of fish meal and concerns about its future availability, I believe these are two good options for weanling pig diets," Stein said. "They are comparable in digestibility to soy protein isolate, the gold standard protein source that is only used in human nutrition."

In the future, Stein and his team will conduct more research on fermented soybean meal and enzyme-treated soybean meal to look at the digestibility of energy and phosphorus. They also plan to conduct performance studies so they can fine-tune inclusion rates.

"Ileal digestibility of amino acids in conventional, fermented, and enzyme-treated soybean meal and in soy protein isolate, fish meal and casein fed to weanling pigs," was published in the *Journal of Animal Science*. Researchers include S.K. Cervantes-Pahm and Stein, both of the University of Illinois.

Provided by University of Illinois at Urbana-Champaign

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