

Study provides nutritional information on oilseed crop for use in pig diets

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Long considered a weed in North America, *Camelina sativa* is increasingly valued as an oilseed crop.

Researchers at the University of Illinois are now studying its [nutritional value](#) when used as part of weanling pigs' diets.

When oil is extracted from the [camelina](#) seeds, using either solvent extraction or expeller pressing, the oil is then used in fuel production. The defatted meal that is produced during this process is high in protein and may be fed to livestock, but there is very little knowledge about the nutritional value of camelina meal when fed to pigs, said Hans Stein, a U of I professor of animal sciences.

"Camelina seeds and expellers have been evaluated for use in poultry and dairy cattle diets, but to our knowledge, the nutritional values of these ingredients have not been studied in pigs," he said. "This lack of knowledge limits the use of camelina products in diets fed to pigs so we wanted to determine the digestibility of [amino acids](#) in these ingredients."

To determine amino acid digestibility values, Stein and his team fed growing pigs diets containing one of five different camelina products. They tested camelina seeds from two different sources as well as camelina expellers from three different sources. The camelina products were compared with each other and with canola meal.

The digestibility of crude protein and most amino acids in two sources of camelina expellers did not differ from that of canola meal whereas the third source had lower digestibility values. Digestibility values in both sources of camelina seeds were less than in canola meal.

Stein said that the variation in digestibility among the sources of camelina expellers might be due to genetic differences between the [seeds](#) or differences in the oil extraction procedures. "However, amino acid digestibility in two of the sources of camelina expellers was comparable to that of canola meal, which indicates that camelina expellers may be included in diets fed to [pigs](#)," he explained.

The camelina expellers studied were cold pressed and contained greater levels of trypsin inhibitors than canola meal. Amino acid digestibility in camelina products might be improved by heat treatment, provided that heat damage is avoided.

These findings will help producers and feed companies evaluate camelina expellers for possible inclusion in pig diets. Stein said that the next steps for research would be to determine the digestible and metabolizable energy content of camelina expellers and to conduct growth performance studies.

More information: "Amino acid digestibility in camelina products fed to growing pigs," was recently published in the *Canadian Journal of Animal Science*. It was co-authored with Ferdinando Almeida of U of I, John Htoo of Evonik Industries AG, and John Thomson of Evonik Degussa Corporation. The full paper is available at pubs.aic.ca/doi/full/10.4141/cjas2012-134

Provided by University of Illinois at Urbana-Champaign

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