

# Can Canola Affect Sow Lactation

**R**ecent research is showing canola meal can be a significant component of rations for sows.

A recent study at the University of Manitoba, led by Dr. Martin Nyachoti, into the effect of increasing dietary canola meal inclusion on lactation performance, milk composition, and nutrient digestibility of lactating sows has shown good results.

The aim was to determine the effects of increasing dietary canola meal in substitution for soybean meal in lactation sow diets.

In an abstract forwarded by the Canola Council of Canada detailed that “forty-five sows with an average parity of 1.8 (SD = 0.83) were randomly assigned to one of three dietary treatments consisting of a corn-based control diet and two diets with 15 per cent and 30 per cent canola meal formulated by replacing soybean meal with canola meal. Diets were formulated to be similar in standardized ideal digestible AA content and NE value and to meet or exceed nutrient recommendations for lactating sows.

“Sows were moved to farrowing on day-111 of gestation and fed the experimental diets until weaning on day-21. Sows were fed 3.0 kg/d from day-111 of gestation until parturition.

“After farrowing, feed was gradually increased through day-six after which the diets were offered on an ad libitum basis until weaning.

“Sows were weighed and backfat thickness measured on day-111 of gestation and also on day-0, seven, and 21 post farrowing... There were no dietary effects on lactation feed intake, sow bodyweight and backfat change, weaning to estrus interval, and milk fat, protein, lactose, and urea composition.

Brittany Dyck, our canola meal manager with the Canola Council said the recent research does suggest canola meal “helps sow raise successful litters.”

The positive aspect of the research is that it shows “very high levels of canola meal may be used as a replacement for soymeal,” said Dyck, adding by making sure the replacement sows are maintaining bodyweight, returning to estrus in the same time, and with “no difference in consumption of feed.”

Dyck said the new research is very encouraging in regards to hog producers “using canola meal in sow rations,” adding it is data the industry did not have previously.

Certainly in using canola meal feed formulations in terms of balancing energy and

digestible amino acids is important, added Dyck, who said it is possible with attention paid.

Using canola meal is intriguing as a protein feed source since there is a significant canola crushing industry on the Canadian Prairies.

Canola meal is a coproduct of canola processing and is approximately 36 per cent crude protein, with a high bypass protein value and amino acid profile well suited for milk production, and a lot of meal is available in the local region.

Research in dairy cattle may also be suggestive that canola meal is a good additive for milk production, although Dyck notes production of milk in sows has not been specifically studied. But, the data from other species is at least encouraging that it could increase supply.

While not directly related to pigs, research on the dairy cattle side of things shows canola meal can be part of a ration to produce milk.

At the recent Penn State Dairy Nutrition Workshop, Dr. Kenneth Kalscheur, a prominent dairy nutrition researcher at the U.S. Dairy Forage Research Center in Madison, Wisconsin, provided findings on the subject of “Canola Meal vs. Soybean Meal in Dairy Cow Diets”. The workshop provides training to feed industry professionals, and this year’s focus concentrated on amino acid and protein nutrition for lactation.

“Canola meal provides a cost-favorable source of essential amino acids,” said Dr. Kalscheur as he explained his research, which was part of a recent Canola Council release.

Kalscheur pointed out that the U.S. Dairy Forage Research Center, in conjunction with the University of Wisconsin, has been involved in researching the feeding of canola meal as a protein source for lactating dairy cows for quite some time. This research is part of the Canola Agri-Science Cluster, with funding provided by Agriculture and Agri-Food Canada, the Canola

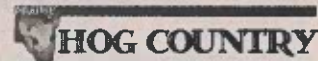
Council of Canada, Alberta Canola, SaskCanola and the Manitoba Canola Growers.

Many trials conducted with mid-lactation cows in the Wisconsin studies showed that substituting canola meal for soybean meal resulted in a 0.6 to 1.4 litre daily milk yield advantage. This is often accompanied by feed cost savings. Results from Dr. Kalscheur’s 2016 early lactation study showed an even greater milk increase in early lactation cows – an average of 4.45 litres more milk per day.

“The researcher noted that the efficiency of nutrient conversion to milk is improved with the inclusion of canola meal in diets for dairy cows. This often results in lower milk urea nitrogen. He emphasized that the superior amino acid balance in canola meal supports its efficient utilization,” detailed the release.

Because of its high protein content, canola meal is often used as a protein supplement for animal feeds, including dairy rations. Visit [www.canolacouncil.org](http://www.canolacouncil.org) to learn more.

— By Calvin Daniels



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**Julian Kleinsasser**  
of Austin, MB

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