

# Digestible and Net Energy Content of Field Peas in Gestating Sows

R. Premkumar, A. Samaraweera, A.D. Beaulieu and  
P. Leterme

Prairie Swine Centre Inc., 2105 8<sup>th</sup> Street East, Saskatoon, SK S7H 5N9;  
*Email:* pascal.leterme@usask.ca

The digestible (DE) and net energy (NE) contents of feed ingredients, such as field peas, are higher in sows than in growing pigs, owing to the better capacity of sows to use fermentable carbohydrates. Therefore, specific DE and NE contents are required for sows. However, it is unclear whether the better digestive capacity also reduces the variability in DE and NE contents of peas grown in different conditions. Therefore, pea samples grown in different parts of Western Canada were collected in 2006 and their DE and NE contents were determined in gestating sows.

The crude protein, starch and NDF contents ranged, respectively, from 21 to 26 %, 42 to 50 % and 12 to 18% of the dry matter. The DE and NE contents of 15 samples were measured in gestating sows. A basal diet composed of barley, soybean meal, minerals and Celite (source of insoluble ash, used as a marker) was formulated. Fifteen diets containing 40% peas, at the expense of barley and soybean meal, were then prepared. A total of 96 gestating sows were fed one of the 15 diets (6/diet) and a faecal sample was collected by grab sampling for 3 consecutive days after a 10 d-adaptation period. The average DE and NE content was, respectively, 3,699 kcal and 2,585 kcal/kg DM. The DE contents ranged from 3,440 to 4,052 kcal/kg DM and the NE from 2,402 to 2,835 kcal/kg DM. The range of variation was lower than that observed in growing pigs. No relationship ( $P > 0.05$ ) could be established between the energy contents and the pea composition, namely their dietary fibre content.

**Implications:** The DE and NE contents of field peas collected on-farm are variable in gestating sows but the variability is not explained by the composition of the peas.