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**NONRUMINANT NUTRITION:  
NUTRIENT DIGESTIBILITY OF  
INGREDIENTS FOR  
MONOGASTRIC DIETS**

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**0447 Digestible, metabolizable, and net energy in diets containing 0, 15, or 30% wheat bran fed to growing pigs.** N. W. Jaworski\*<sup>1</sup>, D. Liu<sup>2</sup>, D. Li<sup>3</sup>, and H. H. Stein<sup>1</sup>, <sup>1</sup>*University of Illinois at Urbana-Champaign, Urbana*, <sup>2</sup>*State Key Lab of Animal Nutrition, China Agricultural University, Beijing*, <sup>3</sup>*Ministry of Agriculture Feed Industry Centre, Beijing, China*.

An experiment was conducted to determine the effects of including 0, 15, or 30% wheat bran in a corn-soybean meal based diet fed to growing pigs. Eighteen barrows (initial BW: 54.4 ± 4.3 kg) were individually housed in metabolism cages and randomly allotted to 1 of 3 dietary treatments in a completely randomized design. The experiment had 3 periods and 6 replicate pigs per diet. The control diet contained corn, soybean meal, and no wheat bran, and 2 additional diets were formulated by mixing 15 or 30% wheat bran with 85 or 70% of the control diet, respectively. Each period lasted 15 d. During the initial 7 d, pigs were adapted to their experimental diets and housed in metabolism crates in an environmentally controlled room and fed 573 kcal/kg BW<sup>0.6</sup> per d. On d 8, metabolism crates with the pigs were moved into open-circuit respiration chambers for measurement of O<sub>2</sub> consumption and CO<sub>2</sub> and CH<sub>4</sub> production. The feeding level was the same as in the adaptation period and feces and urine were also collected during this period. On d 13 and 14, pigs were fed 225 kcal/kg BW<sup>0.6</sup> per day, and pigs were then fasted for 24 h to obtain fasting heat production. The apparent total tract digestibility of DM, GE, crude fiber, ADF, and NDF linearly decreased ( $P < 0.01$ ) as wheat bran inclusion increased in the diets. The DE (3454, 3257, and 3161 kcal/kg), ME (3400, 3209, and 3091 kcal/kg), and NE (1808, 1575, and 1458 kcal/kg) of diets linearly decreased ( $P < 0.01$ ) as wheat bran inclusion increased. The daily O<sub>2</sub> consumption and CO<sub>2</sub> and CH<sub>4</sub> production by pigs fed increasing concentrations of wheat bran linearly decreased ( $P < 0.01$ ). However, there was no effect of wheat bran on daily heat production per kg BW<sup>0.6</sup>. In conclusion, increasing inclusion of wheat bran decreased DE, ME, and NE in diets, but did not change daily heat production if expressed as kg BW<sup>0.6</sup>.

**Key Words:** dietary fiber, energy concentration, heat production