Effect of Feed Presentation on the Feeding Behaviour of Grower/Finisher Pigs

Kimberly A.M. MacDonald[1,2] and Harold W. Gonyou[1]

[1]Prairie Swine Centre Inc., PO Box 21057, 2105-8th St. E, Saskatoon, SK S7N 5N9, [2]Department of Animal and Poultry Science, University of Saskatchewan, Saskatoon, SK S7N 5B5
Email: gonyou@sask.usask.ca

Recent research suggests the standard "five pigs per feeder space" no longer reflects the actual carrying capacity of modern feeder designs. The maximum number of pigs that can be fed from a single feeder space should be highly correlated with the eating speed of the animals.

In this, the first of two experiments, grower/finisher pigs were sorted into eight pens of 12 pigs each. Pens were then randomly assigned to one of four treatments. Treatments included: wet/dry mash (WM), dry mash (DM), wet/dry pellets (WP) or dry pellets (DP). Feed intake and pig weights were recorded. Video recordings were taken when pigs weighed 35 to 45 kg (small) and again when they weighed 90 to 100 kg (large) and used to determine total duration of feeder usage.

Pigs fed a DM diet spent more time occupying the feeder (106 min/pig/day) versus those fed a WM, WP or DP diet (68, 60 and 59 min/pig/day respectively; *P <0.01*). Apparent average daily feed intake was similar among treatment groups. In general, pigs fed wet/dry diets had better average daily gains versus those fed dry diets (901.4 vs. 830.4 g/day; *P <0.05*). Similarly, DM pigs gained significantly less than WM or WP pigs (792.2 vs. 903.2 and 899.6 g/day, respectively; *P <0.05*). DP fed pigs had an intermediate ADG (868.7 g/day). Mash fed pigs had poorer feed conversions as compared to the pigs fed pellets (33.5 vs. 37.2% efficiency; *P <0.05*). Large pigs spent less time at the feeder than small pigs (75 vs. 83 min/pig/day; *P =0.06).*

Implications
Results indicate that feed presentation had a strong influence on eating behaviour and affected productivity, which in turn may limit the number of pigs that can be fed from a single feeder space. Similarly, while pigs fed dry mash spend significantly more time at the feeder, this effect can be eliminated by the addition of water, as in a wet/dry feeding system.