

SELECTION FOR EFFICIENT LEAN GROWTH ON RESTRICTED FEEDING: 3. SOW PERFORMANCE

C.P. McPhee, N.H. Nguyen*, and L.J. Daniels**

Queensland Department of Primary Industries, Animal Research Institute, Yeerongpilly, Q4105, Australia.

*School of Veterinary Science and Animal Production, University of Queensland, Q4072, Australia.

**Queensland Department of Primary Industries, Research Station, Biloela, Q4715, Australia.

Two lines of 36 sows and 6 boars described by McPhee *et al.* (1999) were formed from sampling within litters of an outbred Large White population free of the halothane gene. These are being divergently selected for high and low growth rate on a restricted level of feeding over a 6 week period starting at 50 kg live weight.

This paper reports a preliminary comparison of sow littering performance between these two lines. The herd is farrowed in batches and these include 12 sows from each line. Lactating sows are fed *ad libitum* on 14 MJ DE, 0.55 g/MJ lysine diet, and feed intakes measured from 7 days to 35 days after farrowing. Piglets are cross-fostered among sows of the same line prior to 7 days of age. Data from the first to third selected generation were subject to REML analysis (Genstat 5, 1997) with line, batch and parity as fixed effects. Sow within line was the random effect for all traits except birth weight where piglet was an additional random effect. Number of piglets suckled was a covariate for sow food intake. In Table 1 are given the means fitted for each of the traits measured on the high and low line sows.

Table 1. Means of traits of the high and low selection line sows measured on *ad libitum* feeding.

Trait	High line	Low line	^a s.e.d
Pigs born alive	10.9	10.1	0.44
Pigs weaned	8.9	8.9	0.24
Birth weight (kg)	1.45	1.39	0.03
Food intake (kg/d)	5.92	6.00	0.21
Mating weight (kg)	191	193	3.9
Farrowing age (d)	654	644	13
Number of litters	188	150	

^aStandard error of difference

High line piglets were significantly heavier at birth than low line piglets. Otherwise, there were no differences between lines in any of the traits. The apparently higher number of piglets born alive in the high than the low line did not reach significance. These results show that food intake differences between the lines recorded by McPhee *et al.* (1999) for growers on *ad libitum* feeding were not carried through to sows during lactation.

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References

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