

Wean-finish performance and carcass composition of indoor and outdoor weaner pigs reared in conventional or deep-litter housing.

H.G. Payne¹ and J.R. Pluske²

¹Department of Agriculture – Australia, South Perth, WA 6151

²School of Veterinary and Biomedical Sciences, Murdoch University,
Murdoch, WA 6150

Contact: Hugh Payne, Department of Agriculture, Locked Bag No. 4, Bentley Delivery Centre, WA 6983.

Two experiments were conducted to examine the effects of pre- and post-weaning housing system on wean-finish performance and carcass composition of female pigs obtained at weaning from an indoor (IP) or outdoor (OP) production system of like health status and genetic composition, and reared in either conventional (C) or deep-litter (DL) housing. The experiments were of 2 x 2 factorial design and conducted similarly except that dietary antimicrobial products were omitted in Exp. 2. In Exp. 1, OP pigs grew faster than IP pigs from 0-47 d (467 v 416 g/d, P<0.001) but not from start to finish (744 v 740 g/d, P=0.60). DL pigs grew faster than C pigs over both stages (460 v 423 g/d, P=0.001 and 758 v 727 g/d, P<0.001). There were no significant treatment differences in P2 backfat thickness (mean 13.9 mm). In Exp. 2, growth was similar from 0-47 d (409 v 418 g/d, P=0.516), but IP pigs grew significantly faster than OP pigs overall (721 v 683 g/d, P<0.001). DL and C pigs grew similarly from 0-47 d (408 v 418 g/d, P=0.496), but DL pigs grew significantly faster than C pigs overall (718 v 686 g/d, P<0.001). OP and DL pigs had higher P2 backfat measurements than IP and C pigs, respectively (12.4 v 13.5 mm, P=0.046 and 12.3 v 13.6 mm, P=0.025). In both experiments, OP and DL pigs had significantly higher carcass weights (79.2 v 81.0 kg, P<0.001 (Exp.1) and 79.1 v 81.0 kg, P<0.001 (Exp.2)). Killing-out percentages (74.4 v 75.8 %, P<0.001 (Exp.1), and 74.4 v 76.0 %, P=0.007 (Exp.2)) were also higher for OP and DL pigs. Dual Energy X-ray Absorptiometry estimates of fat (7.33 v 4.61 kg, P=0.01), bone mineral content (6.06 v 5.64 kg, P<0.001), and bone density (0.905 v 0.834) g/cm², P<0.001) in half-carcasses were significantly higher for OP/DL pigs than for IP/C pigs.