

Determining the optimum space allowance for nursery pigs

► Jennifer Brown, Prairie Swine Centre

This study showed that the minimum space allowed for nursery pigs, as recommended in the *Code of Practice for the Care and Handling of Pigs* (2014), provides a reasonable balance between production costs and pig welfare.

Researchers showed that decreasing the space allowance for nursery pigs from the current Code requirement of $k = 0.0335$ by 20% ($k = 0.0265$), which is the maximum short-term decrease allowed, resulted in reductions in average daily gains on commercial farms. In addition, it was found that lower space allowances impacted animal behaviour in studies carried out on both commercial and research farms.

Why was this study done?

Space allowance has a significant economic impact on productivity and the total pig throughput possible on a farm, as well as on the behaviour and welfare of pigs. Therefore, researchers wanted to examine various space allowances in order to find an optimal balance between production costs and pig welfare.

What was done and what was the outcome?

This study examined six different space allowances for nursery pigs ranging from k values of 0.0230 to 0.0390 (equivalent to approximately 2.5 to 3.7 ft²/pig at 26 kg body weight) and was carried out in two phases.

In Phase I, which was carried out at a research barn, there was no measurable impact of space allowance on average daily gain (ADG). However, in Phase II, which was performed on two commercial barn sites, there was a clear effect of space allowance on ADG, where space allowances below $k = 0.0335$ resulted in reduced growth.

Both phases of the study showed similar changes in pig behaviours. At lower space allowances, sitting behaviour (associated with poor welfare) was increased, while lateral lying (associated with comfort) was decreased. In addition, as piglets aged there was a significant



Piglet pen during the nursery density trial.
Source: Prairie Swine Centre

reduction in overlying behaviour, and an increase in lateral lying. In nursery weeks 3 and 5, the fact that there was more overlying behaviour at lower space allowances compared to higher space allowances suggests that this was a space-saving behaviour used to cope with limited space. Ear and tail lesions also increased in week 5, indicating that the impact of space restriction is greater in the late nursery period than at weaning.

Collaborators

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