

Project Number & Title: A systematic review and meta-analysis on the influence of farrowing pens on piglet traits: 1A-117

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Aims and Objectives

The aim of this project was to conduct a systematic review into the effects of farrowing pens versus crates on piglet traits. A meta-analysis was then conducted on included studies to determine effects of housing type on farrowing house performance. The design features of the farrowing pen (i.e. confinement length, enrichment provision and pen size) were compared with farrowing crates to determine factors that enhance piglet performance in pen systems.

Key Findings

This has been the first systematic review and meta-analysis completed on the performance of farrowing crates versus pens.

- The overall quality of the publications was high with half of these obtaining a score of greater than 70%.
- Relative risk of piglet mortality was 16% greater in farrowing pens when compared with farrowing crates, indicating that farrowing pens do compromise post-natal piglet survival.
- Overall, the number of stillborn piglets was not affected by the type of farrowing accommodation. However, when enrichment was examined, stillborn piglets were less likely in farrowing pens that were not enriched when compared with crates.
- There was no effect of housing accommodation on the number of piglets born alive or weaned.

Application to Industry

Producers should anticipate an increase in mortality when piglets are reared by sows that are unconfined in currently available pen designs. This scientific finding re-enforces the industry belief that crates are successful at reducing pre-weaning piglet mortality.

The number of stillborn piglets however is reduced in farrowing pens when enrichment is not provided compared with farrowing crates. This indicates that the increased freedom of movement provided to sows in pens can reduce the risk of intra-partum piglet death.