



Sow Welfare and Piglet Mortality

Background

Farrowing crates have been used since the 1960's to improve space utilisation, to protect the stockperson and predominantly to prevent the crushing of piglets by the sow. There is increasing public concern that the restrictive nature of farrowing crates prevents the performance of natural behaviours of the pig such as nestbuilding prior to giving birth.

Method

Research at SAC has focussed on investigating the welfare of the sow in the farrowing crate around the time of giving birth and during the lactation period. We have done this by comparing the behaviour and physiological stress of sows housed in farrowing crates and loose farrowing pens. In addition we have compared these housing conditions in terms of piglet mortality, and examined piglet mortality over the lifetime of sows.

Farrowing crate



Farrowing pen



Results

- During the nestbuilding period, sows in farrowing crates (compared to pens) performed less nestbuilding (standing, using substrates) and showed increased physiological stress (plasma cortisol).
- Pre-weaning piglet mortality was higher in the loose farrowing pen but there were differences between the systems in the causes of mortality. Farrowing crates did reduce crushing, but sows showed a higher level of savaging piglets (killed by the sow) and piglets born dead.

	Crate	Pen
No. of sows	37	46
Crushed (%)	4.8	13.2
Savaged (%)	3.4	0.2
Born dead (%)	4.8	1.8
Total (%)	13.0	15.2

- Thirteen of the 46 sows kept in a pen were responsible for 74% of the crushed piglets indicating large individual differences between sows. By examining lifetime records of sows we have found that sows are consistent in levels of mortality, suggesting that this may be a stable characteristic.

Conclusions and Implications

- Space restriction in farrowing crates has a detrimental effect on sow welfare through interfering with nestbuilding behaviour
- This may lead to a greater incidence of stillborn piglets and aggressive responses of the sow towards her newborn piglets
- There are individual differences between sows in levels of piglet mortality and these appear to be consistent across the lifetime of the sow.
- Therefore we are now interested in whether there is a genetic basis to piglet mortality so that we could select for sows with lower piglet mortality better suited to loose farrowing systems.

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