



CRC for High Integrity Australian Pork

Mixing sows after weaning or mating

Pork CRC has supported research to better understand the factors contributing to the welfare and reproductive performance of sows housed in groups at weaning or 4-5 days after mating.

The results of these studies can be found on our web site under research – click on program 1 and reports and summaries will be found under sub program 1C. The more pertinent projects are:

1C-105: Effects of floor space on the welfare of group housed sows

1C-108: The sensitivity of sows to stressors throughout gestation

1C-111: Effects of group housing after weaning on sow welfare and sexual behaviour

1C-112: Literature Review on effects of group housing both post-weaning and post-insemination on sow productivity and welfare

The Bottom Line

Floor space is more important than group size on welfare and aggression after mixing and aggression can be reduced and welfare improved by providing barriers in pens so less aggressive sows can avoid their more aggressive counterparts, and at feeding by providing sows with shoulder or full length feeding stalls.

Success with group housing is associated with, space, feeding, experience and good management.

Group Size

In work conducted by Melbourne University group size (10, 30 and 80 sows/pen) was found to have little effect on aggression, stress physiology (assessed on plasma cortisol levels) or on reproduction of sows grouped 4-7 days after mating and floor fed in open pens.

Space

Immediately after mixing both aggression and stress physiology based on cortisol levels declines with increasing floor space but sows adapt within 7-10 days to mixing and reduced floor space. After this period there is no effect of floor space (between 1.4 and 3.0 m²) on aggression or cortisol levels.

In Pork CRC studies reproduction of sows housed in open pens and floor fed was not affected by floor space between 1.45 and 2.9 m² at mixing. The number of sows removed for non-reproductive reasons was similarly unaffected by floor space.

Recommendations

For sows mixed for the first time the research suggests that providing 2.4-3.0 m² floor space per sow in the first week after mixing and reducing floor space to 1.8-2.0 m² thereafter through to farrowing will reduce aggression and stress physiology immediately after mixing and support good reproductive performance.

For sows that have experienced group housing a floor space between 1.8 and 2.0 m² will optimise welfare and maximise reproduction.

Providing barriers (partitions) in pens will assist sows minimise aggressive interactions.

Provision of shoulder or full body stalls in pens for trough fed sows will help reduce aggression at feeding.

Feeding

Aggression especially in the first week after mixing is affected by sows sorting out their hierarchy and over feed.

To prevent less aggressive sows not getting adequate nutrition in this period plenty of feed needs to be available and for floor feeding situations producers have successfully offered sows 4 kg feed /d during this period.

If floor feeding - sows should be fed only once daily as this reduces aggression at different feeding periods and overall.

Mixing different parities

Research has shown that the performance and welfare (based on injury) of parity one sows is improved if they are housed with gilts during gestation rather than with older sows.

For further information contact

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