

Mixing of pregnant sows is stressful and affects development of piglets

Background

Since the ban of the tethered stall system for pregnant sows in the UK in 1999, pregnant sows must be group-housed. While this is seen as an improvement in sow welfare, there are still some concerns over the social stress that can occur following repeated mixing of pregnant sows. In addition, research in rodents and humans has indicated that stress during pregnancy may have long-term negative effects on the development of offspring.

Method

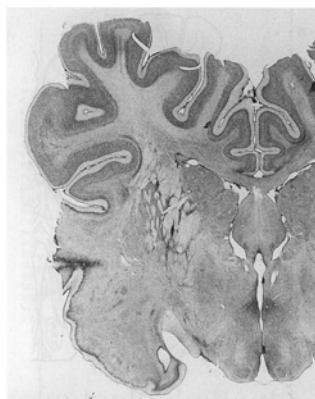
Research at SAC has addressed the issue of whether social stress associated with mixing during pregnancy has negative impacts on the development of piglets. Gilts were mixed during either their 2nd or 3rd trimester of pregnancy and their piglets' production, behavioural and brain development were examined.



Results

Production: Piglets from gilts mixed during pregnancy showed reduced weight gain post-weaning but had caught up by 7 weeks of age.

Brain development: Alterations in brain development indicative of higher stress reactivity and anxiety were found in piglets whose mothers had been mixed during pregnancy.



Behaviour: Piglets from gilts mixed in the 2nd trimester of pregnancy showed more persistent aggression post-weaning, and 12 months later when these piglets became gilts and farrowed themselves, they showed increased aggression towards their piglets.

Conclusion

Mixing during pregnancy is not only stressful for the gilts and sows themselves, but also has long-term detrimental consequences on piglet development. These effects were most apparent when mixing occurred in the 2nd trimester. Therefore mixing should be avoided if possible and particularly during the middle trimester of pregnancy.

For further information contact:

Dr Susan Jarvis, Sustainable Livestock Systems Group, SAC

Tel: 0131 535 3214

Fax: 0131 535 3121

Email: susan.jarvis@sac.ac.uk

Research partners: SAC, University of Edinburgh

SAC Reference Number: 521129

