

1C-113: Welfare and productivity of sows and litters in farrowing crate compared to lactation pen

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Aims and Objectives:

The present research, comprising two experiments, examined the effects, on the welfare of sows and their piglets, of loose housing duration lactation ('lactation pens') following temporary confinement in a farrowing crate from day 110 of gestation to day 3 of lactation.

Key Findings

The lactation pens increased both the interaction between sows and piglets and the maternal behaviour of sows based on the behavioural responsiveness of sows to recordings of piglet vocalisations. In one of the two experiments, piglets in the lactation pens displayed more play behaviour but less injurious or harmful behaviours, such as sucking and chewing other piglets.

There was evidence of increased skin injuries in both sows and piglets in the lactation pens. However, the skin injuries for both sows and piglets in both housing treatments were generally minor scratches.

There were no differences in piglet pre-weaning growth and mortality between litters that were loose-housed following temporary confinement for 3 days postpartum and those that remained in crates throughout lactation.

Application to Industry

The increased maternal behaviour observed in sows in the lactation pens may have short and long-term effects on piglet welfare. For example, increased maternal behaviour may reduce piglet mortality by enhancing the sows' response to piglet vocalisations in the event of a crushing. Furthermore, maternal interactions may facilitate social learning and development in piglets, which may in turn reduce piglet fear responses and aggression at weaning. These early rearing influences may consequently improve piglet welfare and productivity by reducing stress and injury at weaning, thus improving rates of growth and feed efficiency post-weaning. Thus the pork industry may benefit from further investigations into the long-term effects of increased maternal behaviour of sows on piglet behavioural development.

The positive effects of the lactation pen on increased piglet play behaviour and reduced piglet injurious or harmful behaviours in one of the two experiments suggests that the implications of pen space on the behavioural development of piglets also warrants further study.

These present findings and recent overseas research indicate that housing individual sows and their litters in lactation pens following temporary confinement in a farrowing crate early in lactation when the risk of piglet mortality is high, offers an opportunity to minimise piglet mortality while reducing welfare risks to both sows and their piglets. For those producers that are interested but hesitant in transitioning to a totally confinement-free system, temporary confinement early post-partum appears to provide an intermediary step that offers an overall improvement in both sow and piglet welfare before transitioning to a totally confinement-free system.