



Project Number & Title

1C 118 - Sham chewing and sow welfare and productivity

Project Leader

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Project Participants

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Aims and Objectives

Stereotypies are repetitive behaviours induced by frustration, repeated attempts to cope, and/or Central Nervous System dysfunction. While it is believed that stereotypies develop due to suboptimal environments and indicates a welfare concern, the actual welfare implications remain poorly understood. Despite the move from stall to group-housing during gestation, stereotypies such as sham chewing are still anecdotally observed in group-housed sows. To date, the welfare implications of stereotypic behaviour in pigs, particularly sham chewing, have received little examination. The present study examined the relationships between sham chewing and the welfare and productivity of group-housed nulliparous gestating sows.

Key Findings

1. Sham chewing was recorded in 97% of the 170-nulliparous group-housed sows observed on day 8 of gestation, and 91% of the 150-nulliparous group-housed sows observed on day 52 of gestation. Based on the limited literature this was substantially higher than expected.
2. Sows on average were observed in the present study performing sham chewing at 10% and 9% of the visible observation points on days 8 and 52 of gestation.
3. There were few significant relationships found between sham chewing and welfare and productivity variables in the present study. Sows that performed sham chewing behaviour in less than or equal to 5% of visible observations on days 8 and 52 had less still-born piglets and lower cortisol concentrations on day 8, respectively. Several studies report a relationship between the performance of stereotypic behaviour and lower levels of HPA activation. However, there has been, and still is, ongoing discussion and research on the welfare significance of stereotypies. There is a report in the literature that sows performing sham chewing give birth to fewer piglets born alive.

Application to Industry

1. Sham chewing was recorded in over 90% of the 170-nulliparous group-housed sows observed in the present study. Based on the limited literature on sham chewing this is substantially higher than expected.
2. While the present findings provide limited evidence of relationships between sham chewing and sow welfare and productivity, a better understanding of the aetiology of the behaviour would assist in appreciating the implications of sham chewing. For example, understanding the factor(s) leading to sham chewing would provide an opportunity to manipulate this causal factor(s) in controlled experiments to examine the effects on sow welfare and productivity.

Since the present study shows a high level of sham chewing in group-housed sows and some limited evidence of relationships between sham chewing and sow welfare and productivity, and with the ongoing discussion and research on the welfare and productivity implications of stereotypies, further research of the welfare and productivity implications is recommended. Further research may be both pertinent from a sow welfare and productivity perspective and prudent in terms of addressing community and NGO criticisms of indoor sow group housing.