



Jemma Lumby - CSU Wagga Wagga 2014

Measuring novel traits in sows and gilts that may lead to injury and lameness, in order to improve production efficiency.

1C-107 ~ Part C : Improving behaviour, welfare and commercial performance of group housed sows through development of appropriate selection criteria.

Project Leader - *Prof. Paul Hemsworth*

Project Participants - *Kim Bunter - AGBU, Rivalea - Corowa*

Aims and Objectives

An issue that affects group housed sows worldwide is a reduced ability to stand or move around free of injury or lameness. A reduction in locomotive behaviours and lameness generates many negative impacts on the longevity, productivity and welfare of the affected sow. The aim of this study was to determine the associations between novel traits and the locomotion of gestating sows and gilts. The novel traits investigated were: fight injuries, condition, willingness to move and old/new injuries, along with other nuisance factors, such as breed or date monitored.

Data was collected over a 30 week period. Sow locomotion was scored from 0 to 3 with 0 = normal movement (no evidence of lameness) and 3 = non-weight bearing on affected limb or unable to walk. Sow condition was scored as average, over conditioned or under conditioned, while any existing injuries were noted as new or old. An injury score from 0 - 3 was used to describe the extent and number of injuries present with 0 = no scratches present and 3 = >10 scratches present. A sow's willingness to move was also noted as either willing or unwilling.

Key Findings

The novel traits fight injuries, condition and willingness to move were found to have significant associations (p -value <0.05) with the locomotion score of gestating sows. However, old/new injuries were not found to be significantly associated with lameness. Date monitored was also identified as having a significant association, although no other nuisance factors were found to be significantly associated with lameness in gestating sows.

Application to Industry

Although there is likely to be no solution to reduce the negative interactions between group housed sows, there are studies that could be performed to further identify the links between lameness, aggression and social interactions. Future research could also investigate the associations between lameness in sows and the development of sub-clinical diseases. The novel traits identified as significant in this study, could be investigated further to assess the possibilities of incorporating them into genetic selection programs.

This study also suggests that the industry needs to standardise a locomotion scoring system that can be implemented throughout Australian piggeries to assist in the identification, treatment or removal of lame sows.