

How do cold, drafty conditions affect the behaviour of growing pigs?

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Background

A variety of environmental factors are said to cause tail biting in pigs, but the behavioural mechanisms are poorly understood. If we can identify specific factors that cause pigs to engage in biting or chewing behaviour, it may help us to understand the causes for tail biting. Tail biting is difficult to study, because it is unpredictable and because causing the behaviour for the purposes of research would not be ethically acceptable. Therefore, researchers sometimes measure chewing directed at cotton rope tail models as a model for the behaviour.

Objectives

To investigate whether exposing growing pigs to drafty conditions affected their tendency to chew on rope tail models flavoured with salt or blood

Methods

A total of 24 growing pigs, (35-45 kg) were used in 3 experiments. The pigs were held in individual pens on one of two sides of an environmental chamber where temperature and air movement could be controlled. Each pen was outfitted with a panel on which a plain, salty and blood soaked rope tail model was mounted. In all 3 experiments all pigs were kept at ambient temperatures of 20-21.5°C but treatment pigs were exposed to four one-hour periods of draft per day: Expt 1: 150 ft/min (0.8m/s) at ambient temperature; Expt 2: 250 ft/min (1.3 m/s) at ambient temperature; Expt 3: 250 ft/min with a 3 °C reduction in air temperature.

Results

- There were no behavioural differences between pigs exposed to an air velocity of 150 ft/min and those under control conditions.
- Pigs exposed to 250 ft/min stood more ($P < 0.05$) and changed behaviour more often ($P < 0.05$), especially when the temperature was reduced at the same time.
- The frequency but not the duration of chewing at the tail models was increased when pigs were exposed to 250 ft/min ($P < 0.05$), but reducing the temperature did not affect this behaviour any further.

Take Home Message

Exposing growing pigs to very high air velocities mainly resulted in restlessness. This led to a greater frequency of approaching and mouthing the ropes but it did not stimulate longer time spent chewing on the tail models.

We appreciate the financial support of Ontario Pork and the OMAF-Animal Research Program at the University of Guelph