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Proceedings of the
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ANIMAL LIVES WORTH LIVING

edited by:

Ruth C. Newberry

Bjarne O. Braastad



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What do we know about the link between ill-health and tail biting in pigs?

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Tail biting in pigs is a serious and prevalent damaging behaviour leading to reduced welfare and production. Anecdotal reports suggest that health challenges increase the risk of tail biting in pigs. Further, several risk factors are common to both tail biting and poor health. One aim in COST Action GroupHouseNet is to review studies on the link between health and tail biting and to propose hypothetical causal relationships. Tail biting causes lesions which may become infected and potentially act as a route for the spread of infection to other parts of the body. On-farm studies suggest a link between health problems such as respiratory disease and lameness, on the one hand, and tail biting on the other. Recent experimental studies suggest a possible causal link between an artificially-induced inflammatory response and an increase in tail biting-related behaviour, and a link between cytokines and tail biting-related behaviour. Although the underlying mechanism is unknown, one suggestion is that the sickness response might act to increase tail biting via changes in cytokines and altered neurotransmission. Suboptimal management and housing can increase the risk of both tail biting and health problems. Risk factors common to tail biting and health problems include suboptimal thermal climate, poor hygiene, high stocking density and poor feed quality. Therefore, it is plausible that improvements to management and housing to increase the health of pigs will also reduce the risk of tail biting. Tail biting can also increase the risk of health problems. Firstly there is a direct spread of pathogens between biters and victims, and secondly, pathogens can enter the body via the tail lesion. Once infected, systemic spread of infection may occur mainly via the venous route targeting the lungs, and to a lesser extent via lymphatic spread. Studies of slaughtered pigs report an increase in lung lesions, abscessation and arthritis in carcasses with tail lesions. In summary, there is a clear link between poor health and tail biting in pigs, but there is only preliminary evidence suggesting causal relationships, so caution is warranted.