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Dr Megan Lucas



Early life piglet experiences and impacts on immediate and longer-term adaptability

Dr Megan Lucas is a Post-doctoral Research Fellow at the Animal Welfare Science Centre at The University of Melbourne. Dr Lucas is currently working within Tails, a Cooperative Research Centre Project aimed at improving our understanding of tail biting to eliminate the routine practice of tail docking in the Australian pig industry. Within the Tails project, her research interests centre around early detection of tail biting. Dr Lucas is also interested in how housing and management affect pig welfare. Her PhD research examined the effects of positive human interaction and early life experiences on stress resilience in pigs. She found that early human contact and housing during rearing affected the behavioural and physiological responses of pigs later in life to routine commercial stressors, highlighting the importance of the early environment to pig welfare.

Pigs routinely encounter a variety of challenging situations including abrupt weaning, painful husbandry procedures, intense contact with stockpeople, and exposure to different social and physical environments. The resilience of pigs to these stressors has implications for both welfare and productivity, and can be impacted by early life experiences. Information from other species shows that early experiences to such situations confers future stress adaptability, leading to less abnormal behaviour, lower behavioural and physiological responses to stressors, and faster recovery after exposure to stress. Early experiences that can affect the ability of pigs to overcome these types of challenges include interactions with the sow, other pigs, humans, and the overall complexity of the environment. In piglets, the early housing environment before and after weaning can affect future stress resilience, and impact welfare and productivity. As such, early life experiences can be important in shaping how pigs cope with stress in both an immediate and longer-term capacity. This review will address the various challenges young pigs face and how factors such as the physical environment, maternal and human contact, and enrichment may modulate these responses.