

Abstract for 19th Australasian Vertebrate Pest Conference

Title: Variable responses to aerial control demonstrate adaptability of feral pigs.

Conference session theme: Translating science into effective management.

Word count: 297 (maximum 300)

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Feral pigs (*Sus scrofa*) are an extremely adaptable species with established invasive populations around the world. In Australia, feral pigs damage the natural and production environments, and pose a significant risk to the livestock industry as vectors of disease. Aerial culling (shooting) is often undertaken to control feral pig populations and manage environmental risks. Intensive control measures such as aerial culling can be perceived to disperse survivors from the culled area, but the behavioural response of pigs to such control efforts is poorly understood. We investigated feral pig responses to aerial culling operations by examining the movements and landscape use one month before and after different cull periods, along with comparison to a population not exposed to aerial culling. The home range and habitat use of 41 feral pigs fitted with GPS collars across three different sites in Queensland (2 sites with aerial control and 1 site with no control) were examined using continuous time movement models, resource selection functions, and recurse analyses. Feral pigs exhibited no consistent change in home range size or location either before or after culls, or in response to the environmental conditions examined. Based on recurse analysis, differences in the use of cover at both cull sites (including time spent in cover and density of cover selected) were not consistent, and were not significantly different from feral pig spatial behaviour at the site with no aerial culling. Our results indicate that feral pigs vary both their habitat use and home range (size and location) in response to environmental conditions, but do not demonstrate this behavioural plasticity in response to aerial culling. The findings indicate that feral pig populations would be unlikely to disperse survivors or significantly alter their landscape use or behaviour in response to intensive control measures such as aerial culling.