

Resources on the Cost-Benefit of Managing Feral Deer and Pigs in Australia

Ideas, Information, and Inspiration

Prepared by:



Cost of established pest animals and weeds to Australian agricultural producers

Authors: Ahmed Hafi, Tony Arthur, Margarita Medina, Chandra Warnakula, Donkor Addai and Nyree Stenekes

This ABARES study estimates the costs associated with managing established vertebrate pests and weeds in Australian agriculture, including time and money spent by producers and production losses. It focuses on five vertebrate pests: European foxes, European rabbits, feral pigs, wild dogs, and feral goats. The study provides cost estimates at national, state, and industry levels but does not account for the environmental, social, or infrastructure impacts of these pests.

ABARES provides high-level estimates of the time and money agricultural land managers spend managing vertebrate pest species in agricultural production systems and the production losses they suffer.



Australian Government
**Department of Agriculture,
Fisheries and Forestry**
ABARES

Potential economic consequences of African swine fever in Australia

Authors: Rachel Slatyer, Ahmed Hafi, Kirsty Richards, Mark Cozens, Donkor Addai, LY Cao, Chris Mornement, Miles Keighley, Tony Arthur

ABARES estimated the economic costs of two potential scenarios for an African Swine Fever (ASF) incursion in Australia: one affecting the feral pig population and the other impacting the domestic production system, as well as the costs if ASF becomes endemic. These estimates highlight the importance of preventing ASF from entering Australia and can be used to evaluate the costs and benefits of eradication efforts if an incursion occurs.

Pest Animal and Weed Management Survey

Authors: Nyree Stenekes, Jenifer Ticehurst and Tony Arthur

The database/dashboard presents the findings from a national survey conducted by ABARES in 2016, 2019, and 2022, focusing on pest and weed management practices by agricultural land managers in their properties and local areas.

Uses: These ABARES reports help inform management and funding decisions at national to regional scales.

Dr. Tony Arthur's, ABARES, insightful talk on landholder pest animal and weed management survey findings is available to view on [YouTube](#).

Counting the doe: an analysis of the economic, social & environmental cost of feral deer in Victoria

by Frontier Economics; A report for the Invasive Species Council (2022)

This report estimates the economic, social and environmental costs of deer in Victoria over 30 years if deer numbers are not controlled (\$1.5-2.2 billion).

Uses: The estimates have been used to highlight the growing impacts of deer in Victoria, and gain support for management

frontier
economics



Feral Deer Economic Analysis Report: A Report for Primary Industries and Regions SA

by BDO Economics

This report estimates that feral deer caused \$39 million in agricultural losses in 2022. It also projects future losses with and without an 11-year eradication program at state and regional levels. Eradicating feral deer is expected to yield a benefit-cost ratio of 2.7 for the state.

Uses: The report highlights the impact of feral deer and the benefits of eradication by using the benefit-cost ratio of an eradication program and projected future agricultural losses without it. The first 4 years of an 11-year eradication program has been partly funded.



An economic analysis of the impacts of deer in Victoria

Terry Walshe, Casey Visintin, Dave Ramsey, Tom Kompas and Brendan Wintle

School of Biosciences, University of Melbourne
Arthur Rylah Institute

The report estimated state-wide losses to agriculture, forestry and conservation stemming from deer over the next 20 years amounts to \$1.1 billion

Uses: The report provides managers with base case consequences against which the benefits of options can be evaluated.



Cost of Feral Deer In Australia

by Ross McLeod (2023)

This study estimated that feral deer imposed an overall cost of ~\$91.3 million per year upon the agricultural industry, transport and management of land, across Australia in 2021.

Uses: The estimates have been used in plans, reports, presentations and media to highlight the growing impacts of feral deer, and gain public support for management.



CENTRE FOR
INVASIVE SPECIES SOLUTIONS

Effectiveness and costs of helicopter-based shooting of deer

Andrew J. Bengsen, David M. Forsyth, Anthony Pople, Michael Brennan, Matt Amos, Mal Leeson, Tarnya E. Cox, Bec Gray, Ollie Orgill, Jordan O. Hampton, Troy Crittle, and Kym Haebich



The study analysed costs and outcomes for 12 aerial culling programs in Qld and NSW, and found that the asymptotic (near-maximum) kill rate was estimated to be 50 deer per hour.

Uses: The study highlights the likely level of effort required for aerial culling objectives and population reductions to be met.

Stochastic population models to identify optimal and cost-effective harvest strategies for feral pig eradication

Peter W. Hamnett, Frédéric Saltré, Brad Page, Myall Tarran, Matt Korcz, Kate Fielder, Lindell Andrews, Corey J. A. Bradshaw

A study on Kangaroo Island developed population models using control effort and cost data from various methods (shooting, trapping, poison baiting, and aerial culling) to evaluate the cost-effectiveness of different eradication scenarios.

Uses: The simulations indicate that the most cost-effective strategy in most scenarios is to maximize the annual harvest and achieve eradication within the shortest possible timeframe.



Flinders University



Government of South Australia

Primary Industries and Resources SA

Estimating the economic impact of feral pigs in the Whitsunday Regional Council

By Synergies Economic Consulting

A study by Synergies Consulting assessed the economic impact of feral pigs on agriculture in the Whitsunday Regional Council region. It found that annual losses to livestock, horticulture, and sugar cane production, along with broader regional productivity losses and damage, were significant.

Uses: The information on the economic impact of feral pigs in the Whitsunday Region helps inform policy decisions, secure funding for pest control, and assist farmers in understanding the financial consequences of the damage, aiding in better management and planning.

Synergies
ECONOMIC CONSULTING

