

A large, light orange graphic in the background features a stylized house with a chimney and a sun, all enclosed within a large circular outline. The house is composed of simple geometric shapes, and the sun is a simple circle with a smaller circle inside it.

Final Report Summary

Review of rodent control for the Australian
chicken meat and egg industries



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Background

Rodent infestations are a persistent problem for Australia's chicken meat and egg laying industries. Rodents pose a major risk to food safety and food hygiene by contaminating feed and their ability to transmit disease-causing organisms through their feet, fur, saliva, droppings, urine and blood. Rodents can also cause significant damage to farm facilities. They chew through walls, insulation and wiring to gain access to food and to scavenge building materials for their nests and burrows. This can compromise the structural integrity of shed walls, floors and ceilings, undermine disease barriers, and create energy inefficiencies that increase operating costs. Rodent control is therefore a key part of a farm's biosecurity strategy, and must be appropriately considered and implemented to lessen the risks outlined. This project was developed to address knowledge gaps and to raise awareness of the current state of rodent control in the Australian chicken meat and egg industries.

Objectives

- 1 Survey the current use of rodenticides in Australian chicken meat production systems.
- 2 Survey the current use of rodenticides in Australian layer production systems.
- 3 Prepare a literature review of available and emerging rodent control products that are suitable for use in the Australian chicken meat and egg industries.

Outcomes

The survey of current industry rodent control practices found that control in Australian poultry operations primarily consists of the use of poison baits, specifically, anticoagulant rodenticides. If used appropriately, and with a range of physical management strategies, these compounds can be an effective tool for on-farm rodent management. But if used inappropriately, the inherent risks with these compounds could affect the profitability, productivity and integrity of the Australian chicken meat and egg laying industries.

The literature review delivers a comprehensive review of scientific literature on available and emerging rodent control products suitable for use in chicken meat and egg (layer) production systems.

The document highlights the advantages, disadvantages, risks and regulatory requirements associated with specific active compounds, and gives producers an objective comparison of all rodenticides currently registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA). Information about target species behaviour and ecology, integrated rodent management strategies, and novel and emerging rodent control products is also included.

Outputs from this project provide an opportunity for the Australian chicken meat and egg industry bodies to update national manuals and inform producers of relevant and effective options for rodent control and rodenticide use. This research will help maintain the productivity, profitability and long-term financial viability of the chicken meat and egg industries through better on-farm management of rodents.

Research

1. Survey of industry rodent control practices
 - Initiated preliminary conversations with industry stakeholders (chicken meat and eggs).
 - Developed a four-page survey questionnaire: through consultation with the project steering committee, with questions about production systems; rodent observations; control protocols and practices; products and services, rodent control practices and producer thoughts (Appendix 1).
 - Conducted surveys over the phone, by email, and face to face.
 - Made efforts to capture responses from a range of production systems (for layers: barn, free range, caged, and organic; and for chicken meat: conventional, free range, and organic).
 - Sought responses from producers located in all poultry producing states and territories.
2. Literature review of international articles on available and emerging rodent control products

- Systematic review of rodenticide product information and scientific literature using internet searches and academic article databases.
- 485 scientific papers screened to identify relevant publications relating to rodenticides, rodent behaviour and rodent ecology.

Access the Final Report to see the results of the survey and literature review: <https://www.agrifutures.com.au/product/review-of-rodent-control-for-the-australian-chicken-meat-and-egg-industries-2/>

Implications

Rodents are a widespread and persistent problem for the Australian chicken meat and egg industries. This project directly implicates rodents as a cause of significant levels of farm structural and property damage and as a threat to food safety and food hygiene.

The economic burden associated with rodent infestations is difficult to quantify, given their insidious nature and hidden impact. The total cost of rodent infestations, including structural repairs, feed loss, production loss, disease incidents, energy inefficiencies and the implementation of year-round rodent control programs, is likely to be significant.

Potential benefits stemming from this research include better on-farm management of rodents, better poultry bird health and the prevention of disease transmission from rodents. Reductions in on-farm rodent populations will also lead to less structural damage, feed loss and contamination commonly caused by rodents. Appropriate and efficient use of rodenticides in conjunction with physical management strategies, such as rodent habitat disruption and physical exclusion, will reduce the risk of non-target poisoning of livestock, native wildlife species and domestic animals.

Acknowledgements

The authors would like to acknowledge AgriFutures Australia and Australian Eggs Limited for funding this research and the chicken meat and layer producers for participating in the rodent control survey.



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AgriFutures Australia Publication No. 20-066
AgriFutures Australia Project No. PRJ-010965
ISBN: 978-1-76053-107-2

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