



Best practice rodent control for Australian egg farms

This resource provides Australian egg farmers with guidance on implementing best practice strategies for rodent control, with a diversified approach incorporating both traditional and innovative methods. Effective rodent control requires a tailored strategy that addresses each farm's specific circumstances, rodent pressures, and operational challenges. This resource incorporates prior information, new research evidence and other available resources to support how farmers handle rodent pressures.

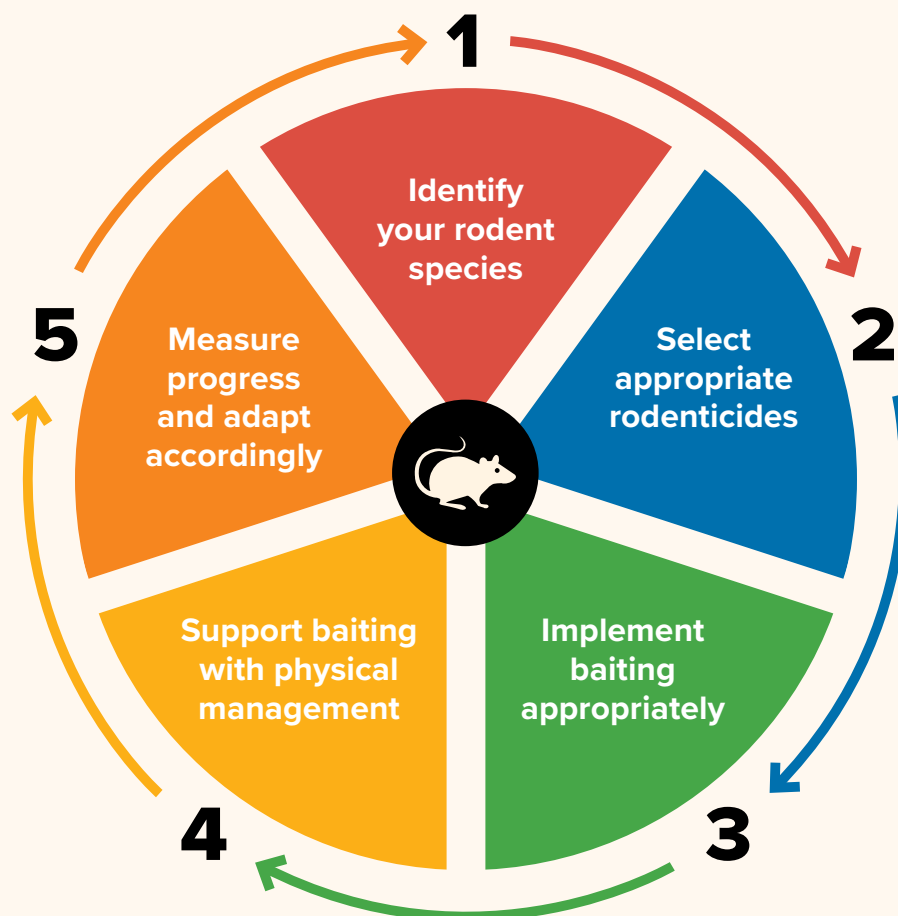


General management and best practices

Best practice rodent control adopts the principles of Integrated Pest Management (IPM), a holistic approach that combines various control methods to effectively manage pest populations whilst prioritising environmental sustainability and safety.

This comprehensive strategy involves five key steps that work together to achieve optimal outcomes:

- 1. Identify your rodent species**
- 2. Select appropriate rodenticides**
- 3. Implement baiting appropriately**
- 4. Support baiting with physical management**
- 5. Measure progress and adapt accordingly**



Step 1

Identify your rodent species

There are three main rodent pest species relevant to Australian egg productions:

- › House Mouse
- › Brown Rat
- › Black Rat

Australian Eggs' *Rodent Identification Guide* for Australian egg farmers helps identify the unique physical feature and behavioural characteristics of these rodents and the species-specific rodenticide selection available.

Scan the QR code to download the *Rodent Identification Guide* for Australian Egg Farmers resource.



Step 2

Select appropriate rodenticides

Guide to Rodenticides for Australian Egg Farmers, an Australian Eggs resource provides information on the types of rodenticides available for use on Australian egg farms, including:

- › Anticoagulant rodenticides
- › Non-anticoagulant alternatives
- › Rodenticide selection guidelines

Scan the QR code to download the *Guide to Rodenticides* for Australian Egg Farmers resource.



Step 3

Implement baiting appropriately

The *Guide to Rodenticides for Australian Egg Farmers* resource provides information on the effectiveness of available rodenticides available for use on Australian egg farms, including:

Bait formulation selection

Wax blocks, grain/pelleted bait, liquid rodenticides, tracking powder.

Bait housing and deployment

How to protect bait, where to place bait, prevent non-target animal access.

Strategic placement guidelines

Where to position and place bait, utilising hidden spaces, regular checking and recording.

Effective baiting strategies include:

- › Pulse baiting which requires alternating periods of bait availability and removal to prevent habituation and reduce bait aversion risk.
- › Pre-baiting is the initial placement of non-toxic bait to accustom rodents to feeding stations before introducing toxic bait.
- › Mass baiting is a large-scale bait deployment in controlled areas for significant infestations requiring rapid control.
- › Bait rotation which uses multiple bait types with different active ingredients to prevent aversion and resistance development.

Scan the QR code to download the *Guide to Rodenticides* for Australian Egg Farmers resource.



Step 4

Support baiting with physical management

Comprehensive physical management strategies can support chemical control:

Physical exclusion

- › Install wire netting to prevent rodent access; consider critical areas of food and water supply and evaluate potential entry points for rodents.
- › Seal potential entry points using silicone or physical barriers.

REMINDER: rats can enter spaces as large as a thumb; mice can enter anywhere as large as a little finger.

Habitat management

- › Apply road base or gravel around structure perimeters to prevent burrowing.
- › Minimise food and water availability to encourage consumption of bait instead of feed.
- › Institute bare earth policy around sheds and food storage structures.
- › Maintain short-cut weeds and remove hard rubbish that provides cover.
- › Seal all practical entry points with rodent-proof barriers.

Additional methods as support to primary methods

- › Traps are labour-intensive and ineffective against large populations, but useful for population assessment.
- › Shooting is generally expensive and ineffective for comprehensive control.

Step 5

Measure progress and adapt accordingly

Population monitoring methods

- › Bait intake records and track consumption patterns over time.
- › Visual observations and regular inspection of activity signs.
- › *Chew cards are cost-effective population density estimation through standardised exposure periods.
- › Possible use of wildlife cameras for activity monitoring.

*CHEW CARDS are 10cm x 10cm core flute cards coated with peanut butter to attract rodents. They help identify rodent species by the chewing pattern: mice typically chew one side, while rats shear through the entire card. By placing chew cards for a set period, you can monitor rodent activity and track population changes over time.



Managing plague conditions

Rodent plagues can result from increased rainfall leading to abundant food supplies and higher offspring survival rates. During plague conditions:

- › Consider zinc phosphide application (requires permit).
- › Maintain emergency supply stocks (2021 mouse plague created supply shortages).
- › Implement intensive monitoring and rapid response protocols.



New and emerging solutions

Latest Chemical Developments

Microencapsulation technology

- › May enable the reintroduction of acute poisons with improved safety profiles.
- › Potential safety concerns remain under evaluation.

Reproductive control

- › ContraPest is a bait additive that limits sperm production in males and causes breakdown of ovarian follicles in females.
- › Levonorgestrel and quinestrol are also contraceptive hormones that are potential candidates for reproductive rodent control.
- › Reproductive control implementation challenges include ensuring sufficient population distribution, as effects are not long-lasting and require sustained intake.

Biological control

- › Can provide genuinely effective population management under appropriate conditions.
- › Implementation alongside chemical control programmes presents difficulties due to secondary poisoning risks.
- › Requires careful integration planning to avoid compromising other animal populations.





New and emerging solutions cont.

Technological interventions

Electronic remote sensor technology

- › Electronic monitors attached to existing mouse traps or bait stations.
- › Battery-operated sensors that automatically gather activity data.
- › Pest managers receive real-time notifications when rodents are caught, or activity is detected.
- › Primary benefit is minimising labour requirements for routine monitoring.

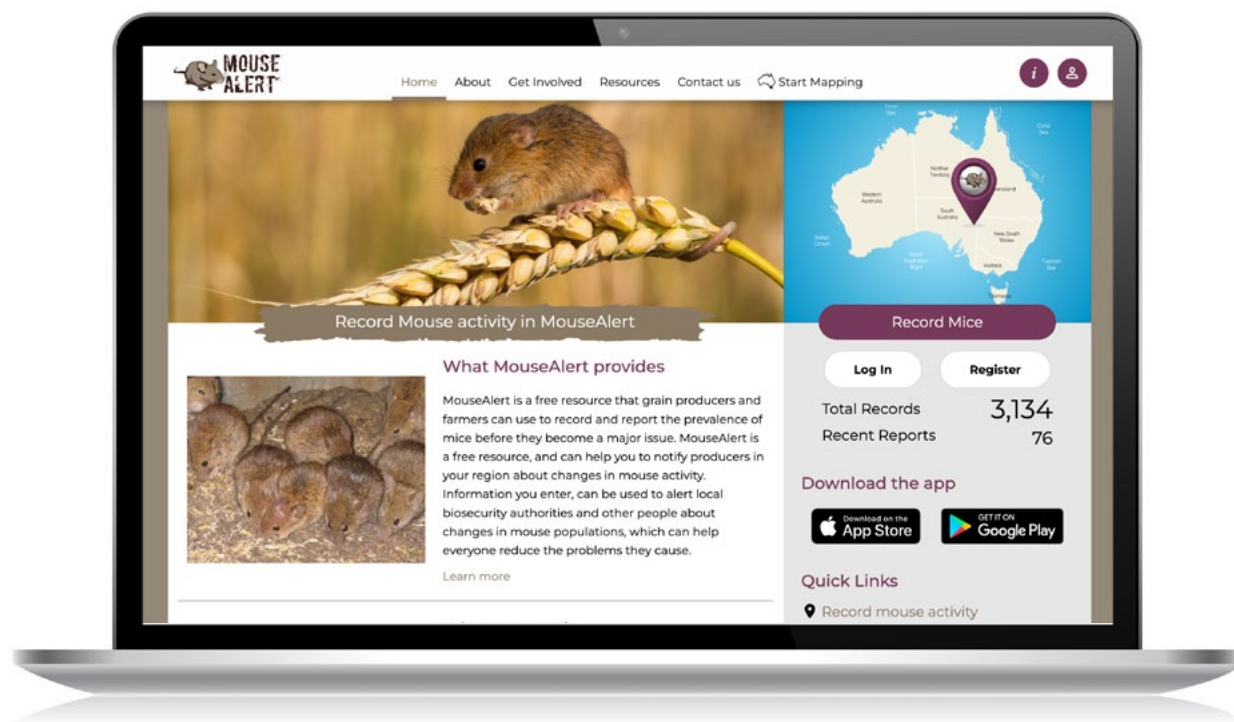
Motion-activated camera systems

- › Similar functionality to electronic sensors but with visual confirmation capability.
- › Motion-activated cameras provide real-time activity alerts.
- › Valuable for tracking rodent behaviour patterns and optimising inspection schedules.
- › Reduces time and labour investment in routine surveillance activities.

Ultrasonic emission devices

- › Established technology that emits sounds inaudible to humans designed to repel rodents.
- › Further research is required to determine efficacy.
- › Potential application as supplementary method alongside primary control strategies rather than standalone solution.





MouseAlert – utilising this valuable resource

What is MouseAlert?

MouseAlert is a free resource available to Australian farmers for recording and reporting mouse prevalence before populations become a major operational issue. This digital platform, accessible through both mobile app and website, serves as an early warning system that enables producers to notify others in their region about changes in mouse activity levels.

The information entered into MouseAlert creates a valuable database that can be used to alert local biosecurity authorities and neighbouring producers about emerging changes in mouse populations. This collaborative approach helps the broader farming community implement coordinated control measures and reduce the problems caused by rodent infestations.

What to record in MouseAlert?

- › Record rodent activity in paddocks, crops, and storage facilities.
- › Capture images of damage caused by rodents to crops, infrastructure, or stored products.
- › Document any recent changes in mouse activity patterns.

MouseAlert is particularly valuable for egg producers as it enables:

- › Access to downloadable mouse activity reports from across Australia allowing early intervention before reaching economically damaging levels.
- › Regional trend analysis to inform local management decisions and coordination with neighbouring farmers.
- › Enhanced biosecurity planning through improved situational awareness.

Scan the QR code to find out more about MouseAlert.



Additional resources



Rodent control

- › *Guide to Rodenticides*
- › *Rodent Identification guide*



Biosecurity

- › *National Farm Biosecurity Technical Manual for Egg Production*
- › *Biosecurity Plan Template*



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