

Protecting your crop

A guide to bird deterrents in orchards

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The challenge

- Bird damage remains a significant cause of crop losses in Australian temperate fruit production
- Damage can be to fruit, buds and trees, which causes issues with marketable yield
- Birds are learning quickly
 - traditional approaches (noise, reflective tape, stationary predators) are failing

Photo: Fortington, G 2025.

Understanding the target species



Not all birds
behave the same



They are highly
intelligent and
adaptable



Birds habituate to
deterrents



Orchards are VERY
attractive



Timing is critical

What to consider when comparing bird deterrents



1. Effectiveness
2. Longevity of the deterrent
3. Cost and return on investment
4. Labour requirements
5. Risk of bird habituation

Netting is gold standard, but what else is out there?



Netting has the highest reduction in bird damage as it provides a physical barrier to the crop.

- Also provides additional protection from hail and sunburn

Requires significant capital investment

But I am using nets and I am STILL getting bird damage!

Acoustic bird deterrents



Acoustic deterrents are commonly used as a short-term or supplementary method for reducing bird activity

- Relatively easy to deploy and relocate
- Lower upfront cost compared with physical exclusion systems
- Capable of covering large orchard areas without physical barriers

Disadvantages

- Birds can become habituated to sound-based deterrents over time, particularly when sounds were not varied or rotated
- Effectiveness decreased when deterrents were left in the same location for extended periods
- Noise output may disturb nearby residents, workers, or wildlife, limiting suitability in some locations

Visual deterrents

Reflective tape that creates flashes of light and movement

Scare balloons with predator-like eye patterns

Scare kites designed to resemble birds of prey

Flashing or strobe lights used during low-light periods

Birds of prey perches intended to encourage natural predators

Lasers projected at dawn or dusk to create sudden, unexpected movement



<https://www.aliexpress.com/item/1005012124165637.html>

Advantages

Low cost and widely accessible

Easy to install, reposition, and remove

Non-invasive and generally quiet, avoiding noise-related concerns

Useful for rapid deployment when bird pressure first appears

Limitations

Birds quickly become habituated due to static nature

Effectiveness declines when left in the same position for extended periods

Considerations if using traditional deterrents

- Activate early, before birds became accustomed to feeding on the crop
- Use deterrents intermittently rather than continuously
- Combine different types of deterrents together
- Rotate in location and sound type to reduce habituation
- Deploy strategically around orchard edges or known entry points
- Some deterrents have been observed to be more effective during dawn and dusk, mimicking feeding timings.



New technologies



Symterra Pulse

Novel deterrent systems integrating low-cost sensors or Internet of Things (IoT) device feedback, data processing units, and automated actuation have been developed in recent years, with examples including the use of an aerial drone for bird monitoring and deterrence

News

New drone technology takes flight to protect Australian crops

Publication date: December 8, 2025



West Australian farmer uses lasers to protect his pome and stone fruit orchard from pest birds



By Georgia Hargreaves

ABC South West WA

Fruit Growing

Posted 25 Nov 2022 at 8:28am, updated 25 Nov 2022 at 8:29am



Video: Molly Black

How do we make the orchard less attractive?

Integrated Bird Management (IBM)

- Reduce food availability by removing fallen, damaged and overripe fruit.
- Limit attractive habitat by managing nearby roosting and perching sites.
- Implement deterrents before birds establish feeding patterns, using a combination of distress calls, visual deterrents and other scare devices.
- Rotate deterrent methods regularly
- Use exclusion netting on high-value block
- Encourage predatory birds in the orchard
- Collaborate with neighbouring growers to implement area-wide bird management and reduce the movement of birds between orchards.



https://alicespringsdesertpark.com.au/connect-with-nature/animals/animals/wedge-tailed-eagle?SQ_VARIATION_491439=0

Useful resources

Bird deterrent case study

<https://www.cherrygrowers.org.au/cherry-industry-essentials/bird-deterrent-case-study/>



Managing bird damage

https://www.dpi.nsw.gov.au/_data/assets/pdf_file/0005/193739/managing_bird_damage-full-version.pdf



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