

Birds in Orchards

Baudin's and Carnaby's cockatoos are native, threatened fauna. They will opportunistically feed on orchard fruit and other crops. Both species are protected under State and Commonwealth environmental legislation. Land managers impacted by this are required to use non-harming techniques, including scaring and netting, to prevent damage to their crops. The following information summarises strategies and techniques for bird management in orchards and considers the impacts of noise from these techniques on neighbours. Further information can be found in *Best Practice Guidelines for Bird Scaring in Orchards* available on the Parks and Wildlife website (<https://www.dpaw.wa.gov.au/plants-and-animals/animals/living-with-wildlife>).

Minimising the Damage to Your Crop

Black cockatoos

There are two species of white-tailed black cockatoo in south-west Western Australia. The long-billed form *Calyptorhynchus baudinii* is known as Baudin's cockatoo and the short-billed form *C. latirostris* is known as Carnaby's cockatoo. It can be difficult to distinguish between these two species (see below) and their ranges overlap, especially during the non-breeding season. One species of red-tailed black cockatoo occurs in south-west Western Australia – the forest red-tailed black cockatoo.



Comparison of the heads of a Carnaby's cockatoo (left) and a Baudin's cockatoo (right) showing the longer and finer upper mandible in Baudin's cockatoo. Image: reproduced with permission from the Western Australian Museum.

What damage do they cause?

Baudin's cockatoo is known to damage pome fruit (apple and pear) crops and Carnaby's cockatoo damages tree shoots, persimmons and nut crops (almond, pecan, pistachio and macadamia). The forest red-tailed black cockatoo is not known to damage commercial crops, but it does feed on the fruits of some ornamental garden trees.

In most years, the damage caused by white-tailed black cockatoos in individual orchards is minimal. However, localised damage can be severe in orchards where the cockatoos have become habituated to the orchard.

Why do they cause damage?

The main reason black cockatoo's damage fruit trees is likely due to a shortage of natural food availability. Damage to crops appears to be greater in years when marri trees fail to produce seed or after loss of marri trees due to clearing or fire.

Can I destroy the cockatoos?

No. Because black cockatoos are native fauna and are threatened species, it is illegal to harm them and anyone found killing or harming these birds will be prosecuted.

The Department of Biodiversity, Conservation and Attractions (DBCA) monitors shooting of birds in WA and investigate all reports of illegal shooting of black cockatoos.

If you are prosecuted for killing a black cockatoo, your firearm may be confiscated and you may face a fine of up to \$10,000 per offence.

Killing black cockatoos is not an effective means of controlling their damage. Flocks can be controlled effectively using a well-planned and managed program incorporating non-lethal techniques.

Damage control

Studies have shown that netting orchards is the best means of controlling the damage caused by black cockatoos. Netting also protects fruit from sunburn and hail damage, reduces water use and provides good quality fruit, but has a higher establishment cost.

The use of scaring devices is another effective means of controlling the damage caused by black cockatoos. The most effective is using a combination of two or three techniques which includes gas guns, motor cycle (harassment) and/or shooting to scare.

It is important not to allow the cockatoos to develop a habit of feeding at the crop. The cockatoos should be repelled as soon as they approach the crop. If using gas guns or shooting to scare, the firing interval should be changed frequently. Gas guns should be moved every two days and should be turned off at night and during the middle of the day. Cockatoos should also not be allowed to eat the fallen fruit or reside in the orchard during the non-fruiting season.



Scaring methods

General points

- Plan your pest control program in advance, because damage usually occurs at the busiest time of year for orchardists.
- Check trees regularly for signs of damage. Early action can then be taken before the cockatoos become reliant on the crop for food or develop a habit of returning to the crop.
- Use scare techniques occasionally throughout the year to maintain a degree of wariness in the cockatoos and to indicate that the area is not safe for feeding.
- Be persistent. Use scaring techniques throughout the damage period, but specifically early and late in the day when the cockatoos are likely to be feeding in the area. This will increase the time taken before the cockatoos become used to the devices.
- Combine a number of techniques and use them in rotation to maintain variety. This will reduce the chances of the cockatoos becoming used to the devices.
- Cooperate with neighbours to ensure they use methods that complement yours, and inform them about potential noise.
- Remove gas guns and put them out of sight immediately if the cockatoos start to ignore them. If scaring devices are left in place, the cockatoos may begin to associate them with a good source of food.

Specific points

- Shoot to scare with pyrotechnic cartridges, before using other scaring devices to establish an association between noise and danger.
- Wear brightly-coloured clothing when shooting to scare. Similar clothing should be worn by workers and scarecrows so that the cockatoos associate the colour with danger.
- Introduce gas guns after the cockatoos have developed a fear of pyrotechnic cartridges. Some shooting to scare may be needed to reinforce the effect of other scaring devices.
- Vary the timing and frequency of gas gun use to maintain the 'startle' effect. Several blasts in very quick succession with 10 to 15 minutes between volleys is preferable. All devices around the crop, including those of your neighbours, should fire at roughly the same time.
- Point gas guns down-wind to maximise the sound produced. The gas guns should also be camouflaged so that the cockatoos do not associate the sound with the device.
- Place the gas guns near the centre of the property pointing outwards to scare the cockatoos away from the orchard rather than at the edge pointing inwards where they will scare the cockatoos further into the property.
- Don't place noise-generating devices close to neighbouring houses or operate in hours of darkness. Follow the *Best Practice Guidelines for Bird Scaring in Orchards*. The guidelines are available on the Parks and Wildlife website and from its offices.
- Remove all fruit from trees during harvest to avoid attracting the cockatoos to the orchard with surplus fruit.

Monitoring and evaluation

This is often the most forgotten aspect of a pest management program. Commercial growers should determine an acceptable level of damage, assess and record losses caused by the cockatoos and monitor how effective the program has been. The costs and benefits of damage control can then be assessed and the program can be modified to achieve better control in the following seasons.

Growers must hold a damage licence issued by the Department of Biodiversity, Conservation and Attractions to undertake scaring of black cockatoos in orchards. They are free and not difficult to obtain. Contact your local DBCA or Parks and Wildlife Service office or email wildlifelicencing@dbca.wa.gov.au for further details.

Managing noise

Excess noise can be annoying and distracting, especially if seen to be unnecessary or not controlled. If you find the noise from bird scaring in orchards near you to be unreasonable, you can contact the environmental health department in your local government authority for assistance. Western Australia's noise regulations give some guidance to local government officers in deciding 'what is a reasonable amount of noise'. In responding to complaints about noisy bird scaring methods, local government officers may take the following approach.

Step 1: Information and informal mediation

Ensure both the resident and the grower have information about bird scaring in orchards.

Step 2: Noise assessment

Assess impact of the noise (e.g. type of scaring method and duration, time of day, noise level).

Step 3: Reduce noise impact

Explore ways of reducing the use of noisy methods and improving how they are set up using *Best Practice Guidelines for Bird Scaring in Orchards*.

Step 4: Formal mediation

Arrange a formal mediation based on a written Noise Management Plan for bird scaring for the orchard.

Local government officers have discretion to take action under the noise legislation if necessary.

Further reading

- *Guidelines for Best Practice Bird Management*. Animal and Plant Control Commission, South Australia.
- *Best practice guidelines for bird scaring in orchards*. Department of Biodiversity, Conservation and Attractions, Western Australia.
- *Netted Apple Demonstration: Final Summary* <<https://www.agric.wa.gov.au/water-management/netted-apple-demonstration-final-summary>>

References

Bamford, M. and Sinclair, R. (2002). Australian research on bird pests: impact, management and future directions. *Emu* 102: 29-45.

Environmental Protection (Noise) Regulation 1997

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Further Information

Contact details for the Department of Biodiversity, Conservation and Attractions are available on the Department's website: www.dbca.wa.gov.au.

Let the Department know if you have seen a Threatened or Priority species by filling out a [Fauna Report Form](#).

