Wedge-tailed eagles in agricultural areas

Fact sheet | 2024

Photo: Greg Kerr

Living with eagles

Wedge-tailed eagles (*Aquila audax*) are an iconic Australian species that play a critical role in ecosystem function and provide a range of benefits to farmers, such as pest control and property hygiene. In fact, many of the remaining wedge-tailed eagles in South Australia occur within our agricultural landscapes.

In the past, the wedge-tailed eagle was the world's most persecuted bird of prey. A bounty system in some Australian states encouraged the slaughter of tens of thousands of eagles annually.[2,3] The practice stopped when it was realised that eagles usually attack only sick, dying or dead lambs and rarely create an economic problem for farmers.[2-5]

Wedge-tailed eagles are protected under the *National Parks and Wildlife Act 1972*. It is illegal to kill, trap or poison them.

The importance of eagles

Wedge-tailed eagles benefit farmers and nature. They:

- help control control rabbits and hares
- are one of the few predators that kill feral cats and foxes
- help control the exotic disease toxoplasmosis carried by feral cats
- support bush and farm hygiene by feeding on dying animals and carrion
- indicate environmental health by providing an early warning for climate change impacts and harmful chemicals.

Culprits or cleaners?

Eagles are still sometimes blamed for lamb losses but an analysis of the cause of death of over 12,000 lambs by the CSIRO showed that with rare exception eagles were not to blame.[7]

Five CSIRO studies over ten years showed that wedge-tailed eagles accounted for much less than 1% of lambs killed in a sheep farming area.[1,3]

More often wedge-tailed eagles are the secondary cause of lamb deaths. They take already dead, sick or injured lambs dying due to natural causes, crow or fox attack. Most lamb deaths are due to mismothering and starvation. They have walked and breathed, but not fed and have used up their fat reserves. Since starved lambs occur frequently, and are easily taken by predators, this creates the impression that a large number of losses occur due to predators.[6]

3 facts about lamb deaths

1. Studies show that with rare exception, eagles do not create an economic problem for sheep farmers.
2. Mismothering, starvation and exposure to bad weather are the most important causes of lamb loss.
3. In South Australia foxes are more responsible for lamb predation.

Foraging behaviour

Wedge-tailed eagles may hunt alone, in pairs or larger groups and sometimes behave in a way that looks like they are hunting livestock. They have been observed following or even harassing large animals, which is a strategy to flush out smaller prey, like rabbits, when the large animal moves. Young eagles are also very inquisitive and may closely examine objects or animals new to them.

This explains the scientific name of the wedge-tailed eagle, *Aquila audax*, which means ‘bold eagle’.

Diet

Wedge-tailed eagles eat both live prey and dead or decaying animals. Before changes to our natural landscapes and the introduction of European animals, they hunted many medium-sized mammals, such as wallabies, young kangaroos and bandicoots. Now wedge-tailed eagles also hunt feral rabbits, foxes and cats.

Their diet reflects the availability of prey, with the most important being rabbits and hares. Rabbits usually make up between 30 and 70% of the typical wedge-tailed eagle diet, but may be up to 98%. [2-5, 9]

A NSW study found that during a ten-week nesting period a pair of eagles will bring around 200 rabbits to a nest as feed for chicks.[5] Given that between 12 and 16 rabbits/ha eat the equivalent of one Dry Sheep Equivalent [10], this predation equates to protecting grazing feed for an additional 12 to 16 sheep on your property. Where rabbit numbers drop dramatically e.g. due to disease, eagles have been observed to modify their diet by consuming larger quantities of native prey species.[11]

Carrion is also a major food source, with road kills and other carcasses eaten. Many reports of wedge-tailed eagles preying on lambs result from birds scavenging already dead animals. Dead or dying stock can account for up to 9% of an eagle’s diet in areas where sheep grazing is widespread.[2] Eagles that live in agricultural areas will also eat lamb/calf afterbirth.

Causes of lamb loss

The effects of prolonged birth and the combination of hunger and mismothering or lack of lamb and mother bonding are the major causes of lamb loss.[6, 13]

It is now known that more than 80% of lambs that die between birth and weaning, die within the first 48 hours of life due to poor ewe nutrition and low ewe condition score at lambing.

These two factors result in low birth-weight lambs (under 3.5 kg). They also impact on ewe maternal instinct, which in turn contributes to numerous causes of lamb deaths e.g. birth trauma (dystocia), starvation, mismothering and secondary predation.[12] Poor ewe nutrition delays the onset of milk production, and colostrum, for up to four hours. This delay is most common in twin-bearing ewes and often results in one lamb dying.

Exposure can also cause stock losses. Cold weather increases lamb mortality substantially, particularly those lambs that have low live weight.

Losses to predators are often secondary predation and associated with lamb health problems and weakened stock.

More significant impact can be caused by other predators such as pigs, foxes, crows and ravens.[6, 7]

Determining cause of death

Livestock farmers can look for evidence to determine the cause of a lamb death. This can lead to management changes that improve lamb survival rates.

The best evidence of lamb killing comes from carcass inspections, which involves skinning the carcass from the top of the neck to look for fatal bite wounds. Various signs indicate what has killed a lamb.

Wounds administered by fox or dingo are characterised by regularly-spaced canine puncture marks. They are found in pairs on either side of the body part that was bitten.

Eagles kill with their talons either by a strike to the head or more usually by the crushing grip of the talons on the neck and upper back. If the eagle was the culprit you will find irregularly-spaced punctures to the skin and maybe the skull.

You can determine if a lamb was alive when taken by examining the presence and degree of bruising. If alive and active there should be considerable bruising where the claws penetrated. If there is no bruising it means the lamb was dead already; little bruising means it was near death.

Mistakenly blaming scavengers for lamb death or secondary predation may mean that you are missing vital underlying causes which can be addressed with changes in management practices.

Reduce the risk

Careful management practices can help to protect livestock.

Manage mob size and lambing

To optimise lamb survival manage mob size:

- for multiple bearing ewes decrease your flock below 200
- for single-bearing ewes flocks may be 400-500 ewes
- for maiden ewes flocks of 250-400 ewes.

Think about mob composition (lambing maiden ewes with older ewes), check stocking rates, and minimise handling during lambing to prevent the risk of starvation (mismothering).[12]

Think paddock hygiene

Wedge-tailed eagles will clean up carcasses in paddocks and compete with foxes for this carrion, reducing their numbers. If wedge-tailed eagles are uncommon in the area and foxes are a problem during lambing, remove afterbirth and dead lambs regularly. These can be dumped away from the lambing paddock where wedge-tailed eagles can find and consume them.

Scare them off

Predators are wary of people. If possible, move vulnerable stock closer to people while lambing i.e. near a house or farm headquarters. A few farmers have successfully trained their resident eagles not to bother lambing ewes, by scaring off the eagle with noise and movement each time it approaches the lambing paddock.

Plan your paddock shelter and layout

The best protection for lambs against death from exposure is adequate birth weight and lamb vigour, combined with paddock shelter and plentiful milk production in ewes.[12] Keeping the lambing flock close to the house or in a paddock of shelter trees can minimise lamb loss from bad weather and predation.

Coordinate with neighbours

If possible, time lambing to coincide with that of neighbours to spread the attention of foxes and stray dogs.

Protect local wedge-tailed eagles

Resident adult eagles will defend their territory against other vagrant eagles. Removing a resident eagle creates an open territory. Because territories are in short supply, this will result in an increased number of eagles while new ownership of the territory is sorted out. Protect existing nests and breeding sites.

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About wedge-tailed eagles

Wedge-tailed eagles are an iconic Australian bird that are fascinating to watch. The females are larger than the males. The males have a wingspan of about 1.9m and females about 2.3m. Eagles form a pair that bond for life, only changing partners when one of the pair dies.(1)

Populations of eagles are naturally self-regulatory, based on availability of food.(1)

Wedge-tailed eagles usually breed once a year, but only when their prey is abundant. Studies have found that where rabbits were in very low numbers eagles failed to breed.(2) Breeding occurs in late winter and eggs hatch during September/October. Although they lay two eggs, usually only one chick survives to fledge. Fledglings leave their nest in late November and remain with their parents until late autumn.

As with most raptors, many juveniles do not survive to maturity. These are long-lived birds, living to over 30 years of age (over 40 years in captivity).

Most territories have several nests usually within a few hundred metres, but one is favoured for breeding. Anyone approaching the nest between when the eggs are laid and when the young fledge will usually cause the adults to abandon the nest. There are reports of nests being used for over a century.

Further reading

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What can I do?

- Learn about wedge-tailed eagles and how you can live with them on your property.
- Protect nesting sites from disturbance, especially during the breeding season (typically Aug-Oct).
- Be careful and conservative when using farm chemicals as secondary poisoning is a real issue.
- Ensure any shooters on your property are aware of the legal protection for all birds of prey.
- Report dead or injured eagles to your local landscape board.
- Share what you have learnt about living with wedge-tailed eagles with your neighbours.

Contact us

Visit www.landscape.sa.gov.au to find contact details for your local landscape board.

Acknowledgement:

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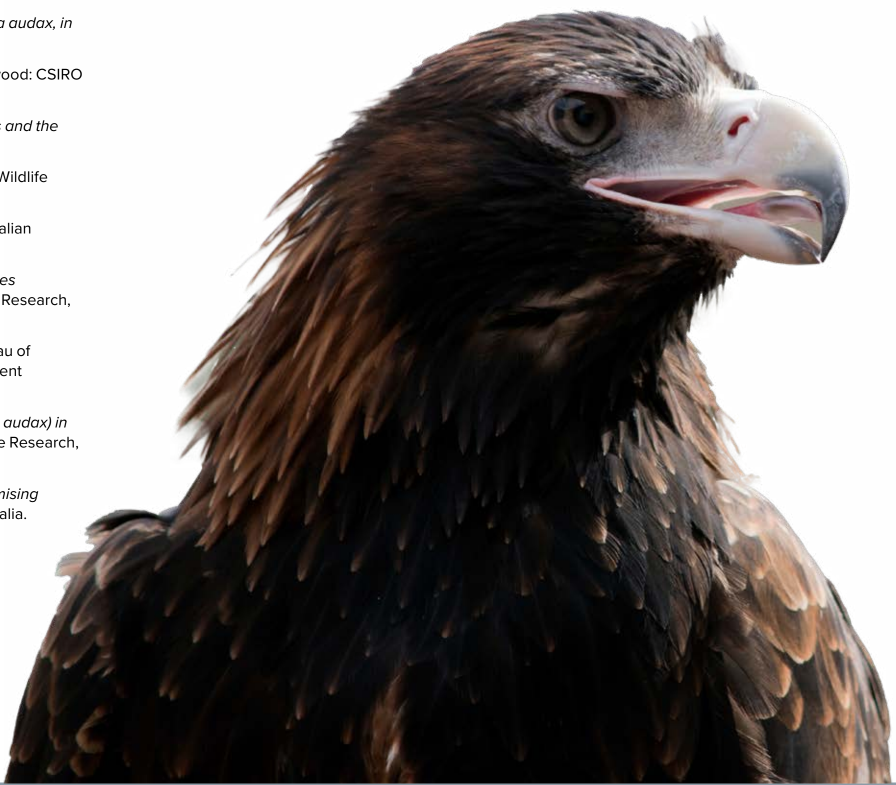

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