

The Rabbit Problem

Wild rabbits in Australia

The European wild rabbit is an introduced pest throughout the southern two thirds of Australia. They affect natural environments, primary production, and even townships and infrastructure. Wild rabbits are 'ecosystem engineers' of the worst kind; they change the fundamentals of whole ecosystems, degrading entire landscapes. Their broad distribution, and the nature of the problems they cause, make them the nation's worst vertebrate pest. European wild rabbits adversely affect over 300 threatened native plant and animal species, change landscapes, and cause losses of over \$200 million a year to crop and livestock production.

Rabbit impacts

The presence of rabbits in a landscape sets in train a web of inter-related impacts.

As grazers they reduce plant biomass. When in high densities they heavily degrade pastures and bushland, even to the extent of inviting widespread erosion. At medium densities they open up bushland (reducing groundcover) and consume crops and pastures (changing pasture composition and creating opportunities for weeds). At lower densities, even down to one rabbit per two hectares, their preferential grazing targets preferred species and can prevent the growth of palatable seedlings – changing the entire structure of plant communities and the ecosystems they support.

If rabbits are seen they are already abundant enough to be harming the environment.

Rabbits also serve as a filling and relatively easy meal for feral predators such as cats and foxes. Predation can help contain rabbit numbers, especially at low densities, but it is not enough to control rabbits. At high densities, rabbits easily outbreed the pressures from predators. As rabbits help sustain feral predators, rabbit control should be a first step in feral cat and fox control; reducing rabbit numbers can make predators more likely to take baits. Without rabbits, vegetation is denser, better protecting small animals from predators.

Reductions in plant cover due to rabbit grazing and warren establishment leave lands open to erosion (and subsequent water resource degradation) as well as weed growth. Reduced plant biomass, above and below ground, results in less carbon sequestration.

Grazing and nibbling by rabbits also affect many forms of primary production in addition to cropping and grazing. Those industries include viticulture (especially the loss of young vines), annual horticulture, turf and nursery production, and forestry. The threat they pose to revegetation programs necessitates increased expenditure, time and labour installing tree-guards, while their digging and nibbling can be the bane of green-keepers and parkland managers.

Urbanised locations are not free from rabbit impacts. Peri-urban areas around Australia suffer from rabbits invading backyard gardens and they have undermined infrastructure from humble garden sheds and tanks to railways and industrial facilities. Cultural heritage sites, e.g. cemeteries and burial grounds, are also affected.

Social impacts from rabbits include coping with the harm caused by rabbits, prioritising time and funds to their control, and overcoming an antipathy to having to destroy them and their warrens.

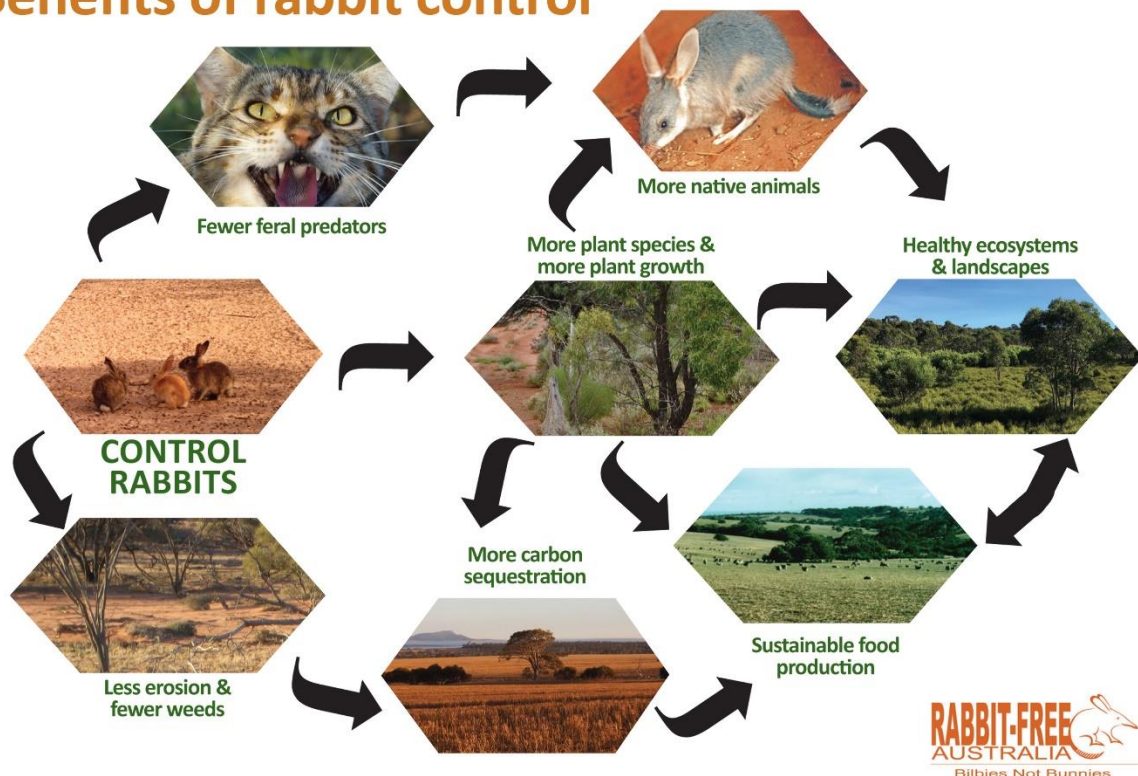
While some rabbit impacts are obvious, many are unseen. Only experienced eyes will 'see' what is not there - things like the absence of seedlings. Similarly, many land managers have not seen the damage caused by rabbits prior to the introduction of calicivirus (RHDV) in the early 1990s. Some assume that biological controls have effectively controlled rabbits. They haven't. Bio-controls are not sufficient to prevent all rabbit impacts, and their effectiveness can wane over time. Additional ground control is often necessary and ongoing research is essential to ensure new controls are available when required.

Benefits of Control

The benefits of rabbit control include:

- **More plant species and more plant growth.** Rabbits are selective feeders and, even in low numbers, can eliminate entire species of plants. In high numbers they can wreak havoc across entire landscapes.
- **Fewer feral predators.** Rabbits can be easy tucker for introduced predators like feral cats and foxes – helping to sustain those species and hence their predation on native animals.
- **Less erosion and fewer weeds.** The burrowing of rabbits and their destruction of vegetation can leave land bare and open to erosion, the degradation of waterways, and invasion by weeds. Rabbits can also undermine roads, water-tanks and even buildings.
- **More native animals.** More abundant and healthier bushland provides food, shelter and nesting options for a myriad of animals which, together with fewer feral predators, results in healthier populations of native animals ranging from invertebrates to reptiles, birds and mammals.
- **Sustainable food production.** Controlling rabbits results in more crop and pasture growth and production, less damage to infrastructure, and lower costs of production due to less need for pest and weed control.
- **More carbon sequestration.** More plant growth equates to more carbon sequestration.
- **Healthy ecosystems and landscapes.** All of the above improve the health of our Australian landscapes and natural ecosystems.

Benefits of rabbit control



Key References:

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