

Rabbit Control in times of Natural Disaster

About Rabbits

Rabbits are prolific breeders whenever seasons are favourable. A single doe can produce up to 60 offspring a year. The size of their litters (4 – 8 kittens) and their short gestation period (around a month) enable their rapid recovery after traumatic events, such as drought and bushfire. Their ability to recover so quickly gives them a ‘head-start’ in times of recovery; their numbers grow faster than other animals enabling them first go at regenerating pastures and vegetation, and letting them dominate the landscape (Williams et al. 1995).

Rabbits are selective eaters when conditions are favourable. They choose nutritious, palatable feeds first and their acute senses enable them to sniff out their preferred species. Palatable seedlings and pastures are particularly prone to intense grazing pressure, even when rabbits are at low densities. One rabbit per two hectares will completely prevent the regeneration of palatable species. For native plants that only set seed periodically, e.g. after fire or soaking rainfalls of decadal intensity, the presence of rabbits will annihilate an entire generation of plants. Rabbits are a major threat to the recovery of landscapes following natural disasters (Cooke et al. 2014).

As an example, in 1974, wildfires killed mature mulga trees (*Acacia aneura*) over large areas in north-west South Australia. Those former arid woodlands have never recovered because rabbits have continuously eaten any seedlings that regenerated and the seed stock that survived the fires has been depleted.

Warrens, or above ground harbour, are crucial for rabbits. They provide nesting sites for secure breeding as well as shelter from extremes in weather and predators. If warrens are abandoned during drought or due to a wave of biological control sweeping through, they will be promptly re-opened as conditions improve. Rabbits prefer to re-use warrens than dig new ones. Destroying warrens is a key to restraining rabbit breeding and re-infestation.

Rabbit Control

Recommended practice for rabbit control is to use a combination of phased interventions:

- Knockdown – initial control to reduce rabbits to manageable levels, e.g. biological control, poisoning or taking advantage of low rabbit numbers after fire or drought.
- Knockout – extensive, often more targeted, control to reduce numbers and inhibiting breeding or reinfestation, e.g. warren destruction or harbour removal.
- Mop-up – locating and cleaning up remnant rabbits and warrens, e.g. fumigation or shooting.

Rabbits can quickly extend their range in favourable seasons, moving across property boundaries and re-opening abandoned warrens. Best practice rabbit control encourages neighbourhood approaches. Rabbits are a staple diet item for feral cats and foxes, helping sustain their populations, so controlling feral predators in conjunction with rabbits is also recommended.

Rabbit control during drought or following bushfires is an opportunity to knockout rabbit populations while they are reduced and concentrated in refuge areas. Doing so will optimise the rate and quality of landscape recovery for bushlands, grazing and agriculture.

Knocking out warrens and other breeding harbour will be a key to effective disaster-based rabbit control. Studies have shown that ‘well-implemented, coordinated rabbit control programs based on warren ripping will consistently result in large and sustained reductions in rabbit numbers’ and will ‘reliably reduce rabbit numbers for up to 10 years’. Public investments in subsidised warren ripping programs in Victoria were highly cost effective, with a benefit/cost ratio greater than 10:1 (McPhee & Butler, 2010).

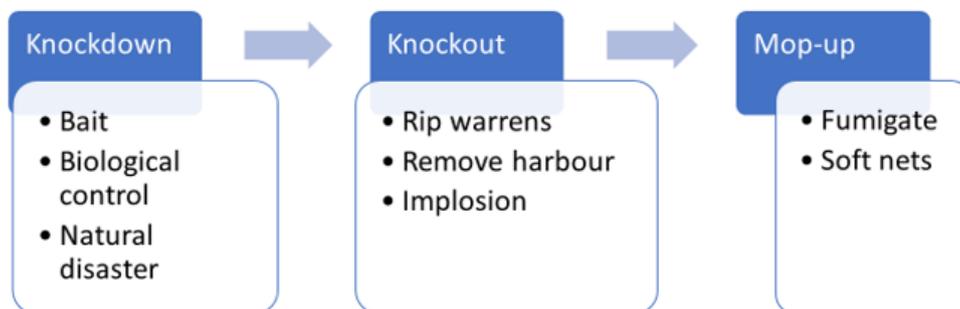
Another important ingredient to effective pest control is planning. The best advice available to land managers is to adopt an adaptive management, or a 'plan-do-review' approach ([pestSMART](#)).

Assisting Land Managers

Dealing with the experience and impact of a disaster is traumatic for many people. Common reactions include feeling overwhelmed, unable to focus and being unable to plan ahead ([Beyond Blue](#)). For land managers there is also the pain of seeing the land and animals they care for being reduced to a devastated state. On top of the trauma are the economic stresses of insufficient money and time to respond to the many factors demanding attention.

Reflecting on the factors discussed above ramping up planned, well-coordinated, programs of feral pest control will help land managers to cope, financially and socially, with natural disasters. Working across neighbouring properties (regardless of tenure and land use), and dealing with several pests concurrently, will improve landscapes and whole communities. Forms of useful assistance could include:

- Assessment and Planning
- Coordination
- Training
- Machinery and equipment hire, operating expenses or contract services
- Survey and monitoring
- Mop-up equipment and supplies.



References

- Beyond Blue – <https://www.beyondblue.org.au/the-facts/natural-disasters-and-your-mental-health>
- Cooke B, McPhee S & Hart Q. (2014) 'A threat to conservation and natural resource management'. MLA & AWI
- Finlayson G, Taggart P & Cooke B. (2021) 'Recovering Australia's arid-zone ecosystems: learning from continental scale rabbit control experiments.' Restoration Ecology
- McPhee SA & Butler KL (2010) 'Long-term impact of coordinated warren ripping programmes on rabbit populations'. Wildlife Research 37, 68-75.
- Peacock D, Cox T, Strive T, Mutze G, West P & Saunders G. (2021) 'Benefits of rabbit biocontrol in Australia: an update.' Centre for Invasive Species Solutions
- pestSMART - <https://pestsmart.org.au/pest-animals/glovebox-guides-order-form/>
- Williams K, Parer I, Coman B, Burley J & Braysher M. (1995) 'Managing Vertebrate Pests: Rabbits.' Bureau of Resource Sciences & CSIRO Division of Wildlife & Ecology. Australian Government Publishing Service, Canberra.