

Management of rabbits in rural areas

Fact sheet | January 2018



Rabbit in Flinders Ranges National Park. Credit: Scott Jennings

European rabbits (*Oryctolagus cuniculus*) are a serious invasive pest in Australia. Rabbits cause millions of dollars in damage to crops annually and, even at very low numbers, cause major impacts to the natural environment.

Once established in rural areas rabbits can cause extensive damage to crops, pastures and native vegetation and are difficult to control, requiring constant landholder action to manage. Rabbits construct burrows that enable them to survive a wide range of environmental conditions. They adapt to a wide range of food types and their ability to graze plants to ground level contributes to the enormous damage they cause. It is the legal responsibility of the land owner to control rabbits on their property, and penalties can be imposed for failing to do so under the *Natural Resources Management Act 2004*.

Identifying the problem

The first step is to identify the location of any warrens or cover above ground that may harbor rabbits. This could be plant beds or woodheaps that provide rabbits with some refuge. Rabbits are territorial and generally

don't travel more than 200 metres from their home, feeding mostly within 25 to 50 metres.

Look for signs of where rabbits have been active, such as burrows (figure 1), fresh scratches in the soil, scattered or piled dung and damage to vegetation.

Locate the shelter being used and make an estimate of the total area within which the rabbits move. This is the area that your control program will need to concentrate on. Rabbits do not respect property boundaries and will quickly invade. It is best to take joint action with your neighbours and do rabbit control work at a similar time.



Figure 1. Rabbits sitting on a warren. Credit: Liz Poon CSIRO

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Preparation and planning

To achieve the best results, a control plan should be prepared in advance so that the chosen control methods can be carried out at the appropriate time and in the appropriate sequence. Always select the most appropriate methods of control that are suited to your situation.

Natural Resources South Australian Murray-Darling Basin District Officers are able to help plan your program.

Choosing control methods

There are a number of methods that can be used to control rabbits. To achieve good results it is best to use a number of approaches in a regular manner. Late summer or autumn is the best time to do rabbit control work because food sources are low, rabbits are not breeding and dry soils make it easier to collapse burrows.

Rabbits are pests in the wild but they must still be controlled in a humane manner. If in doubt seek further advice from the Pest Smart website at <https://www.pestsmart.org.au/animal-welfare/>.

Baiting

Baiting is the main control method for rabbits. It is best undertaken in late summer or autumn when rabbits are at their most vulnerable as food is scarce so they can be more easily trained to take bait. There are two main chemicals that are used for rabbit control, being Sodium Fluoroacetate (1080) and Pindone. Landholders

can only access the regulated chemical 1080 through local Natural Resources Centres, as strict conditions of use apply.

Pindone is the only poison bait that can be used in urban situations for rabbit control but its use is restricted to properties larger than 1000m², and it can only be used in accordance with label instructions.

For all baiting programs, 'free feeds' are laid a few days apart followed by the 'poison feed', which is laid only where the free feeds were eaten. The amount of free feed needed depends on the type of bait used.

Baits can be laid as a trail through the feeding area or in bait stations within the feeding area. Rabbits are very territorial and like to investigate freshly disturbed soil to identify who or what has entered their area.

For best results it helps to make a trail by scraping a shallow furrow using a bait laying machine (figure 2), plough, grader blade or simply by dragging a hoe or mattock across the ground.

The trail should be made throughout the area where the rabbits are actively scratching and feeding, not just around the warren openings.

As a guide for a large-scale program, establish about 20 km of trail per 100 hectares of rabbit infestation. Read and follow instructions on the product label and accompanying information for full directions of use and safety information (figure 3). For effective long-term control, baiting should be followed by ongoing fumigation and refuge/ warren destruction.



Figure 2. Bait laying machine for towing behind a vehicle



Figure 3. Sealed, labelled containers for transporting and storing 1080-coated oats

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Bait type	Suppliers	No. of free feeds before poison feed	Free feed interval	No. of poison feeds required	Poison feed interval
1080-coated oats	Only available from Natural Resources Centres	3*	3 days*	1*	-
Pindone-coated oats	Available from agricultural supply retailers and some Natural Resource Centres	1-2	3-5 days	3*	3-5 days
Pindone-coated carrots	Available from vertebrate pest controllers and some Natural Resource Centres	1-2	3-5 days	3*	3-5 days

*Note: mandatory

Ripping

Warren destruction is the most important part of effective and long lasting rabbit control. Thorough ripping is the best way to destroy warrens, burrows and holes (Figure 4).

Ripping is best undertaken following a baiting program. Begin ripping 3 metres outside the furthestmost hole with ripping tines that are at least 90 cm long. Rip a series of parallel lines 40 cm apart, across the warren. If you are not using winged boots on your ripping tines, or in heavier soil, rip another series of parallel lines (at 90 degrees) across the first rip line (cross ripping).

Consider contacting *Dial Before You Dig* to check for underground cables, pipes and other services before carrying out ripping. Remove all possible rabbit shelter. Rubbish, stumps, and other cover need to be pushed off warrens and buried.

Always check warrens on a monthly basis and treat any reopened holes. Reopened warrens can be re-ripped or treated with a fumigant to keep them closed.

This advice does not authorise the clearance or damage of any native vegetation.



Figure 4. Ripping deep and wide of the warren is important to destroy all the warren structure

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Removal of their refuge

Rabbits look for a sheltered place that provides protection from predators and is a safe environment to breed. They will either build warrens or shelter under thick vegetation or other materials such as wood piles.

A warren or burrow can be destroyed by collapsing it in on itself with earth moving machinery or hand tools, and then filling and levelling the area. If this is not possible (such as if the burrow is located under a concrete slab) then block the entrance to the warren with material that will prevent rabbits from reopening it, and consider fumigating the warren as well.

Any materials, such as wood, bricks and hard rubbish, should be removed or stacked at 50cm above the ground and in such a way that there are no cavities for rabbits to enter.

This advice does not authorise the clearance or damage of any native vegetation.

Your situation may require approval for native vegetation clearance or you may wish to notify the Department of Environment, Water and Natural Resources on your intention to undertake a ripping program. This can be done here at <http://www.environment.sa.gov.au/licences-and-permits/native-vegetation-clearance-forms>.

Fumigation

If a rabbit warren has been located and it can be easily accessed, fumigation may be an option. Fumigation will only control rabbits present in the burrow at the time of fumigation and so is less effective than baiting. It can be useful in situations where baiting is not an option. Fumigation is best done in late summer or autumn.

Nearly all available rabbit fumigant products are Schedule 7 poisons and therefore are restricted to purchasers who have specific chemical safety accreditation.



Fumigants can also be used to treat small rabbit infestations where poisoning cannot be used or where ripping is not practical. Steep banks, fence lines and warrens under trees are best treated by fumigation.

It is recommended that fumigation be carried out only by a suitably qualified person or contractor.

Biological control

There are two types of biological control agents present in Australia, Myxomatosis and Rabbit Haemorrhagic Disease. Their effectiveness varies considerably from year to year as they are dependent upon a range of environmental factors. There are no consistently reliable methods which can be used to accurately predict the timing or impact of Myxomatosis or Rabbit Haemorrhagic Disease on rabbit populations. However, if they do occur in an area it is important to implement additional control measures to capitalise on their effects.

Trapping

Trapping is not an effective way to reduce high numbers of rabbits quickly as it requires a significant amount of time and effort. Jawed traps must have rubber jaws, and cage traps may be suitable to trap rabbits if they have a base plate or peddle type trigger (figure 5). All traps must be checked regularly and rabbits contained must be destroyed humanely. Once trapped, it is an offence to release the rabbit alive.



Figure 5. Traps must be checked regularly to ensure trapped animals do not suffer

Ferreting

The use of ferrets may be an option to remove rabbits from warrens in some circumstances. Check with ferret clubs or organisations. Ferrets cannot be used to kill rabbits, and all animals should be humanely euthanised.

Exclusion fencing

Wire exclusion fences can be used to keep rabbits out and prevent damage in certain areas, but will not reduce rabbit numbers. The fence should be 60 cm high, fixed securely to posts and buried into the ground to a depth of 30 cm. The wire mesh netting must have holes with a maximum diameter of 30 mm. Rabbit exclusion fencing may also trap native wildlife and so should be checked regularly for unintended impacts.

Repellents

Substances that repel or discourage rabbits may be useful in reducing damage, but they do not offer long-term control. There are commercially available products as well as various home-based preparations containing substances such as pepper, chilli, lime and sulphur.

Declarations

The following sections of the Natural Resources Management Act 2004 apply to wild rabbits in the South Australian Murray-Darling Basin region:

175 (1) Cannot bring the animal into the region

175 (3) Cannot spread animals to areas where it doesn't already exist

176 (1a) Cannot keep a declared animal

177 Cannot sell the animal

179 Must not release the animal in the region

182 (2) Landowner must control and keep controlled wild rabbits

185 (1) The NRM authority may recover costs for control of pest animals on road reserves from owners of adjoining land

For more information

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Mt Barker – T: 08 8391 7500

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www.naturalresources.sa.gov.au/samurraydarlingbasin



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