



Rabbits: control in urban areas

Paul Hay (Box Hill)

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This Landcare Note provides advice on rabbit control activities in urban and semi-urban areas where many of the normal rural methods of control are not possible.

Rabbits have been significant pests in Australia since they were released near Geelong in 1860. Australian conditions suited them well and they have bred prolifically.

Rabbits are Australia's most serious pest animal. They:

- destroy plant communities;
- cause soil erosion; and,
- compete with native fauna for food and habitat.

Their population in Australia has been estimated as between 200 and 300 million.

Their numbers were radically reduced in the 1950's with the introduction of the myxoma virus but since then the virus has become much less effective, as both the genetic make-up has changed and rabbit resistance has built-up.

Scientific update.

Another virus which produces rabbit calici disease (RCD) has recently been introduced to Australia. It is an infectious and lethal disease of rabbits. It was first observed in China in 1984 and then subsequently found to have moved to Europe and Mexico. Trials have shown it to be specific to the European or wild rabbit.

A RCD vaccine is available for use with pet rabbits and with commercially farmed rabbits.

RCD is transmitted to rabbits through direct contact, most likely from birds, insects and other animals but only if the virus particles move from the carrier to the rabbit within a few hours. Rabbit droppings, vehicles, clothing and footwear may also spread the disease.

Points to note about RCD

- RCD alone will not eradicate rabbits.
- RCD must be used in conjunction with traditional control methods.
- RCD is not a haemorrhaging disease.
- Not all rabbits exposed to RCD will die from it. Some exposed rabbits, especially those under 8 weeks, old will live a full life span and breed as normal.
- Offspring of female rabbits carrying the RCD virus will receive maternal antibodies.

Rabbit biology and behaviour

It is necessary to understand how rabbits function and behave before designing a control program.

1. Rabbits have a hierarchy in which dominant males mate with dominant females. When non-dominant rabbits are excluded from 'family burrows' they seek other feeding areas and establish other warrens.
2. Rabbits are territorial. Brave rabbits generally feed further from the warren; shy rabbits feed closer to the warren. Rabbits may not find (and therefore not eat) bait placed outside their feeding areas.
3. Rabbits are prolific breeders able to produce numerous litters per year. This usually occurs during the wetter months, including wet summers.
4. Survival of young is substantially increased when rabbits have safe harbour, especially earth burrows.

Planning a rabbit control program

Points to remember

Rabbit control is achieved efficiently and effectively through a combination of control measures, not just one. There is no quick-fix solution. Landholders must be more persistent than the rabbits!

One rabbit is one too many. Rabbits are not native to Australia and are not part of the natural landscape.

Native wildlife may also be using rabbit harbour. Make provisions for wildlife as required.

Planning Your program

Planning can maximise rabbit control while minimising damage to other animals. Consider the habitat in which the rabbits are living as this will determine what action is appropriate. The following steps will be help in planning.

1. Work together.

Work with neighbours. Work done on your property will be wasted if rabbits can re-colonise from other areas. Find out what adjoining property owners are doing to control rabbits. Be aware that neighbours might have a different view of the extent of the problem. Perhaps they are not being uncooperative; they prefer other options

2. Be rabbit free

Use rabbit proof fencing to enclose rabbit harbour "hot spots". Well maintained fences stop rabbits from damaging valuable plants and your property. Work with adjoining neighbours to fence the whole area, or individually to protect your own property.

3. Identify rabbit feeding/living areas in and around your property.

Map these areas for future reference. Rabbits are territorial and may live in burrows or harbour under boulders, houses, bungalows, wood heaps, proclaimed and environmental weeds.

4. Assess the number of rabbits on your property.

The best time to make observations is early in the morning (ideally around 0200-0300 hours) or at dusk. With a torch, walk around their property and record the number of rabbits, what they are feeding on and where they run to (ie: live).

5. Eliminate all known rabbit habitat/harbour.

Trim under all hedges and thickets of scrub to destroy possible harbour. There is a close association between rabbits and weeds (ie introduced plants and introduced animals eg blackberries and rabbits.)

Indigenous vegetation is protected in your area under local government planning schemes. Contact your local council before clearing any indigenous vegetation.

It is your responsibility to control rabbits on your property.

Remember rabbit control is time-consuming and that there is no quick fix solution.

Methods of rabbit control

1. Rabbit-proof fencing

This involves constructing a fence around a property to exclude rabbits. There is material specifically designed for constructing such fences. Ask for "rabbit proof fencing" when making inquiries.

There are two main rabbit fence designs. Either 18cm of the fencing wire (mesh) is buried in the ground, or the lower section of the wire mesh is angled to lay on the ground facing in the direction of possible rabbit entry. The wire must be held down securely with pegs, rocks or timber.

More information on this type of fencing can be obtained from manufacturers brochures or from Landcare Note LC0342: *Rabbit proof fencing*

Once you have "rabbit-proofed" your area, follow up with other techniques (eg. fumigation, ripping) to remove rabbits within the "proofed" area.

Rabbit-proof fencing is a one-off process. With proper maintenance fences should last up to 20 years. It is a relatively most cost effective method of rabbit control.

Well built and well maintained fences can keep properties free of rabbits.

One consequence of such fences is that the movement of some native animals may be limited by rabbit proof fencing. Contact the local Flora and Fauna Officer at NRE for more information.

2. Ripping and harbour destruction

This method destroys areas where rabbits live and shelter. A rabbit control program will fail unless burrows or other harbour is destroyed.

Ripping of warrens (if feasible) and harbour destruction should be done after fumigation or poisoning as part of a follow-up technique.

Before you begin:

- Make sure all rabbits are driven underground, either by running dogs over the area, or by making enough noise to scare rabbits into their burrows.

Then

- Remove all harbour. This may be blackberries, logs, fallen timber or bracken. Be aware of native wildlife colonies that might be using the rabbit harbour
- Use a single or double tined ripper to rip burrows. A powerful tractor may be required for some areas. Start ripping at least 3 metres out from the outermost opening. The distance between rip lines should be no more than 40cm. Rip to a minimum depth of 80 cm (if possible), then cross-rip afterwards. This ensures thorough destruction of warrens and reduces possibilities of rabbit re-infestation. Where ripping on slopes, make sure the final rip lines run across the slope, to minimize possible soil erosion problems.
- Check the area a week later for signs of re-use by rabbits. If there is fresh activity, fumigate or rip again. When you are sure all rabbits have been removed, level the area off and revegetate with appropriate species.

More detail on this activity is given in Landcare Note LC0297: *Rabbits: Ripping and other harbour destruction.*

3. Poisoning

Poisoning is usually very effective in quickly reducing rabbit numbers, but must be done in conjunction with fumigation and harbour destruction.

The poison "1080" is not appropriate for use in urban or semi-urban areas, especially where non-target animals are at risk.

Pindone is more suitable for urbanised areas. It has an antidote (vitamin K1).

Pindone is a registered rabbit poison. The product label provides specific directions for use and must be understood prior to its use.

The procedure for a pindone poison rabbit control program is given in Landcare Note LC0296: *Rabbit control using pindone poison.*

4. Fumigation

Fumigation of rabbits in burrows is an important option in rabbit control. It is a follow up technique to ripping and poisoning.

Nearly all rabbit fumigation products are Schedule 7 poisons and all persons using a Schedule 7 poison must have an Agricultural Chemical Users Permit (ACUP) or be under the direct supervision of an ACUP permit holder. (See Agriculture Note AG0626: Agricultural Chemical Users permits (ACUP) and chemical control areas(CCA).)

When fumigating burrows:

- Ensure all rabbits are in burrows
- Treat every hole of every burrow
- Seal each hole securely with soil
- Ensure all seals are air-tight for maximum effectiveness

Before using a fumigant always read the label thoroughly and then follow the instructions carefully.

Further information is contained in Landcare Note LC0295: *Rabbits: Methods of fumigating rabbit burrows*

5. Wire cage trapping

Trapping is not a recommended method of control as it is a slow, long-term process with variable results. Further it is costly and inefficient.

The advantages of cage trapping are that non-target species caught can be released, and that no poison is used.

There are two methods of cage trapping. One involves placing a wire cage at the entrance to the burrow; the other uses a wire cage placed in the open.

6. Ferreting

Ferreting is a useful means of control if rabbit numbers are fairly low. Ideally it should be done in conjunction with other methods (such as fumigation). It is regarded as time consuming and inefficient when rabbit numbers are high.

7. Leghold trapping

Small leg hold steel jaw traps have little utility in urban or semi-urban areas. They cannot be used unless done so in accordance with the *Prevention of Cruelty to Animal Act* 1986 and the Code of Practice for the use of Small Steel-Jawed Traps. Under the Act the use of small steel jawed traps:

- is prohibited on Crown land
- is prohibited in “an urban area which is not predominantly for agriculture”.
An urban area is defined for this purpose in the Act (see Section 15) as land that is predominantly:
 - subdivided into allotments for residential purposes (up to 0.4ha);
 - able to be used under a planning scheme for residential, industrial or commercial purposes; and,

- provided with constructed streets and public utility services.
- is prohibited except in if done so in accordance with the Code of Practice and with the consent of the owner or occupier of the land. See Agriculture Note AG0010: *Code of practice for the use of small steel-jawed traps* for details of the code.

Contractors and suppliers

There are various contractors who can carry out rabbit control programs. Consult the yellow pages of the local telephone directory.

For supplies of fencing material and wire netting, look under the "Hardware" and "Rural Merchants" sections of the yellow pages of the local telephone directory.

Further information

Your local council or the Department of Natural Resources and Environment (NRE) may provide additional information to help plan your control program.

Acknowledgements

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