

CONTROL METHODS

Night shooting

A successful night shoot can reduce a rabbit population by about 30 percent with two or three shoots necessary to gain good control. It is important to effectively cover all areas as any rabbits that have been missed become wary of a spotlight or the sound of a gun.

You must have a licence before using a firearm. Use a gun with extreme care, especially where there are likely to be people or animals nearby.

Poisoning

Rabbit poisons can affect all warm-blooded animals including humans. Read the instructions carefully before use.

Poisoning is the most cost-effective method of controlling rabbits. Poison is most effective from March to September, outside the main breeding season, when the young are likely to survive in burrows and re-infest an area.

Pindone

Pindone is an anticoagulant which uses the same principle as rat poisons. A controlled substance licence (CSL) is not required to use pindone in pellet form, which may be laid around buildings and residential areas if treated with the same caution as rat poison. Keep away from children and pets and follow label directions.

Fumigation

Magtoxin is available as a small tablet which releases the toxic gas phosphine when exposed to moisture. Phosphine is a colourless gas with a garlic smell.

Typically 2-3 tablets down a rabbit burrow will be enough to kill any animals in it. When fumigating, make sure all burrow entrances are blocked. A small amount of water can be used to make the Magtoxin react if the soil is dry.

Fumigation is a good follow-up method to shooting or poisoning and will kill young rabbits that may otherwise survive.



HABITAT CHANGE

Habitat modification is one of the best ways to limit rabbit numbers. Rabbits prefer short, over-grazed pasture so leaving grass a bit longer creates a less palatable place for them to live. Long grass also encourages rabbit diseases and will keep them wet and cold so the young are less likely to survive.

The removal of rubbish piles, vegetation, weeds – like gorse and blackberry – and logs can also help keep rabbit numbers permanently down.

RABBIT CALICIVIRUS (RCV)

Rabbit Calicivirus is a naturally occurring virus that came from wild rabbits in China in the 1980s and is now found in 41 countries.



It was introduced to New Zealand illegally in 1997 and spread widely, reducing rabbit numbers in many areas of the country. After the initial illegal release, the virus could be bought by the public and was released in Northland. It continues to kill in some places. RCV only infects rabbits of the species *Oryctolagus cuniculus* and has no reported effects on humans or other animals.

For more rabbit control information go to:
www.nrc.govt.nz/pestmanagement
www.npca.org.nz or www.ermanz.govt.nz

Contact us:

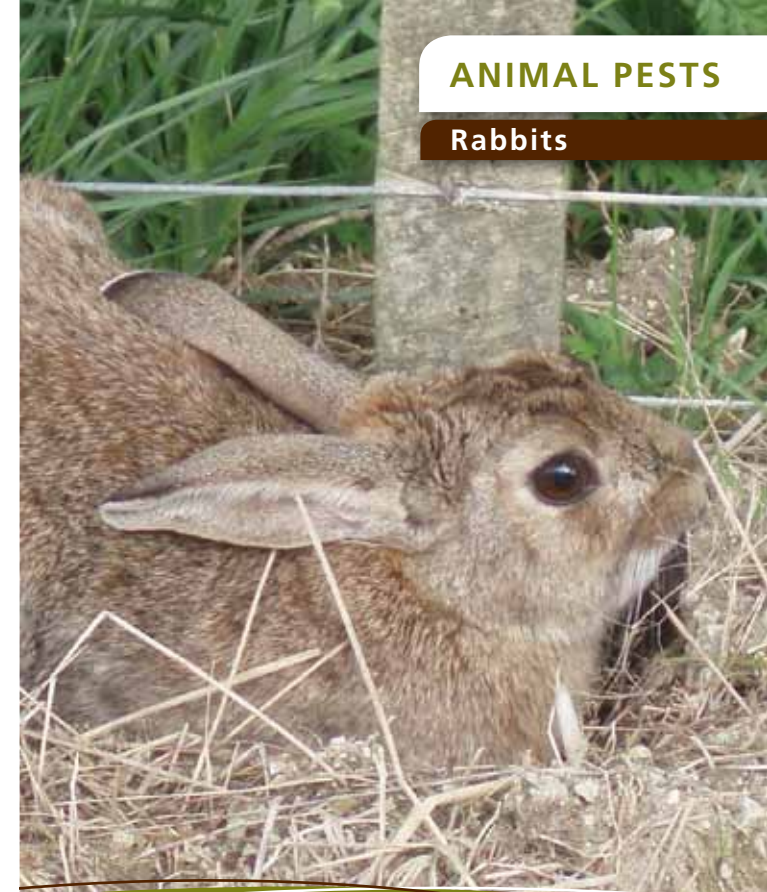
For further information contact
Northland Regional Council Biosecurity staff
0800 002 004 or www.nrc.govt.nz

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ANIMAL PESTS

Rabbits



Rabbits

Oryctolagus cuniculus

- > Repellents, fencing and protective devices
- > Control methods
- > Habitat change
- > Rabbit Calicivirus

Putting Northland first

Did you know – ten to 15 rabbits eat as much grass as a sheep? Rabbits were first released in New Zealand by Captain Cook in 1777, and settlers introduced more to provide food, fur, and sport. By the 1870s they were well established.



- Wild rabbits sour pasture by eating the best grass, and their digging can expose vulnerable soils to wind erosion and invasive weeds. They also permanently damage seedling trees and are a nuisance in vegetable gardens.
- They prefer lighter soils in open country, among scrub in rocky places and plantations. They thrive on land that receives less than 1000mm of rain per year, is in a sunny position, and has light soil, good drainage and shelter within easy reach of short grass and open ground.
- Rabbits live in colonies or warrens, which can be extensive with many interconnecting burrows. They are nocturnal, spending most of the daylight hours below ground.
- Rabbits tend to use a communal 'toilet' or mound – pill heap – to deposit their faeces and urine, and these along with scratch marks define their territories.
- Under ideal conditions a female rabbit can produce 30 young a year. Rabbits breed throughout the year, although the main breeding season is spring to early summer. The gestation period is 28-30 days and the litter size is three to seven. The doe (female) usually mates within 12 hours of giving birth.
- Northland's wet clay-type soils and high rainfall prevent rabbit numbers from becoming too high, more so than in other parts of the country, such as central Otago, which has low rainfall and dry soils.
- There are generally low numbers of rabbits in most areas of Northland with more during spring and summer, which can cause severe damage to new plantings and home gardens.
- Northland has sandy coastal areas and areas with dry volcanic soils, which rabbits prefer. These areas can produce high numbers of rabbits during dry periods so they can suffer major damage.

REPELLENTS, FENCING AND PROTECTIVE DEVICES

Repellents are sprayed, painted or rubbed onto young trees. If used correctly they will prevent rabbits from browsing on new plantings. The most common repellents are:

- Eggs mixed with acrylic paints;
- Mutton fat with kerosene; or
- Thiropel (commercial repellent sold as Thiram).

Repellents are generally used in pine plantations, horticulture, landscape plantings and gardens. Fish fertiliser and mutton fat are not recommended for broadleaf species as burning may result.

Egg-based repellents

To make one litre of egg-based repellent that is suitable for treating 50 seedlings: mix 80g whole egg powder and 800ml water in 150ml of primal AC235 acrylic resin. Alternatively mix five fresh eggs and 600ml water in the 150ml of resin. Acrylic resin is available from paint stores. Spray about 20ml of the egg-based repellent on and around each seedling in the field immediately after planting. Further applications may be needed after heavy rain or in the spring.

Mutton fat and kerosene

To make a mutton fat and kerosene repellent mix one part kerosene and 10 parts melted mutton fat and allow it to set. The repellent is applied by wiping seedlings with a lightly greased rubber glove, leaving minimal visible fat. Dabbing the ground at the base of the tree and any supporting stakes will also increase the smell.



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Fencing

Fencing provides an alternative to repellents – which are only a short term solution – and poisoning, which isn't 100 percent successful. Fences will also protect trees against hares, which are very difficult to poison.

Pest-proof fencing can protect horticultural blocks that are growing high value crops and plant nurseries, where hares or rabbits are liable to cause damage.

Timber or corrugated iron fences

Timber paling fences about one metre high, with gaps between palings of less than 5cm, or corrugated iron fences, are suitable for small areas. There must be no holes at ground level.

Electric fences

Electric fencing works more effectively when hooked up to a mains power source. If you're using a portable electric fence unit it's a good idea to check the batteries regularly to ensure they are fully charged. Keep the vegetation under the fence low to stop the fence from shorting. The lower four wires on the fence should alternate between hot and earthed wires and each wire should be 8-10cm apart with the first about the same distance out from the base of the fence.

Protective devices

Protective devices which can be used for individual plants include:

- Fifty-200 litre drums, with the tops and bottoms removed;
- Wire-netting tubes staked with wire or wooden pegs to stop them being knocked over;
- Heavy clear plastic sheeting about 75cm-1m high, placed around the plant and held firmly by three or four stakes; or
- Wind-break material placed around the plant and pegged tightly to the ground.