Use of Poisons to Control Rabbits

Introduction
Poisons offer a cost-effective approach for reducing medium to heavy infestations of rabbits. Low numbers of rabbits can also be effectively controlled with suitable poisons. Care is required with poisons. Indiscriminate use will not only fail to properly control rabbits, it may also endanger human life, domestic stock, pets and native wildlife.

Two types of poison are commonly used for rabbit control: chronic poisons and acute poisons.

Chronic Poisons
These poisons are usually anticoagulant types which are slow acting and have a cumulative effect. Rabbits must consume several applications of treated baits over a number of days to acquire a lethal dose. Chronic poisons are relatively safe to handle and an operator’s licence is usually not required. The most commonly used rabbit poison of this type in the Bay of Plenty is Pindone.

Acute Poisons
These poisons are fast acting and will kill rabbits after a single dose. Acute poisons are potentially hazardous and are controlled pesticides i.e. an approved handlers licence is required to purchase and use such poisons. Before using an acute poison, several pre-feeds of untreated (non-poisonous) bait are laid to condition the target rabbit population into acceptance of the bait type. When these applications are being regularly eaten, a single application of treated (poisonous) bait is then laid. Common examples of acute poisons presently used for rabbit control in the Bay of Plenty are phosphorus and 1080.

Rabbit Infestation
Rabbit infestation is measured on the modified McLean scale. This scale is described in the pamphlet ‘Environment Bay of Plenty Rabbit Policy’, which is available at all Environment Bay of Plenty offices. Environment Bay of Plenty pest animal officers will assist with measuring rabbit infestations on properties if required.

The Regional Pest Management Strategy for the Bay of Plenty requires landowner/occupiers to keep rabbit infestations on their properties below level four on the modified McLean scale. However, rabbits at lower infestation levels can still cause significant damage to crops and tree seedlings.

General Poisoning Techniques
Points to consider before poisoning
1. Within rabbit habitats there are specific feeding areas and it is essential that ample baits be laid in these areas. Look for areas of closely cropped grass with associated droppings and scratchings. There will sometimes be ‘runs’ connecting these feed areas with burrows or cover.

2. During the main rabbit-breeding season (late winter to early summer) bucks vigorously defend their territorial boundaries and young rabbits do not travel far from their burrows. It is not advisable to try poisoning during this time.

3. Prevent any hunting within the area to be poisoned for at least three months prior to the intended operation. A quiet rabbit population will generally accept baits more readily allowing a good kill to be achieved.

4. Before starting an operation test the rabbit acceptance of baits. For small poison operations, feed baits (i.e. baits containing no poison) can be laid within one or two rabbit feed areas. Check baits over several days to ensure that rabbits are eating them. If large operations are planned, Environment Bay of Plenty pest animal officers will be able to assist with a rhodamine bait trial which can accurately predict the success of an operation using a particular bait and application method.
5 Plan stock movements in advance to accommodate the intended poisoning operation. Where baits are in paddocks, it may be a month or more (depending on weather) before uneaten baits degrade sufficiently to be non-toxic to stock. If using baits on spits, stock still need to be excluded from the operation area for two to three weeks during the course of the operation.

6 In the North Island, late autumn and winter months are good times for poisoning. During this period, rabbit acceptance of baits is generally good.

7 Notify all adjoining land occupiers of the intention to lay poisons. It is possible that poisoned animals may die on their land and expose dogs to secondary poisoning risks.

8 Ensure that poison warning notices are erected at all access points to the land being treated.

9 Consider the weather before laying baits. While rain may not completely wash baits out, it will affect the toxicity of poison baits. This may lead to rabbits eating sub-lethal baits, which often results in bait shyness.

Laying Baits

1 Use good quality fresh bait. Rabbits are selective feeders and will reject stale or tainted baits. Order in bait immediately prior to the operation start. If using carry bags to transport bait, ensure that they have been cleaned in fresh water. Do not use detergents as these are readily sensed by rabbits.

2 When using chronic poisons deploy ample bait. It is better to slightly over-feed than not to apply enough bait. Ideally it should take the resident rabbit population three to four days to eat all bait applied to feed areas. If all bait has been eaten within this time, the block has been underfed and the second feed should be applied at a higher application rate. If there is still bait remaining after four days, reduce the second feed accordingly.

3 Be thorough; ensure that all areas containing rabbit sign are treated with baits.

4 When applying baits in lighter rabbit infestations, it is better to lay more lines with less bait rather than few lines that are heavily baited. Coverage is very important to achieve a high success rate regardless of the level of infestation.

5 Where acute poisons are used, pre-feed baits must be available to the rabbits for at least one week. It is normal to apply at least two pre-feeds before the application of toxic baits when using acute poisons. Some individual rabbits may be hesitant feeders and must be given adequate time to accept baits.

Poisoning Methods

Hand broadcasting

This is the easiest and most common method of bait application. Baits are scattered by hand at the appropriate rate over areas containing rabbit sign. This method is suitable for applying pellet and carrot baits. Baits can be broadcast from motorbikes and ATVs, and some types of tractor and ATV fertiliser spreaders are suitable for spreading baits. Calibrate the spreader to the required application rate prior to carrying out the operation. Take care to avoid spreading or spilling poisonous baits outside the target area.

Spitting

Spits are simply sods of earth upturned with a spade or grubber. The smell of freshly turned earth reportedly attracts rabbits. This is an ideal method for treating small areas, but can be used in larger areas if paddocks are needed for grazing (see below). Compared with broadcasting, this method is labour intensive.

Applying phosphorus paste to a spit

Spitting is normally used for the laying of baits in paste form, although any type of rabbit bait can be laid on spits.

Spits are evenly spaced along set lines and spacing is determined by the level of rabbit infestation. Lines should cover all areas of rabbit sign. As a general rule lay 250–350 m of line per hectare. Baits are placed on the topside of the upturned spit and can be easily buried by turning the spit back into the hole. This is necessary if live stock need to be returned to the area before baits have degraded to a non-toxic state.

If using pellet or carrot baits, place 5–15 baits on each spit. With paste, apply a single bait
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Aerial Application
For large areas with high rabbit infestation and difficult access, cost-effective control is normally achieved by using top-dressing planes or helicopters to apply baits. Before considering this option, discuss your rabbit problem with the local Environment Bay of Plenty pest animal officer.

Suitable Poisons for Rabbit Control
The main poisons for rabbit control are:
- Pindone
- Phosphorus
- 1080

Before using any poison ensure that you read the poison label and comply with all handling instructions, and understand symptoms of poisoning and the recommended first aid treatment.

Pindone Poison
Pindone is an anticoagulant poison originally developed for rodent control. Rabbits are particularly susceptible to Pindone, while non-target species (dogs, birds and stock) are considerably more resistant. Humans are nearly 100 times more resistant to Pindone than rabbits. Pindone is a safe, effective and easy poison to use against rabbits, providing it is handled correctly and all instructions are followed.

Pindone pellets are generally effective in controlling most infestation levels of rabbits and are available in 2 kg, 10 kg and 25 kg bags. Rabbit acceptance of these baits is generally good but rain or heavy dew may affect the palatability of baits. Purchase only the amount needed to carry out the control operation as the pellets have a six to eight month shelf-life. The amount of bait needed for an operation is dependent on the rabbit infestation level and the size of the area to be treated. Also remember that two applications of bait will be required.

Pindone liquid concentrate is currently available to regional councils for experimental use. This product is applied to natural baits such as carrots, which are very attractive to rabbits. If intending to carry out rabbit control over large areas, the use of Pindone liquid may be a more cost-effective option. Contact your local pest animal officer for further information.

Phosphorus
Phosphorus is a controlled pesticide and an approved handlers licence is required. It is available as a 0.5 % w/w paste for rabbit control. Phosphorus can be purchased from Environment Bay of Plenty in 500 g tubes or 20 litre buckets. Non-poisonous pre-feed paste is also available. There are different paste formulations available for possums and rabbits. Use only rabbit paste. Possum paste does not attract rabbits.

Phosphorus is a very effective rabbit poison. It is relatively inexpensive and suitable for controlling small areas of rabbit infestation. As with all acute poisons, pre-feeding with non-toxic feed bait prior to the toxic application is essential for success. Phosphorus paste must be laid on spits. Warm weather may dehydrate paste baits affecting their palatability. Best results using this bait are usually achieved during the cooler months of late autumn and winter.

1080
1080 is a very effective poison for rabbit control. Compared with other toxins it is cheap and easy to apply. When used correctly, it is safe to handle and the dangers to non-target species are minimal. There are high secondary poisoning risks associated with its use however, and scavenging dogs are particularly susceptible.

The use of 1080 is controlled under the Pesticides (Vertebrate Pest Control) Regulations 1983. Operators must be licensed, (currently only employees of DOC, MAF or regional councils qualify) or be working under the direct supervision of a licensed operator.

1080 is mixed as a solution with various natural bait types and is also available as a prepared pellet or paste bait. As with other acute poisons, pre-feeding of non-toxic baits prior to the application of poison baits is essential.

For large areas with medium to high rabbit infestation, the use of 1080 bait offers the most cost-effective method of control. Contact your local pest animal officer for further information.

Bait Application Rates
The amount of bait applied in a poisoning operation is dependent on the level of rabbit infestation and the size of area to be treated. Application rates of different bait types vary and the following should be used as a guide only.
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Pellets
- Light infestation: 1–2 kg/ha
- Medium infestation: 2–3 kg/ha
- Heavy infestation: 3–4 kg/ha
- Severe infestation: 5+ kg/ha

Carrots
- Light infestation: 1–2 kg/ha
- Medium infestation: 5–10 kg/ha
- Heavy infestation: 10–25 kg/ha
- Severe infestation: 25+ kg/ha

Paste
- Light infestation: 100–200 g per 100 m of spit line
- Medium infestation: 200–300 g per 100 m of spit line
- Heavy infestation: 300–500 g per 100 m of spit line
- Severe infestation: 500+ g per 100 m of spit line

Safety with Rabbit Poisons
All pesticide containers are labelled with handling and storage instructions, poison symptoms and first aid treatment. Ensure you read and thoroughly understand these instructions before attempting to use any poisons.

The main points to consider are:
- Suitable storage in a lockable cupboard or shed. The storage area should be cool and dry and must not contain any foodstuffs, sprays or fuels to avoid contamination risk.
- Wear appropriate protective clothing while handling poisonous bait or material. e.g. overalls, rubber gloves and boots.
- Remove protective clothing and wash hands before eating or smoking after handling poisons.
- Comply with handling instructions as stated on the poison container label.
- Dispose of empty poison bags or containers according to the manufacturer’s instructions.
- Warn neighbours and the public of poisoning operations.

Poison licences
Applications for a licence to use controlled pesticides (such as phosphorus) can be made to the New Zealand Food Safety Authority (NZFSA) www.nzfsa.govt.nz/acvm.

In order to obtain a licence, the applicant must:
- Be 18 years or older.
- Have completed a course of study and pass examinations as prescribed by the NZFSA.
- Have had sufficient practical instruction to apply or use safely every controlled pesticide for which a licence is sought.
- Satisfy the NZFSA that he/she is a fit and proper person to be entrusted to apply or use the controlled pesticide.

For those people needing practical instruction on the correct use of controlled pesticides, Environment Bay of Plenty pest animal officers can give training on the proper and effective use of these poisons.

Environment Bay of Plenty pest animal officers are available to assist with assessing rabbit infestation levels. They will offer advice on appropriate baiting methods and bait application rates. Pindone baits, phosphorus paste and feed paste can be purchased from Environment Bay of Plenty.

Acknowledgements

Useful Contact:
Pest Management Services
P O Box 121
Waikanae
Ph:(04) 293 1392
Fax:(04) 293 1456

Poisons and Hazardous Chemicals National Information Centre, urgent information only:
Ph: (03) 474 7000

For further information and advice, contact your local pest animal officer at Environment Bay of Plenty:

Telephone: 0800 ENV BOP (368 267)
Facsimile: 0800 ENV FAX (368 329)
Pollution Hotline: 0800 73 83 93
Email: info@envbop.govt.nz
Website: www.envbop.govt.nz
Address: 5 Quay Street, P O Box 364, Whakatane, New Zealand

This fact sheet was prepared by Greg Corbett.

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