

Cyanide poison for possum control

Use for licensed operators

Sustainable
Options

Pest Animal Control 09

The Brush tail Possum (*Trichosurus vulpecula*) represents a significant and well documented menace to the environment and to the economic well-being of New Zealand. Cyanide poison provides an effective means of controlling possums whilst minimising the potential risk to the environment, birds and other non-target species.

Cyanide paste and pellets used by possum hunters is coloured green, so that it should not be mistaken for other non-toxic substances. Cyanide in all forms is a controlled substance and requires specific permissions to purchase, use, store and dispose.

How the poison acts

Cyanide acts by inhibiting the enzyme system involved in oxygen utilisation in body cells. Its major effect is on the part of the brain that controls breathing. If sodium or potassium cyanide (as in possum paste and pellets) is swallowed, it is converted by the acids in the stomach into hydrocyanic acid, and is absorbed through the blood stream.

Using cyanide

All operators must have a current Controlled Substance licence and Approved Handler certificate to purchase and use cyanide before any poison operation can commence. Consent from the Medical Officer of Health and written permission to enter land must also be held by the operator.



Compliant warning signs must be placed at all entry points to the land.

Correct bait placement is essential for the operation to succeed and also to avoid accidental poisoning of livestock, wildlife or even human beings.

Paste

Cyanide paste contains about 550 g per kg (55 percent) of sodium cyanide. Possums become poison shy if cyanide paste is used too often or incorrectly. This is because some animals take a non-lethal dose and become wary about swallowing the poison again. When this happens, a different poison and bait or some other method of control must be used or a pre-feed non-toxic paste must be used for several days prior to laying cyanide to improve the toxic bait acceptance.

On land where livestock may be found, baits must be placed well out of their reach. For cattle and horses, this means over 2 m above the ground. Cattle, for instance, will lick baits off a tree if they can gain access to them.

When you lay baits in trees, make sure the bait is positioned so that they cannot be accidentally dislodged, either by passing possums or by branches blowing in the wind. Preferably put the bait in hollows or in cracks in the branches or trunk.

If you are placing baits on the branches of a tree put them about a possum's length from the junction of the branch and the trunk, so that the possum does not sit on any bait or knock it off. Another method is to use small bait stations such as KK or Romark to place the cyanide paste in.

On a tree trunk, place the bait in a flaw or knot on the side up which the possum is most likely to climb. Avoid anywhere that has a vine, a leaning tree, or anything else that the possum may use as an alternative route instead of the baited trunk.

To obtain the best results in terms of possum kills and to reduce the potential for harm to non-target species always use small pea sized bait.

A 500 g tube will supply about 1,230 pea size (0.4 g) baits. In theory a 0.4 g bait will kill:

- 5 possums - 3 kg in weight
- 2 dogs - 14 kg in weight
- 1 man - 73 kg in weight

At least nine baits this size are required to kill a cattle beast weighing 350 kg.

Where livestock have no access

In such areas set the baits 10 cm above the ground. The baits can be placed on the roots of trees, on trimmed sticks or twigs, on tree trunks, or possibly on broken branches, or even on stones. In baiting possum tracks on the ground, place the bait on trimmed sticks or twigs covering about half the run and place more than one bait along the track.

Feratox bait blocks

Connovation Limited has developed a bait formulation in which their Feratox encapsulated cyanide pill is incorporated in bait block. These bait blocks come as pre-feed (cyanide free) and toxic and are approximately 12 or 20 g in weight.

They are lured and waxy and very palatable to possums, and have a field life of approximately three months. When placed in bait stations they provide an effective method of controlling possums and are excellent to use in areas of historic cyanide use as the bait and capsule mask the smell of cyanide effectively.

Bait stations can be set along fence lines if stock are absent, and the baits are removed before the stock return, or on a grid line at approximately 1 station per ha (100 m x 100 m) for effective possum control.

This form of bait/toxin has the advantage of one bait, one kill

unlike anticoagulants which require several feeds for a lethal dose and several days before death, thus it minimises the bait taken and will eliminate the possums quickly and efficiently when used correctly.

Field application

As with trapping, the success of the operation will depend on the user's ability to recognise possum sign and place the baits accordingly. Bush margins, feed, play trees and pads are ideal sites.

Prefeeding should be considered as often possums may have been exposed to cyanide which can lead to poison shyness. Pre-feed paste can be purchased in 500 g tubes or a home-made alternative is to mix an oil-based lure with either flour or icing sugar, spices such as curry cloves or cinnamon could also be used. Prefeeding dramatically improves bait take and saves on cyanide, ideally pre-feeding with non-toxic baits which replicate cyanide baits followed by the placement of toxin wherever pre-feed has been taken is the most effective method

A control programme may be undertaken at any time of year, however weather and season can have a major impact on the degree of success achieved. Possums are most active after a wet weather cycle, this is the preferred time to pre-feed, apply cyanide, or use a combination of the two. The optimum period to conduct a control programme is when the possum's usual food source is scarce (such as foliage-pasture, crops, fruit), this is usually autumn, winter or during a drought.

Cyanide poisoning remains a very cost effective way of achieving population knock-down, provided care is taken to ensure degraded baits do not cause bait shyness.

Lures

In the past cyanide was available with or without a lure being incorporated into the paste. As all pastes now contain a lure it is not necessary to add additional lure. Despite this white flour still makes the best visual attractant when smeared up trees and marking baits, while finely ground yellow corn meal is a much more palatable material for covering baits. Use only small pea-sized baits and cover them with a small cone-shaped mound of corn meal containing 20 percent icing sugar, some salt and lure oil, dispensed from a 2 litre milk container with about a 10 mm hole drilled in the lid. There is some evidence that domestic animals may be attracted by the lure when using cyanide paste therefore caution must be used.

Notices

Wherever baits are laid or bait stations are set, use plenty of the recommended notices to warn people of the poison, notices content must comply with specific design criteria. The notices must stay in position:

For cyanide paste - Until the bait has disintegrated, or has been destroyed, or until a period of one month has elapsed from the date on which the bait was laid, whichever occurs sooner.

For cyanide pellets - Until the pellets have been removed, or consumed. After this, remove notices from the area.

Use limitations

Any person who wishes to apply or to use (or to engage any other person to apply or to use) cyanide poison:

- On a public road
- In any other place to which the public is entitled to have access
- Within 60 m of a public road, or of any other place to which the public is entitled to have access
- Inside (or within 400 m of) the boundaries of any area or district that is controlled by a local authority (a city council, borough council, town council or district council)
- Inside (or within 400 m of) the boundaries of any community, as defined in Section 2(1) of the Local Government Act 1974; or
- In any catchment area from which water for human consumption is drawn;

must first obtain from the appropriate authority written permission to do so. **In every case the local Medical Officer of Health, and the local authority responsible for the control of the area or district must be notified.**

Permission from owner or occupier of the land:

Make sure that the owner or the occupier of the land where you are laying poison has given permission, and that other people who are allowed into the area are warned that poison has been laid.

Precautions when using cyanide

1. Never mix cyanide paste with any form of acid. The acid will liberate hydrocyanic acid gas from the paste and cause a weakening of the paste plus a possibly dangerous concentration of gas in an enclosed space.
2. Never place poison bait on fence posts, battens, gate tops, or bridge railings, or any place where people could accidentally come into contact with them.
3. Never lay poison near a house or in a public place, particularly where children go.

Other important considerations when using cyanide include:

- Wear overalls and gloves (rubber or plastic) to protect your hands and keep them clean.
- Remove your protective clothing before you eat, after work, and before getting into your vehicle and store in a safe place.
- Wash protective clothing separately from other washing. Do not leave it lying with other washing at home.
- Do not smoke or eat while you are handling the poison.
- Wash your hands frequently, especially after handling the poison. Keep your fingernails short and clean. Cyanide on your hand gives the skin an oily feel in water.
- Carry amyl nitrite capsules (see First-Aid treatment following) at all times and know how to use them.
- Always store the amyl nitrite capsules below 150°C to prevent explosions and decomposition of amyl nitrite.

- Replace the amyl nitrite capsules with new ones every two years as they deteriorate over time.
- Make sure the cyanide poison is always in a labelled container, with label and MSDS close by.
- Always store the cyanide poison under lock and key.
- Make sure other people assisting are fully conversant with the precautions, and especially with First-Aid treatment. Your life could depend on it.
- If you lose a tube of cyanide paste or bottle of cyanide pellets, contact the owner of the property, the Police, and local Medical Officer of Health immediately.

Additional precautions when using cyanide paste

- Destroy any empty poison containers by slashing or burning them, then bury them at least 60 cm underground. Do not just throw them in the rubbish.
- Do not attempt to heat cold tubes of the cyanide paste over a flame or in hot water.
- When using, watch for air locks in a paste tube otherwise you may get a “blow-out” of the bait.
- Always use a number of small baits instead of a single large one.
- Pay particular attention to placement of hands and feet while moving through areas where cyanide paste has been laid.

Symptoms of acute mild poisoning

The symptoms of acute mild poisoning include headache, nausea, metallic taste, dizziness, anxiety and increased respiration. Many of these symptoms can occur from severe anxiety such as when someone thinks they may have been poisoned by cyanide. However with serious poisoning progressive drowsiness, breathing impairment and collapse of the blood circulation develops.

First Aid treatment in the field

When cyanide poisoning occurs, or has suspected to have occurred, the immediate actions required are to:

- Get the person to fresh air immediately.
- If exposed to the eyes remove contact lenses or glasses and immediately irrigate eyes with plain water for at least 10 minutes.

- Prevent further absorption of cyanide into the body by removing any remaining toxin carefully minimising disturbance and avoiding inhalation.

Accidental swallowing

When cyanide is swallowed the following steps should be taken:

- Call a doctor and an ambulance as soon as possible.
- If the patient is conscious, make him/her drink a large quantity of cold water, and then cause vomiting. Repeat until the vomit fluid looks clear.
- Break a capsule of amyl nitrite and hold it under the patients nose for 30 seconds. Repeat with further capsules at intervals of 2-3 minutes.
- If the patient's breathing has stopped or is difficult, immediately administer **hands only CPR, do not do mouth-to-mouth or nose-to-mouth CPR.**

- Remove any contaminated clothing and wash any cyanide from the skin.
- Keep the patient warm.

How to get your Controlled Substance Licence and Approved Handler Certificate

The use of cyanide is controlled under the Hazardous Substance and New Organism (HSNO) Act 1996 and is subject to provisions of the Agricultural Compounds and Veterinary Medicines (AVCM) Act 1997.

Under these enactments users are required to hold a valid Controlled Substance licence. The current procedure for obtaining this licence is:

- Contact the Environmental Protection Agency (www.epa.govt.nz) for information.

Purchasing cyanide

Cyanide can purchased directly through the following companies, note a Controlled Substance license will be required if purchasing cyanide products. These are by no means the only suppliers of cyanide and other pest control products, we encourage you to shop around to identify what suits your needs.

Animal Control Products Limited
101 Heads Road, Whanagnui
Phone: 06 344 5302
Website: No website

Products: Cyanide paste, Cyanide prefeed paste (Wonderlure).

Connovation Limited
Location: P.O. Box 58613, Manukau
Phone: 09 215 4355
Website: www.connovation.co.nz

Products: Cyanide paste, Feratox encapsulated pellets, prefeed paste and blocks, baitstations, amyl nitrate, lures.

Pest Management Services
Location: 1/37 Te Roto Drive, Paraparaumu, Kapiti Coast
Phone: 0800 111 466
Website: www.nopests.co.nz

Products: Baitstations, lures, Amyl Nitrite.

Trappers Cyanide Ltd
Address: 303 Laidmore Road, Amberley, North Canterbury
Phone: 03 34 9940
Website: www.traps.co.nz

Products: Bushmaster leg-hold traps, Cage traps, Holden Mustelid trap, Trappers cyanide, Amyl Nitrite.



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