

Possums are a major ecological and agricultural pest throughout New Zealand. They feed on a wide variety of native and introduced vegetation, as well as invertebrates, eggs and fledgling birds. They also contribute to the spread of Bovine Tb in cattle and deer.

By continually browsing on favoured tree species possums change the structure of a forest and make it less suitable as a habitat for native wildlife. Exotic forests can also suffer from possum browsing, with bark stripping and the breakage of soft growing tips.

Possums strip fruit from orchard trees, damage shelter belts and will travel long distances to feed on crops. They will happily live in urban areas where they can severely damage flower and vegetable gardens.

Trapping is a well-established method of catching possums, either for fur, skins or for pest control. There are several different types of leg hold trap available, along with kill traps (like Timms, Sentinel and Goodnature A12) and cage traps.

Trapping can be a time-consuming method of control in large-scale situations, but offers efficient control if carried out correctly. Trapping can also be a safe and effective method of removing possums from urban areas and household gardens.



Possum sign

Before implementing any control measures it is important to correctly identify the pest causing you problems. Like all animals, possums leave certain tell-tale signs which will confirm their presence.

Possum browsing is distinctive, particularly on broadleaf tree species. Possums will typically hold branches in their paws and use their teeth to tear the foliage from around the midrib of leaves. This normally leaves the leaf stalk, base and midrib and some tattered remnants of foliage. Trees that are heavily browsed will appear to have little foliage left in the top third of the canopy, heavy and persistent possum browsing will kill a tree.

Possums are untidy feeders, and the ground beneath feed trees will often be littered with discarded and partially eaten leaves, flowers, or fruit, small branches are often broken at the top of the tree.

Along with this damage possums will leave other signs, when moving

to and from feeding areas there are often pad runs (tracks) which are used each night by the possums, these are very distinctive in grassed areas and can be used to target possums.

Possums are territorial and fights are common when the population is high, as a result fur often appears throughout their habitat. Claw marks on trees, fence posts, gates and bark biting (horizontal bites) on trees are also good indicators of possum presence.

Possum droppings will also be scattered under food trees and may be found in branch forks of the tree. They are approximately 2.5 cm long, and slightly thicker than a pencil and often have a subtle sickle shape. Pellets are normally dark green and coated with a slimy film when fresh, although the colour will depend on diet. If feeding on pine tree pollen in early spring for example, pellets will be yellow coloured.

Suitable traps

Whether a live-capture, restraining, or leg-hold trap is used, the Animal Welfare Act, 1999 stipulates that all traps must be checked at least once a day within 12 hours of daylight the day after it was set. Trapped possums should be killed humanely and carcasses should be incinerated, buried, or discarded in a manner as to not cause nuisance to others. There are no laws that state when kill traps must be checked.

Leg-hold traps



Several types of leg-hold traps have been used for trapping possums in New Zealand.

Leg-hold traps are effective because the possum does not have to enter a cage or box, or try new foods; they catch possums that are behaving naturally.

The Victor No.1 or similar coil spring trap is recommended, it is small, light to carry, and has adequate spring tension for its non-serrated jaws to hold possums without causing major injury. Successful trapping depends on good trap placement; traps should be placed where possums will encounter them during normal movements. Good trap sites include the base of trees and posts displaying obvious possum sign, and on pad runs. Other similar traps are available and can be sourced through web searches and stock and station agents.

When setting a trap, make sure it is level and steady, ensure that the 'dog' is oriented to the tree, or in the case of a pad set, to the side of the run. Set the trap a hand width from the base of the tree. In kiwi zones or where there is a risk of catching ground birds or other non-target animals traps must be placed at least 300 mm off the ground on a raised set, if weka are present it is recommended sets of at least 700 mm are used. A raised set may take many forms but is commonly a small bracket attachment firmly connecting the trap to a tree perpendicular to the stem, a raised set can also be a ramp made from fallen forest debris. If using raised sets, ensure that the trap chain is secure, and long enough to allow the trapped animal to fall to the ground without being suspended.

Well-placed traps do not necessarily need to be lured. However, if lures such as scented flour are used, rub them on the tree trunk directly behind and above the trap. **Never apply lure to the plate of the trap.** This may result in a possum being caught by the head.

In forested areas trap lines are normally no further apart than 100 m. Traps are spaced at 20–40 m intervals along the line depending on the level of possum infestation. Once a trap line is in place, work the traps until the capture rate drops to one possum per 20 trap nights.

Check traps in the early morning, captured possums should be approached and handled with caution as they are capable of inflicting injuries with their claws and teeth. To kill a trapped possum approach from behind and grasp it by the end of the tail, then quickly pull it out to the length of the chain and deliver a sharp blow with a hammer or stout stick between and slightly forward of the ears, this will only stun the animal. Its head

should then be placed over a rock or solid tree root, where a hard blow to the same area of the head can be applied to kill it, alternatively cut the carotid artery and bleed it out. Remove all dead possums from the immediate trap area.

If a non-target species such as a pet cat or a bird is caught, cover with a coat or blanket to keep it calm while the leg is carefully released from the trap. Keep the cat or bird covered and determine if it has suffered any physical injury. Injured birds or animals should be treated immediately and the owner notified. In the case of native birds, notify the Department of Conservation who can arrange appropriate care.

Kill traps



Kill traps are a humane form of possum control which when used carefully is an effective way to deal with possums in any type of environment. A variety of traps can be purchased at stores or online which will allow landowners to safely control possums, below are three examples commonly used:

Timms trap

The Timms trap is a box trap made of light weight polythene plastic. The light colour of the trap is an effective lure to the naturally curious possum. The possum goes straight to the keyhole opening because the bait's scent is strongest at this point.

Timms traps can be set on the ground, or may be attached to a

tree, fence, or roof. Timms traps should be set overnight with a piece of fresh (firm) fruit as bait, quarters of apple or orange, or pieces of carrot are effective baits. Baits should be replaced every two days. A mix of cinnamon, icing sugar and flour sprinkled around the trap and coating the fruit acts as additional lure.

To avoid catching cats never bait a Timms trap with meat or fish. To give a pet cat an aversion to the Timms Trap, let the cat sniff/ investigate the trap housing, then set the trap and drop it on a firm surface near the cat. The loud bang of the trap springing will frighten the cat and should discourage it from approaching the trap in future.

Sentinel kill traps

Sentinel traps are constructed from aluminium and steel to withstand difficult environmental conditions. They are designed to be placed on the trunks of trees therefore avoid majority of non-target interference. These traps are popular with the Department of Conservation due to their robust design and ability to withstand the elements, while delivering effective maintenance control.

Once the trap is placed in position, a white core-flute cover is placed overtop to protect the trap, guide the possum in from the bottom into the "killzone", and also doubles as an additional attractant to the often curious possum. Sentinel traps can be baited with a variety of baits, though the bait clip is specifically designed for use with "Ferafeed" paste.

Goodnature A12 self-setting possum trap

The first in what is likely to be a variety of "self-setting" traps, the Goodnature A12 is an automated possum trap using compressed CO² gas to re-set the trap once tripped. The Goodnature A12 is

designed to be set on the side of a tree trunk up to 70 cm above the ground to avoid non-target interference. Traps are triggered once the possum grips the bite block which is attached to the lure container. The design of the trap means the head must be positioned in a certain position to set-off the trap meaning this trap has a higher humane rating than any other kill trap on the market.

The compressed CO² cartridge has been shown to reset the trap a minimum of 12 times before needing replacement. On-going maintenance and regular checking is required to ensure the trap is functioning reliably. It is suggested that additional lures are used around the traps as an extra attractant.

As of late 2013 this trap was still undergoing modifications and had not been proven effective at sustained possum control in the field.

Precautions when using kill traps

- Keep fingers clear of the front or "kill zone" when interacting with traps at all times.
- For single kill traps set the trap late afternoon/early evening.
- When trapping around domestic animals it is a good idea to release all set traps early morning.
- Ensure family pets are restrained indoors while the trap is set if practical. Young cats and some breeds are naturally inquisitive.
- Use bait types that don't attract cats etc.
- Raising traps off the ground can reduce non-target interference but also potentially reduce kill rates if the technique is poorly applied.

Live capture traps



These traps are mainly used in urban areas where the likelihood of catching domestic animals is high. Live capture traps, commonly called cage traps, can be purchased from most farm supply stores.

It is important to place traps close to the damaged plants or trees, or beside a possum pad run, with the door facing the direction of likely possum approach. Make sure that the trap is far enough away from the tree so the possum cannot climb down on top of it, thereby triggering the door prematurely. Place the trap on firm ground and check its operation to ensure the door closes properly when triggered.

Attach bait such as apple, kiwifruit, orange or carrot to the trigger arm or beyond the treadle plate of the trap. Set the trap by lifting the door and holding open with the trip pin, insert the trip pin only far enough to prevent a light wind from releasing the door. Baiting but not setting the trap for a few days may ensure the target has more confidence to enter when the trap is set.

As the possum reaches for the bait, the trip pin is released allowing the door to slam shut. If you are using a new trap, leave it outside to weather for a few days. Live capture traps must be checked within 24 hours and within 12 hours of sunrise the day after setting it.

Disposal of possums

It is illegal to release possums in New Zealand and all live captured possums must be properly disposed of. Veterinary practitioners or SPCA officers are all able to humanely put down captured possums and may be able to offer this service. **Never attempt to handle or kill a live possum unless you have previous trapping experience and know what you are doing.**

Possums have sharp claws and teeth and are capable of inflicting serious injuries to a careless or inexperienced trapper.



To kill a live captured possum, the following method can be used:

- Coax the possum towards the back of the trap facing away from the door, movements should be very deliberate so as not to disturb the possum too much.
- Grasp the end of the tail and remove the possum from trap.
- If it attempts to climb up your arm, keep the tail straight and steadily swing the possum back and forward. Alternatively, allow its front paws to maintain some contact with the ground as it will be more intent on trying to escape, rather than to attack, the handler.
- With a thick stick or hammer, hit it hard between and slightly forward of the ears to deliver a stunning blow, and finish with a killing blow.
- Alternatively shoot it with a small calibre rifle in the trap.

Lures

With all types of traps, the use of suitable lures to coax possums to the traps is recommended.

Oil essences and powdered spices can be mixed with flour and icing sugar to make up a suitable lure to sprinkle around traps to draw possums to the bait, and ensure a better chance of capture. A number of lures or attractants can be purchased online to improve the effectiveness of a trap.

How we can help

Bay of Plenty Regional Council Land Management Officers are available to assist with assessing possum control options and will offer advice on appropriate traps and trapping methods if required. Please feel free to contact us if you would like assistance.

For supply of traps

Below are some companies that sell the products mentioned in this fact sheet. These are by no means the only suppliers and you are encouraged to shop around for the product that suits your needs.

M.S. Woodcraft Ltd

128 Marine Parade, Mount Maunganui
Phone: 07 5755920
Website: www.victortraps.co.nz
Products: Victor leg-hold traps, cage traps

Goodnature

4-12 Cruickshank Street, Kilbirnie, Wellington
Phone: 04 387 3872
Website: www.goodnature.co.nz
Products: Goodnature A12 automated possum trap, lures

Philproof

P.O. Box 4385, Hamilton
Phone: 07 8592943
Website: www.philproof.co.nz
Products: Timms kill trap, Victor leg hold trap

Pest Control Research

2/25 Opawa Road, Christchurch
Phone: 03 372 1580
Website: www.pestcontrolresearch.com
Products: Sentinel kill trap, leg hold traps, lures

Trappers Cyanide Ltd

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 Nitrate.



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