

# AFTER THE DROP: WHAT HAPPENS ONCE TOXIC BAITS ARE ON THE GROUND

Aerial possum control operations may take more than a year to plan and put into action, months to consult with landowners and land users, and several weeks of fine weather to execute.

Once the GPS-guided distribution of non-toxic pre-feed cereal baits followed by toxic 1080 baits has been achieved, and the helicopters are safely back on the ground, there is still more critical work to do before the operation is complete, warning signs can come down and the native birds and other wildlife can get back to business in a newly predator-free home.

This factsheet explains what happens in the post-operational phase - the clean-up, the track-clearing, water-monitoring - that shows the benefits of large-scale possum control.

## WHY CONTROL POSSUMS?

OSPRI's TBfree programme works toward the eventual eradication of bovine tuberculosis (TB) from New Zealand. This requires large-scale control of possums, which are the main wildlife 'vectors' (transmitters) of TB infection to cattle and deer.

Possum control is predominantly managed by ground-based trapping or poisoning.



Aerial operations are used in difficult terrain, where a ground-based possum control is not practical. Aerial operations make up only 10 percent of TBfree's possum control work; 90 percent is managed through ground control operations.

Aerial operations for an area - which can range from about 1,000 hectares to more than 40,000 hectares - are planned up to two years in advance, and executed according to strict health and safety protocols, monitoring requirements and public health consents, in consultation with landowners.

## WHAT HAPPENS DURING A POSSUM CONTROL OPERATION?

Once the area for possum control has been identified according to the overarching plans denoted in the TB Management Area (TMA) plan, all boundaries are confirmed, and all required consents and notifications are in place, the operational area is pre-fed with non-toxic aerial baits.



Pre-feeding familiarises possums with the baits and encourages them to find more of the same. Between seven and 28 days later, cereal baits containing a dose of sodium fluoroacetate (1080) are distributed.

An operation generally kills up to 99 percent of possums in the first night, a rapid knockdown that resets the forest for native birds and contributes to increased nesting success in the following breeding season.

## WHAT HAPPENS NEXT?

Once an aerial operation is complete, the first significant rain starts to break down toxic baits into harmless substances. The forest is unchanged except for the suppression of possum, rat and stoat numbers.

The primary host of TB has been removed and the cycle of infection interrupted so the disease cannot be sustained.

Where tracks or other areas of high public use are within the baited area, they are promptly checked and cleared of any baits. GPS guidance ensures baits drop within prescribed boundaries but post-operational checks ensure any stray baits are collected and destroyed.

If an area is popular with dog walkers, streams and waterways that drain the catchment may be checked for carcasses of poisoned animals, which are removed to reduce the risk to scavenging dogs of accidental secondary poisoning.

If required, water courses can be tested by accredited research organisations for any trace of toxin, according to consent requirements.

Warning signs alerting the public to the danger of 1080 to humans and dogs remain in place until monitoring shows they are no longer a danger. Poisoned possum carcasses may still contain 1080 residues, which can be a hazard to dogs. The warning period will depend on weather conditions and the rate at which bait and carcasses have broken down.

## POST-OPERATIONAL MONITORING

After an operation is complete, landowners and occupiers are notified and thanked for their assistance.

The break-down and detoxification of baits is monitored by placing samples of bait in wire-mesh enclosures (to avoid interference by animals). This enables weathered baits to be taken for analysis. Baits are usually non-toxic after 100mm of rain.

Possum carcasses are similarly placed in enclosures and samples are taken over time until testing indicates the remains are free of 1080 residues. When both bait and carcass samples are shown to have no 1080 residues, and at least six months has elapsed since toxic bait application, then warning signs can be removed and normal access to the area resumed.

Game animals should not be taken for meat consumption until signs are removed.

At this stage, a report on the operation is submitted to the Environmental Protection Agency.

## A TB-FREE AND PREDATOR-FREE FOREST

The biodiversity benefits of removing possums, stoats and rats from native forests become obvious in the spring and summer following an aerial 1080 operation.

The signs of increased breeding success include increases in birdsong – evidenced, for example, by studies conducted by institutions such as University of Canterbury and Victoria University of Wellington – measured by networks of recording devices in an operational area.

Regrowth of native plants, formerly browsed by voracious possums, becomes obvious and flowering plants present more abundantly.

Reduced incidence of TB-infected possums moving out of the bush onto adjacent farmland lowers the risk of infection for farmed cattle and deer.

If possums are kept at a low enough density (through repeated control operations if necessary) then TB will no longer be transmitted from possum to possum, or from possums to other wildlife, and the disease will die out for lack of hosts.

