



1080: Frequently Asked Questions

Introduced pests such as possums, deer, stoats and rats pose the single biggest threat to our native forests and wildlife, many of which are literally being eaten to extinction. Forest & Bird supports the continued use of 1080 in New Zealand's forests as it is currently the most effective tool for significantly reducing pest numbers and allowing native forests and wildlife to thrive.

Until a more effective pest control method can be found, using a toxin that readily breaks down in the environment, is particularly effective against introduced mammal pests, and can be used over large areas of rugged back country, is a small price to pay for ensuring the survival of our precious native plants and animals.

What is 1080?

1080 is a manufactured version of fluoroacetate, a naturally occurring chemical produced by many plants that grow on high fluoride soils. These soils are found in Western Australia, Sri Lanka, Eastern India, South Africa and South America.

How is 1080 used?

The main use of 1080 is in baits that are designed for consumption by possums. There are two types of possum baits: carrot baits weighing 6-9 grams, and manufactured cereal baits about the size of a thumb. The baits are usually distributed by helicopters using satellite positioning systems at an application rate that means that three baits will land in an area of forest about the size of an average three bedroom house. The baits are dyed dark green and treated with a cinnamon lure which attracts the possums but repels birds.

Does 1080 remain in the environment?

1080 is biodegradable, so it breaks down and does not remain in the soil or waterways. Most 1080 operations are done in Winter and Spring – seasons in which wet conditions help the toxin to break down. GPS navigation is used to ensure that areas within 50 metres of a waterway are not treated with 1080.

Why does New Zealand use 80% of the 1080 produced worldwide?

We use the most 1080 because we need to control the damage done by introduced mammalian pests. New Zealand is unique as we have only two native species of land mammals – the short tailed and the long tailed bats. Everywhere else in the world native mammals are an integral and important part of the ecosystem, so the use of 1080 - which is particularly effective against mammals - is restricted.

Is New Zealand the only country which uses aerial distribution of 1080?

No. In Western Australia 1080 baits are aurally distributed over more than five million hectares to control introduced foxes and introduced feral dogs that prey on a range of native marsupial species. Because the marsupials of Western Australia have evolved over millions of years in the presence of 1080 in much of their vegetation, the local marsupial predators have quite a high tolerance to 1080, unlike the introduced pests.

Does 1080 poison our water supplies?

Clearly no-one wants to be putting any toxins in their water supply. The maximum limit for 1080 in water supplies has been set at 3.5 parts per billion (ppb). In more than 1500 samples taken from waterways during 1080 operations, just 4% briefly reached this limit. By comparison, 1080 occurs naturally in black tea leaves from India and Sri Lanka - brewing a normal cuppa will give you about 5ppb of 1080 in your tea, which is 1.5 times the drinking water limit.

Does 1080 kill native animal species?

There is no question that this has occurred at unacceptable levels in the past, which is why big advances have been made in how 1080 is now used compared with the 1970s. We now use 10 times less 1080 bait per hectare than was commonly used then. Bait quality is now carefully controlled and baits are dyed dark green and have cinnamon lures which attract the possums but repel birds. These changes have greatly reduced accidental by-kill of native species.

Tomtits and robins are the most vulnerable native bird species, but as they are prolific breeders they recover quickly and thrive as a result of the reduced predation that follows successful 1080 operations. People are understandably worried that 1080 may kill other species such as kiwi and kereru. Birds have been radio tracked before, during and after 1080 operations to monitor any accidental by-kills. Of the 249 birds tracked up to 2004, only two (a morepork and weka) died. The removal of pests such as possums, rats and stoats means that reproduction of the native birds is considerably improved.

Survival of radio tracked birds following 1080 operations using cereal and carrot baits (up until 2004)

Cereal baits

Species	Birds tagged	Number deaths
Brown kiwi	61	0
Great spotted kiwi	16	0
Weka	32	1
Morepork	7	0
Kaka	57	0
Total	171	1

Carrot Baits

Morepork	6	1
Blue duck	19	0
Kaka	38	0
Keruru	15	0
Total	78	1

Grand total	249	2
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Does 1080 kill deer?

Sometimes feral deer are killed by 1080 operations, particularly where deer numbers are high and the understorey plants have been eaten out so deer are more likely to find 1080 pellets and eat them. Deer are a major conservation pest in New Zealand. High deer numbers prevent forest regrowth and sometimes, in combination with possums, browsing by deer can cause serious forest collapse. With deer numbers increasing following the end of commercial helicopter hunting, more needs to be done to reduce deer numbers in our native forests.

Does 1080 kill dogs?

Dogs are particularly sensitive to 1080. Dogs are usually poisoned if they eat the carcass of a dead animal (such as a possum or rabbit) that has been killed by 1080. A lot of effort is put into informing the public about where 1080 operations have been carried out. Roads and tracks leading to these areas are signposted with warnings to dog owners to keep their dogs away or muzzle them. Local vets are advised before 1080 drops are carried out, and, contrary to popular belief, vets are able to save dogs suspected of eating 1080 using the antidote **acetamide** up to four hours after ingestion.

Does 1080 have any effect on human health?

There have been no recorded cases of 1080 causing harm to human health, let alone any deaths of humans due to 1080 poisoning. Long-term, low-level exposure is not harmful – tea drinkers consume 1080 at about 1.5 times the drinking water limit with every cup of ordinary tea. All over the world millions of people have been regularly consuming 1080 for centuries with no discernible ill effects.

Why can't we use alternative pest control methods?

Hunting and trapping are alternatives to 1080 in only a limited number of circumstances. These methods are very labour-intensive, require easy access, and are seldom enough to have more than locally significant effects on possum population densities. By comparison, well-managed aerial 1080 operations achieve a 95% reduction in possum populations over large areas of rugged and inaccessible country.