

1080 in Northland

MAY 2010

***Why the
Department
of
Conservation
uses 1080***

1080 is currently the best fit-for-purpose animal pest control poison available. It is particularly suitable in New Zealand because there are no native mammals living on the ground affected by its use. 1080 is mostly used to help control pests that are destroying our forests such as possums, rats, rabbits and goats. Stoats and ferrets can die from secondary poisoning after eating possums and rats, which is an added benefit.

***History
of use in
Northland***

In the past 20 years the Department of Conservation has used 1080 in Northland to help the plants and animals living in special Northland forests recover from animal pest impacts. In each of these places where 1080 was used, possum and rat numbers were reduced to low levels and our greatest treasures—native plants, wildlife and birds—have been able to flourish and regenerate.

Puketi 1992

Whangaruru 2005

Raetea 1994

Motatau 1997

Waima 2009

Warawara 1999

Bream Head/Manaia Ridge 1994

Waipoua Forest 1990, 2005

Bream Head 2008

Mimiwhangata 2000, 2005, 2008

Russell Forest 1996

Riponui 2009

The Northland Regional Council has carried out other 1080 operations elsewhere in Northland, for example in the Tangihua and Warawara forests and on privately owned property.

Many of the stories about 1080 problems relate to earlier days, when less was known about quantities and techniques and where controls were less stringent. Often stories have grown through concern and fear. And mistakes were made. For example, applying 20kg per hectare instead of 2kg per hectare or not screening the fine chaff in carrot baits, or pre-feeding, or pilots overflying boundaries using sight and rough maps. These kinds of old ways and the problems they caused have been addressed through ongoing studies, learning and new technology.

***What is
1080?***

1080 is a compound called sodium fluoroacetate or sodium monofluoroacetate. Although 1080 is a manufactured compound, the active ingredient is a natural plant toxin found in more than 50 plants (including the tea plant) in South Africa, the USA and Australia.

It is called 1080 because of the number of the laboratory test that identified it.

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Te Papa Atawhai

How does it work?

In very basic terms, animals die from 1080 through a lack of energy. 1080 interrupts energy production in the body's cells (the process of converting food into energy) and death is by heart or respiratory failure.

What about native birds in and around the control area?

1080 baits are dyed green and flavoured with cinnamon to make them less attractive to birds. Although a very few individual birds may be poisoned, their populations as a whole benefit hugely through removal of the pests which often kill them. There is more food and habitat for the birds and they can nest undisturbed. Generally bird populations double within three years after 1080 operations.

Aerial methods

Aerial distribution (1080 dropped from helicopters) is by far the most effective, efficient and economic way of controlling a number of pests over large areas, especially where the land is steep and rugged. Helicopter pilots use digital global positioning systems (DGPS) to accurately identify where the 1080 is placed—and more importantly, not to be placed, with 'no fly zones' established. The quantity used and its placement are precisely controlled. Bait is usually applied at 2–4 kg per hectare depending on the possum and rat populations. At an application rate of 3 kg there will be around 300 bait pellets on the ground, or the equivalent of a small bag of kumara scattered over two football fields.

Ground-based methods

Ground-based methods are another way of distributing 1080 (and other poisons). This usually means filling bait stations or laying the poison by hand throughout the area concerned. Ground-based methods are better suited to areas that are less rugged and more accessible. For ground operations the kilograms of bait per hectare used are generally slightly more than for aerial operations. This is because hand laying is a less accurate way to distribute the bait. Any bait not eaten in bait stations is removed.

Resuming normal activities in a treatment area

Generally people are still able to visit and enjoy recreation activities in treated areas while 1080 is present. Often the area is closed for the days that aerial operations are happening, largely for safety reasons—for example to avoid the risk of people being hit by falling bait and because a helicopter is working overhead.

The Department of Conservation lets neighbouring landowners and users of a treated site know when the site is clear of 1080, by directly contacting landowners within the treatment area, then removing the caution signs. When the caution signs are removed, the caution period has passed. The length of the caution period is based on the results of many scientific studies about what happens to 1080 in the environment. Bait and carcass decomposition is monitored at treated sites to ensure local conditions have broken the toxin down completely before the signs are removed. Water testing may also be undertaken. 1080 has rarely been found in waterways after operations, and where it has, it has never exceeded acceptable limits.

NZ Food Safety Authority guidelines state wild animals should not be taken for eating from a 1080 area for at least four months after an operation. There is always advertising in local newspapers about treated areas and caution signs are posted around treated sites.

***What is
the biggest
potential
danger to
me?***

1080 is poisonous to people—but you would need to eat a lot of it to either get sick or die. You would have to deliberately put a number of pellets in your mouth and swallow them.

1080 is also highly effective at killing dogs. Therefore dog owners must take heed of caution signs and read and understand information provided about 1080 operations and precautions. Safety measures may include using muzzles when near the treatment area and keeping dogs tied up and out of the operational area. Muzzles are important because occasionally, poisoned possums may travel away from the operational area before being affected by the poison. If a dog eats a sick possum, the dog could die from secondary poisoning. Unless caught after the caution period, animals hunted and killed in the treatment area should not be fed to dogs nor eaten by humans.

Please keep dogs out of 1080 areas or under complete control until the all clear is given.

You must keep children under close personal supervision if going near a treatment area. Despite being told, they may not understand the risk of eating the green baits. It has never happened in the history of 1080 use, but several handfuls of baits may be lethal if eaten by a child. Extra precautions are taken during operations, such as not laying bait near walking tracks and huts.

Livestock will eat the bait if they encounter it. They could die, or get rejected from the freezing works. If you are a neighbour to a treatment area it is important stock are separated by good fencing to prevent access. This may mean negotiating temporary retirement of an adjoining paddock during an operation if fences are not adequate. Often a buffer is established to further reduce the risk of accidental stock entry,

If you live next to a treatment area, DOC staff will talk to you about the best ways to look after animals you own and the treatment if 1080 is eaten.

***How does
a 1080
operation
affect my
recreational
hunting
and food
gathering?***

Treating a site with 1080 restricts hunting opportunities for a short time. However pig populations can increase dramatically after 1080 operations due to removal of hunting pressure for the time that 1080 is present and while it is dangerous to dogs. Although pigs are susceptible to 1080, the concentration in possum bait is too low to effectively control them. Pigs get nauseous and vomit after eating the bait. Domestic pigs and smaller wild pigs have died from 1080 because of their size but larger, mature wild pigs can recover from a sub-lethal dose, then avoid the bait and carcasses.

Goats are also susceptible and their numbers will reduce slightly. Northland uses cereal 1080 baits, which goats like less than carrot, so it affects goat populations much less.

Hunters can check for treated areas through the Department's Pesticide Summary, by contacting their local DOC office or the DOC website:

www.doc.govt.nz/templates/page.aspx?id=33355 OR

www.doc.govt.nz/conservation/threats-and-impacts/animal-pests/pesticide-summaries/northland/

The process for a 1080 operation in Northland

DOC goes through a lengthy and very detailed planning process before it can run any 1080 pest control operation. This includes getting approval from the Medical Officer of Health, who is subject to strict conditions and a resource consent from the Northland Regional Council for aerial operations. The entire process is regulated by the National Environmental Risk Management Authority (ERMA) and legal obligations under the Hazardous Substances and Noxious Organisms (HSNO) Act 1996.

Having a say about what happens

The level of consultation DOC undertakes and what it consults about will be different depending on the type of operation, its location and the communities involved.

Consultation may be undertaken about possible control methods and/or the effects of proposed control methods and/or people may simply be kept informed.

If you occupy land included in or next to the control area or you hold a grazing licence, DOC will consult you on the effects of a proposed animal pest control operation.

If you have concerns or questions at any time, contact your local DOC office.

You can also check out www.doc.govt.nz/conservation/threats-and-impacts/animal-pests or the Northland (by region) pages of the website.