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THE 1080 DEBATE

By Andy Cowan

I dread to think how many man/woman hours and how much money has been spent in Australia and New Zealand trying to eradicate bovine TB (Mycobacterium bovis). A national program, lasting more than 20 years, eradicated the disease in Australian cattle and on 31 December 1997 Australia was declared free of bovine tuberculosis. The last case detected in Queensland was in 2002 (strange??). To highlight the enormity and potential of the problem, it has been estimated that, during the first half of the 20th century, M. bovis was responsible for more losses among farm animals than all other infectious diseases combined.

The first European settlers to New Zealand bought with them cattle with bovine TB. By 2007, about 0.4% of the nation's cattle herds and about 1.4% of their deer herds were infected. It was discovered in the 1960s that possums were the main carriers of TB. It is now believed that close to 40% of New Zealand's land mass contain populations of infected possums. In these areas, nearly 70 per cent of new herd infections can be traced back to possums or ferrets. Infection is permanent and there is no treatment. Most animals die six months after contracting the disease. Although possums are the main vector of TB, it is also transmitted by rabbits, rats, stoats, ferrets and feral cats.

Knowing the possible devastation that could be caused by not controlling TB the problem is how do you control its spread? All of the above mentioned pests constantly devastate New Zealand's native plants, animals and ecosystems. They kill adult birds and their chicks and raid nests for eggs. They also compete for, and wipe out, critical food sources for birds such as supplies of berries, flowers, fruits and invertebrates. Apart from the threat to New Zealand's pastoral industry, conservation is a major motive behind the country's pest control strategy.

The most common and most controversial poison for possum control is 1080 (sodium fluoroacetate), which has been used in New Zealand since the 1950s. However it is dangerous stuff. It is classed by the World Health Organization as 1A (the most hazardous class of poison). In Australia, at least, it is only available from licensed S7 retail outlets. Users of 1080 need special training and must have authorization from the appropriate department. Neighbours must be given 72 hours written notice of a baiting program. Warning signs must be displayed and dead animals must be burnt or buried. 1080 is especially lethal to mammals and it can also kill birds, amphibians and insects.

New Zealand uses over 80% of the world's total 1080 production – about 2.5 tonnes of powder. In the few other countries where it is used, the use of 1080 has been limited because of the need in these countries to protect native mammals. New Zealand, however, unlike almost all other countries, has no native land mammals (except bats), but a very large number of introduced, highly destructive mammalian pests, including possums, rabbits, rats, stoats, ferrets and feral cats. Controlling TB infected pests is central to controlling the disease in cattle and deer.

Over the fifty years of 1080 use in New Zealand, the Department of Conservation, the Animal Health Board and their predecessors have killed a lot of animals in their attempts to perfect this method of pest control. The use of jam baits has killed masses of bees, the high sowing rates has killed large numbers of untargeted animals and small carrot baits and chaff that has killed high numbers of birds. There continues to be disagreement between New Zealand scientists as to whether 1080 poison has caused any net population benefit to a single native species.

1080, although dangerous, seems to be the most effective and least environmentally destructive of the weapons at the authority's disposal. To do nothing would be environmentally disastrous. The supporters of

1080 argue that 1080 degrades quickly in the environment, especially in water. Being soluble, it is rapidly diluted. In soil it does not persist for more than a few weeks, especially at warm temperatures.

New Zealand is the only country in the world to drop 1080 poison from the sky as carrot and cereal baits. Originally quite random, this technology is now managed with sophisticated GPS technology for accuracy of coverage and uses smaller more precisely attuned dosages. That is not to say alternatives to 1080 should not be sought or developed, but for now the message is clear. Farming groups continue to support the use of 1080 until a viable and cost effective alternative is found, or until the pests species that harbour TB and that are destroying New Zealand's unique natural environment, are eradicated.

There seem to be three main reasons why New Zealand groups oppose 1080. They consider it harmful to the environment, they believe it is inhumane and that it kills other "non-target" animals. 1080 can and will leach into the soil and groundwater, or lie on the surface posing risks to native birdlife, dogs and deer. Other animals are killed because they eat 1080 directly or they feed on possums. The label on Compound 1080 says it shouldn't be dropped anywhere near waterways and that poisoned carcasses should be burnt or buried deeply. This rule does not seem to apply in New Zealand.

More than anything, it is New Zealand's topography and the large amount of inaccessible country that leads to the continued use of 1080 and aerial baiting. Until a better, safer option is found and farmers have to spend money on maintaining their herd status, 1080 will be used to control the spread of the TB.

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