14. THE USE OF 1080 FOR PEST CONTROL - A DISCUSSION DOCUMENT

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The purpose of this report is to briefly summarise the findings of the above document and to consider forwarding a Council submission on the document.

INTRODUCTION

The Animal Health Board and the Department of Conservation are preparing an application to the Environmental Risk Management Authority (ERMA) for the reassessment of the vertebrate pest control toxin, sodium monofluoroacetate (1080), under the Hazardous Substances and New Organisms Act 1996.

The above organisations have produced the discussion document on the use of '1080' for pest control as a basis for reassessment of these issues and it covers both benefits and risks considerations of the use of this pesticide.

The main use of this pesticide in New Zealand is in the control of possums, which are a significant source of bovine tuberculosis as well as being a threat to native biodiversity. It is, however, a useful pesticide for the control of rabbits and other animal pests that also are a threat to biodiversity as well as being an agricultural pest in some cases.

The Chairman of Environment Canterbury has written to the Mayor encouraging that a submission be made as 1080 is a particularly important tool for extensive possum control in difficult country and is useful for both rabbit and wallaby control.

THE DISCUSSION DOCUMENT

The discussion document has been prepared to bring together current research findings on the use and effects of 1080 in New Zealand. It is a comprehensive examination of a large number of research reports and, in the opinion of the writer, provides a balanced view of the subject. The information, together with the views put forward through the consultation process, will form part of the reassessment undertaken by ERMA.

The process undertaken by ERMA will involve a re-evaluation of an existing substance that is similar to that undertaken for the approval of any new substance. This consists of examining the risks, costs and benefits of the hazardous substance as well as the controls that regulate its use. ERMA decided that a reassessment was needed, as requested by the Animal Health Board and the Department of Conservation, as since its registration in 1964 new information had become available. The discussion document provides an opportunity for public debate on these issue, particularly in light of the fact that increased use of 1080 is being sought by the Animal Health Board and the Department of Conservation. The following steps in the reassessment process have to be undertaken by the applicants as part of the review.

1. Lifecycle assessment and hazard classification.

2. Consultation.

3. Risk assessment.

4. Overall evaluation and submission.

Once these have been received by ERMA they then undertake a further process of seeking submissions and hold a hearing. ERMA will also weigh up the scientific and non-scientific information in the application, including the public submissions. A judgement will then be made regarding the continued use of 1080 in New Zealand and the conditions under which it may be used.

Sodium monofluoroacetate, which is commonly called 1080, is a fine white powder that is stable under normal storage conditions and highly soluble in water. The active ingredient, fluoroacetate, is chemically identical to the fluoroacetate that occurs naturally in many poisonous plants from Brazil, South and West Africa and Australia. In Western Australia 40 plant species produce it. It has been used for pest control since the mid-1950s and is the only poison registered for aerial application. It is a controlled pesticide and only available to licensed operators. 1080 is degradable in New Zealand soils to non-toxic substances, and while this is somewhat temperature dependent, experiments have shown it does not persist long enough to have detrimental effects. It biodegrades in water, somewhat more rapidly than in soil. It is also water-soluble which means it is rapidly diluted in water.

The benefits of the use of 1080 for pest control, particularly of possums, are shown to be significant in the discussion document. There are considerable economic benefits due to the reduction in a source of bovine tuberculosis but also in regard to protection of native forests and native bird life.

Studies indicate that 1080 is not genotoxic and there is strong evidence that it is not carcinogenic. It is, of course extremely toxic to animals but species vary widely in their sensitivity to the poison. Dogs are particularly sensitive on a LD_{50} [1] measure of milligrams per kilogram of body weight basis. The susceptibility to any poison of course relies on both its sensitivity and the body weight. The larger the size of the animal the more poison it would need to ingest to have effects.

As 1080 can persist in the poisoned pest carcasses for a long time (up to 11 weeks in cold weather) care needs to be taken in the exposure to scavenging animals such as dogs. Conditions placed on areas being poisoned normally exclude such animals for a period of three months from areas being poisoned.

The summary from the discussion document is attached.

DISCUSSION

Within the boundaries of Christchurch City 1080 has been used from time to time, with success, largely for the control of rabbits or possums on limited areas. These have been ground as opposed to aerial operations.

In 1993 the Regional Pest Controller of the Canterbury Regional Council approached the Council seeking the approval of the use of 1080 poison within the city boundary on a permanent basis. The letter stated, "*1080 is a very valuable tool for use in pest control and the loss of its use in the City could jeopardise the work carried out over the last 3 years as other baits have proved ineffective in the past."*

In 1991 the Council gave approval, subject to conditions, for the use of 1080 poison by the Canterbury Regional Council for a number of areas in the city, some of which were under the control of the Christchurch City Council. Some additional areas where 1080 could be used were also approved in 1992. In all cases conditions were associated with the use of 1080. The experience of the use of 1080 in these areas was reported to the Council at its meeting on the 21 September 1993 by the Parks Manager who stated, "*It should be noted that all these programmes have been actioned with no accidental poisonings or adverse reaction from adjoining residents or landowners. So long as the publicity programmes are kept running, no problems are anticipated in the future."* Information from the Regional Council on the poisoning programme over the 1991-1993 season in the city was that there was a 95% kill of rabbits in the period with no reported instances of household pets being affected.

The Council, on the 21 September 1993, adopted the recommendations for a pest control programme for the areas mentioned in the report, including the use of 1080 on some Council land, subject to appropriate notification programmes.

Regulation 12 of the Pesticides (Vertebrate Pest Control) Regulations 1983 provides that no person may use a controlled pesticide within the boundaries of the City unless that person has obtained prior written permission from the Medical Officer of Health for the district and the Council concerned. The applicant must apply to each of these authorities in writing. Regulation 15 provides that the Medical Officer of Health must give his permission, with or without conditions, if he is satisfied that the proposed use of the pesticide will not contravene any of the following Acts or regulations:

[1] LD_{50} is defined as the dose of any poison expressed in milligrams of the poison per kilogram of body weight that will theoretically kill 50% of the test subjects under specified conditions.

- The Health Act 1956.
- The Toxic Substances Act 1979, and
- The Pesticides (Vertebrate Pest Control) Regulations 1983.

Regulation 16 of the Pesticides (Vertebrate Pest Control) Regulations 1983 provides that the Council must give its permission to the applicant where it is satisfied that the applicant has obtained the permission of the Medical Officer of Health and the proposed use of the pesticide will not harm or inconvenience the public. The Council has given permission, subject to compliance with requirements for notices around the areas in which the poison has been laid prohibiting access, public notice being given, and the distribution of explanatory pamphlets in the surrounding neighbourhood.

There have been no reported instances of harm, other than to the pests being targeted, from these 1080 operations in Christchurch City.

The responses sought from submitters are relatively simple at this stage. The submission form contains the following questions.

"1. Do you support the use of 1080 to control bovine tuberculosis? yes/no/maybe
Please give reasons for your answer.

2. Do you support the use of 1080 to conserve New Zealand's native forests, plants and animals? yes/no/maybe
Please give reasons for your answer.

3. If you do not support the use of 1080 (for either bovine TB control or conservation), how could its use be modified to make it more acceptable to you?

4. Do you have any other comments about the use of 1080?

(We are especially interested to hear your comments about other environmental issues; health and wellbeing issues; cultural and spiritual issues; or Treaty of Waitangi issues.)"

CONCLUSIONS

The use of 1080 has been a useful tool for pest control in Christchurch to control possums for both bovine tuberculosis and forestry protection purposes and rabbits and other pests for protection of native plants.

The use of 1080 has been undertaken in a safe manner over a number of years without any environmental harm. If the ability to use this pesticide were to be removed this could be of concern, as it is part of an integrated pest management programme that has been adopted by the Regional Parks Team of the Greenspace Unit.

The Council has the opportunity to make a submission on this document. If the Council does not wish to make a submission on the 1080 discussion document, there is also the option for the Council to submit on the re-evaluation of 1080 use prepared by ERMA at a later date.

Staff Recommendation: That the Council make a submission in support of the continued availability of 1080 for pest control purposes provided that similar conditions are placed on the use of 1080 as those currently in place.

Chairman's Recommendation: That the above recommendation be adopted.