POSSUM CONTROL AND ANIMAL WELFARE

FACTSHEET RD18

PEST ANIMAL CONTROL METHODS

Critical to OSPRI's work towards eradicating bovine tuberculosis (TB) from New Zealand is the need to reduce possum numbers and keep them low over an extended period of time. A range of control methods are used to accomplish this including traps (kill-traps and live-traps) and toxic baits.

Toxic baits contain a poison such as sodium fluoroacetate (1080), cyanide, anticoagulant, cholecalciferol or zinc phosphide. Selecting the appropriate bait and control method for possums and other pest animals requires case-by-case consideration and a balance of factors such as efficacy, cost, practicality, operator safety, target specificity and environmental effects.

Animal welfare is also an important consideration, as control methods can cause varying levels of pain, stress and other negative experiences to affected animals. Because all of the currently available possum control methods cause some of these responses, none can be considered truly and consistently humane. Thus, when considering the welfare costs of control methods, it is not useful to simply classify them as 'humane' or 'inhumane', but rather consider the relative animal welfare impacts of each option. Formal and objective approaches to do this have been recently developed.

COMPARING ANIMAL WELFARE IMPACTS

In the last two decades there has been significant progress in developing approaches to objectively assess and compare the welfare impacts of different pest animal control methods. An assessment framework developed in Australia (Sharp and Saunders 2011) considers the specific effects of a control method against five 'domains' of animal welfare;

- Thirst/hunger/malnutrition
- Environmental challenge
- Injury/disease/functional impairment
- Behavioural/interactive restriction
- Anxiety/fear/pain/distress

Available (but often limited) information about a particular control method for a target pest species is collated to make an assessment of (i) the nature and extent of welfare impacts and (ii) the duration of these impacts up to the point where the animal becomes unconscious. These two components (extent and duration) are then combined to produce a welfare impact score within a matrix (see below).

This approach was adapted to assessing the welfare impacts of the range of pesticides used in bait for the control of possums and other pest animals in New Zealand (Fisher et al. 2010).

COMPARING IMPACTS OF DIFFERENT POISONS

In studies conducted by Landcare Research, the anticoagulant pesticides registered for possum control (brodifacoum and pindone) were determined to have the highest impact on animal welfare. Encapsulated cyanide had relatively the lowest welfare impact overall. Of the other commonly used pesticides, 1080 and zinc phosphide were ranked better than phosphorus and cholecalciferol across a range of species.

A report (cited below) commissioned by the Ministry for Primary Industries rated the welfare impacts of 1080 poisoning for possums as grade 6, with grade 1 being the lowest welfare impact and 8 the highest welfare impact. This score takes into consideration the nature and duration of welfare impacts resulting from poisoning.

REFERENCES

P. Fisher, N. J. Beausoleil, B. Warburton, D. J. Mellor, M. Campion and L. Booth (2010). *How humane are our pest control tools?* (09-11326) MAF Biosecurity New Zealand Technical Paper No: 2011/01, 148 pp. ISBN No: 978-478-37562-6. ISSN No: 1177-6412

http://www.biosecurity.govt.nz/files/publications/technical-papers/2011-01-how-humane-are-our-pest-control-tools-final.pdf

T. Sharp and G. Saunders (2011) *A model for assessing the relative humaneness of pest animal control methods* (Second edition). D. o. A. Australian Government, Fisheries and Forestry, Canberra, ACT

http://www.agriculture.gov.au/animal/welfare/aaws/humaneness-of-pest-animal-control-methods#executive-summary

This Factsheet was prepared by Penny Fisher, Research Leader, Landcare Research. For a printable copy, or more information, please visit ospri.co.nz

OSPRI

FACTSHEET