



Use patterns for anticoagulant rodenticide products

RSPCA Australia Submission

1. General comments

Although this public consultation focuses on mechanisms to minimise non-target poisoning risks of using anticoagulant rodenticides, it is timely to also consider the welfare risks of these products, which impact equally on target and non-target species. Based on these rodenticides causing significant suffering, increasing community concerns regarding the treatment of animals, including those targeted in pest control programs, and that more humane alternatives are available, it is imperative to consider the justification for their continued unrestricted use.

RSPCA Australia recognises that under certain circumstances there is a need to control vertebrate pest species. The RSPCA has a number of policies referring to vertebrate pest control, with the most relevant being [RSPCA Policy E01 Wildlife - General principles](#) and [RSPCA Policy E02 Management of wild animals](#). Key policy aspects relevant to this review which relate to animal welfare and non-target risks include:

- A balance is found between maintaining the viability of an ecosystem and protecting the welfare of individual animals.
- The humaneness of current control methods is improved or they are replaced with more humane and effective alternatives.
- There is adoption and implementation of compulsory codes of practice and standard operating procedures for all wild animal management activities.
- All activities to control vertebrate pests are:
 - justified - impact must be legitimate, quantified and appropriately measured to assess progress; benefits must outweigh the harms
 - effective - only proven control methods to be used based on scientific evidence and that ongoing control is achieved, and
 - humane - that it is recognised that pest species are sentient, and that the most humane methods are used.

RSPCA Australia also supports the seven principles for ethical wildlife control (Dubois et al 2017).

1. Modifying human practices
2. Justification for control
3. Clear and achievable outcome-based objectives
4. Animal welfare
5. Social acceptability
6. Systematic planning
7. Decision making by specifics rather than labels

2. Humaneness

There is increasing community concern and expectations regarding the treatment of all animals, including vertebrate pest species. In the past, little scrutiny has been given to the animal welfare impacts of vertebrate pest control methods (Littin et al 2004). Fortunately, over the past decade, there has been a greater focus on the animal welfare impacts of pest animal control methods. However, unless this focus translates into improved practices on the ground, progress will not be achieved. More needs to be done especially in relation to humaneness of control methods (particularly for toxic baits), competency of operators and research into more humane management options. There is also an important role for regulators who register and regulate the use of these products, particularly where significant welfare risks exist (Littin 2012).

Currently, it is not a mandatory requirement to use the most humane methods available. Furthermore, most users are unlikely to be aware of the relative humaneness of different control methods. However, with our increasing knowledge and understanding of the welfare impacts of some toxins, the availability of more humane alternative methods and heightened community concerns and expectations, there is a need for more scrutiny of welfare impacts of chemicals as part of the product registration process.

Vertebrate pest animals are sentient, in that they are capable of experiencing pain, distress and suffering and therefore, it is paramount that in all instances, the most humane control methods are used. However, if less humane methods are used this must be adequately justified. Animal welfare outcomes could be significantly improved if a humaneness assessment of new and existing control methods and programs became a mandatory requirement (Humane Vertebrate Pest Control Working Group 2004; Littin et al 2004; Littin & Mellor 2005).

Poisoning with anticoagulants do not result in a humane death (Paparella 2006). Mason & Littin (2003), who have reviewed the humaneness of several rodent control methods, reported that animals poisoned with anticoagulants experience distress, disability and/or pain, and take several days to die. Bleeding per se is not considered to be painful but the accumulation of blood in confined areas in the body, particularly the joints and muscles, can cause pain and dysfunction.

When compared with other control methods using the Humaneness Assessment Model (Sharp and Saunders 2011), anticoagulants were shown to be the least humane, with suffering considered to be moderate to severe (see Appendix 1). The Model assesses and ranks pest control methods based on the welfare impact prior to death and the effectiveness to achieve a humane death, i.e., instant loss of consciousness and rapid death without consciousness being regained.

Direct adverse impacts affecting individual poisoned animals is not the only welfare issue. When evaluating the overall welfare impact, the total number of animals affected by a specific control method must also be considered (Warburton et al 2012). Due to the wide availability and use of anticoagulants, millions of animals will suffer, including both rodents and non-target species. A study by Sainsbury et al (1995) reported that the impact of second generation rodenticides in Europe caused distress and severe pain for hours and days, in 10-100 million animals annually.

Alternative more humane control options exist including effective snap traps (for domestic use) and mechanical kill traps for large and/or commercial premises. However, it is recognised that baiting is a more cost-effective option for broad scale use during rodent plagues in agricultural areas but it is relatively inhumane. More research is required to develop more humane products or methods for use in these situations. The potential of gene drive technology is currently being pursued as a humane non-lethal control method but this will not be available in the immediate or short term future due to further research being required as well as further discussions of the ethical aspects regarding its use (Webber et al 2016).

3. Non-target risks

There are many factors which influence the risk of non-target species being exposed to and succumbing to toxic baits, despite restrictions and instructions to minimize this risk. The following information relates to risks and impacts to wildlife and domestic pets of using anticoagulant rodenticides but not humans.

3.1 Wildlife

Although one of the important aims of controlling rodent populations is to protect and conserve vulnerable native species, bait poisoning can also pose significant risks to wildlife as has been reported in many countries (Sanchez-Barbudo et al 2012; Eason et al 1999; Murray 2017; Hughes et al 2013). Secondary poisoning of owls due to consumption of rodents fed with anticoagulant rodenticides was demonstrated several decades ago (Mendenhall 1980). Secondary and tertiary poisoning due to second-generation rodenticides are of concern, especially due to the relative persistence of these toxicants in vertebrate species (Eason et al 1999). Brodifacoum was implicated in the death of a number of Stewart Island robin nestlings following a baiting program on an island off the coast of New Zealand (Masuda et al 2014). A study conducted on dead and moribund boobook owls in Western Australia showed a very high percentage of birds were exposed to anticoagulant rodenticides with about 50% having potentially dangerous levels (Lohr 2018). Further work has identified native reptiles also being at risk of secondary poisoning with the authors calling for greater regulatory oversight of the use of these chemicals (Lohr & Davis 2018).

3.2 Domestic pets

A number of international studies have reported cases of pesticide poisoning of domestic animals involving anti-coagulant rodenticides (Caloni et al 2016; Merola 2002; Sheafor & Couto 1999). Robertson et al (1992) reported that rodenticide toxicity cases were more commonly seen in cats and dogs in rural compared to urban veterinary practices. Although vitamin K administration can help mitigate the anticoagulant effects of these rodenticides, implementing an effective treatment regime is not simple and the prognosis varies depending on the type and severity of bleeding (Merola 2002). There have been several reports of anticoagulant rodenticides being used to maliciously poison domestic pets, with the RSPCA publicly stating that these baits are commonly used for this purpose (Merrilees 2017).

4. Specific considerations

Comments are provided on the following specific considerations as outlined in the call for submissions document.

a. The need for anticoagulant rodenticide products to be used in home garden or domestic settings

Based on welfare grounds, the risk of non-target poisoning and the availability of more humane control methods, the RSPCA questions the need for these products to be widely available without restriction, for home garden and domestic setting use.

b. The need for anticoagulant rodenticide products to be used in residential or suburban settings, for example, for public health or public sanitation programs

Based on welfare grounds, the risk of non-target poisoning and the availability of more humane control methods, the RSPCA questions the need for these products to be widely available without restriction, for residential or suburban setting use.

c. The need for anticoagulant rodenticide products to be used in or around buildings, including those used to house livestock, or in or around on-farm buildings (including homesteads)

More research is needed to identify more humane control options for large scale situations to replace the use of anticoagulant rodenticides.

- d. *The need for anticoagulant rodenticide products to be formulated as powders, gels, liquids, pellets, grains or pastes*

Unfortunately, different formulations are unlikely to reduce the welfare risks associated with the use of these products to a significant degree, as the nature of the toxic effect inevitably results in pain and suffering. If however, a specific formulation caused more rapid death, that is, hours rather than days from time of consumption, this may cause less pain and suffering.

- e. *The likelihood of compliance with post-application sanitisation instruction (e.g., the timely collection of poisoned rodent carcasses, and the appropriate disposal of carcasses)*

This is an important issue especially when anticoagulants are used for broad scale control in agricultural and bushland areas. It is unlikely that all poisoned rodent carcasses can be retrieved to mitigate the risk posed to non-target species. Furthermore, due to a general aversion of handling dead and decomposing carcasses, the general public are unlikely to undertake collection and appropriate disposal of carcasses, when these products are used in domestic settings.

- f. *The label instructions, particularly the adequacy of instructions to prevent inadvertent exposure to the product*

Current label instructions do not appear to be effective in preventing accidental exposure to the product. Therefore, more stringent instructions are unlikely to be more effective, particularly when products are used by the general public. The risk of malicious poisoning also remains.

- g. *Critical uses for anticoagulant rodenticide products, particularly in primary production*

This is an important issue especially when anticoagulants are commonly used for rapid effective control. However, based on the humaneness matrix, zinc phosphide is considered to be relatively more humane than anticoagulants, so if anticoagulants were prohibited or significantly restricted, an alternative slightly more humane toxin would be available.

- h. *Other relevant matters related to the use of anticoagulant rodenticide products*

RSPCA Australia has strongly advocated that all pesticide products submitted for registration be assessed for humaneness, in a similar fashion as to other aspects which are currently assessed, including environmental risks, and human health and safety risks. With increasing community concern regarding animal welfare and the availability of a rigorous approach to evaluate humaneness (i.e. the relative humaneness assessment model), all chemicals can and should be assessed for humaneness. The APVMA is well placed to incorporate a requirement for humaneness assessment as part of the registration process.

5. Conclusion

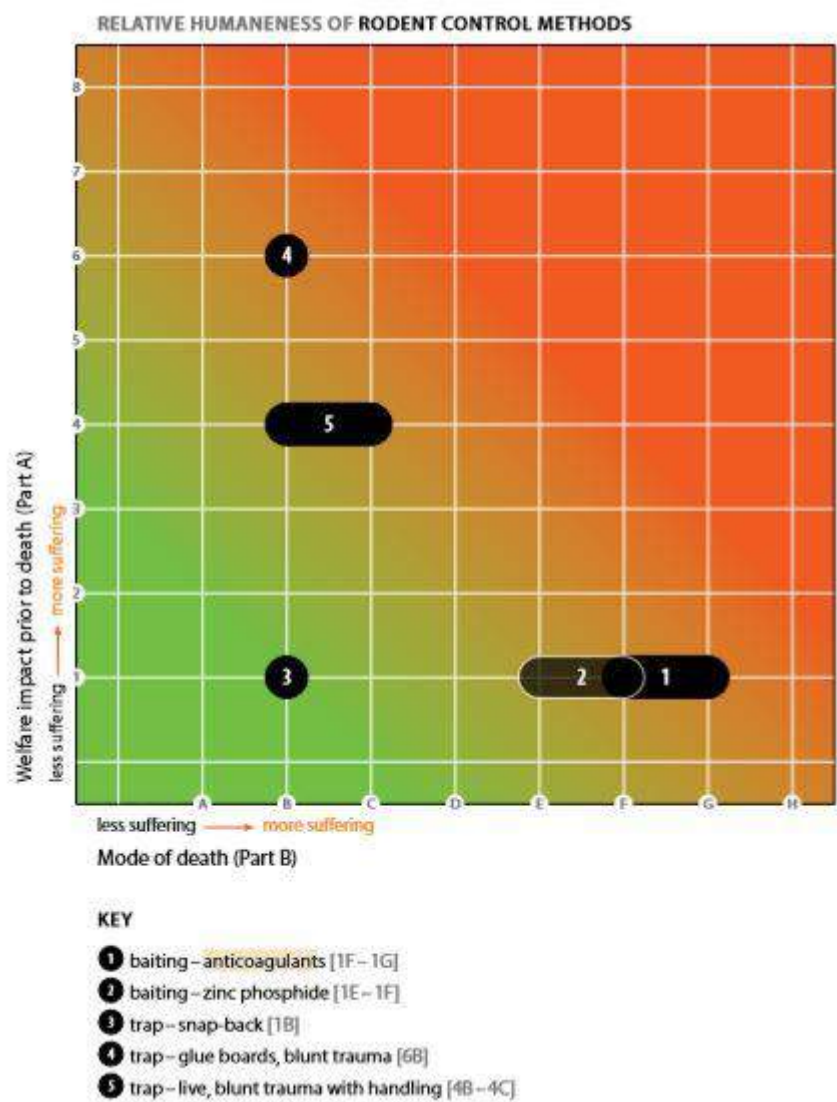
RSPCA Australia believes these products are not humane for both target and non-target animals and as they are currently widely available, we support limiting future access by the general public and restricting use to licensed operators in domestic settings. It is important to acknowledge that licensed operators provide additional advice for preventing infestations and managing pests more effectively which will help to minimise the number of animals being subjected to control measures, as well as reducing non-target exposure risks to wildlife and domestic pets. More humane alternative control methods are available for use in various settings which should be promoted more widely. RSPCA Australia also advocates that the APVMA require applicants to include relative humaneness assessment information of pesticide products submitted for registration. RSPCA Australia strongly advocates that more research is done to replace the use of anticoagulant rodenticides as soon as possible due to the significant pain and suffering caused.

6. References

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Appendix 1: Relative humaneness matrix for rodent control methods



END.