Pindone Rabbit-Baiting: Cruel and Careless?

Sharon Beder, PhD’ and Richard Gosden, PhD

The Bingie Residents Association (BRA) has circulated information encouraging Bingie residents to enroll in a Livestock Health and Pest Authorities (LHPA) course for using Pindone rabbit baits. A recent BRA committee meeting also decided to contribute to the cost of supplies of Pindone poison for an ongoing program of rabbit-baiting in the area. The purpose of this discussion paper is to question the wisdom of this sponsorship.

The Bingie Residents Association has acquired an admirable reputation for its past work in landcare and environmental protection. But this will be severely tested by its sponsorship of Pindone rabbit-baiting.

Every program of pest eradication by poison has to take into account the effect it will have on both target and non-target species. To do this it has to take account of the effects, and the risks, of both primary and secondary poisoning of animals. Primary poisoning occurs when target and non-target animals consume baits; secondary poisoning occurs when scavengers eat the carcasses of primary-poisoned victims.

A program of pest control that is neither cruel nor careless requires that target animals do not have a lingering, painful death and that all poisoning is confined only to target species. However, as this paper will demonstrate, Pindone is a poison that causes rabbits to suffer a slow and painful death and is also likely to kill non-target species including antechinus, juvenile possums and bandicoots as well as endangering animals and birds that eat the rabbit carcasses, including eagles and owls. If baits are not securely protected wallabies and kangaroos will also be harmed.

What is Pindone?

There are two poisons normally used for killing rabbits in Australia; Pindone and 1080. Neither Pindone nor 1080 are target-specific and can readily kill other animals including humans, pets and wildlife. 1080 is normally used as the preferred poison in rural areas because it kills target animals more quickly. However, Pindone is used in urban and urban-fringe areas because its slower killing time, and the availability of an antidote, make it less dangerous to use around humans and pets.

* Sharon Beder is a visiting professorial fellow at the University of Wollongong. Her books and articles on environmental issues can be found at [http://www.herinst.org/sbeder](http://www.herinst.org/sbeder) and her photos of Bingie wildlife can be found at [http://www.herinst.org/photos](http://www.herinst.org/photos).
**Pindone Discussion Paper**

**Pindone is a first-generation anticoagulant that acts by blocking the synthesis of vitamin K-dependant clotting factors, which causes fatal haemorrhages in susceptible animals. Poisoning with pindone can occur with a large single dose, but it is more effective when given as a series of smaller doses over a period of 4 to 12 days. Pindone is an anti-coagulant poison that blocks an enzyme enabling vitamin K to be recycled in the liver. The effect is to disable an animal’s blood-clotting system.** (Sharp and Saunders 2004a)

Pindone was declared ineligible for registration in the US and has never been registered in the UK. It is not used in the EU and it is registered in New Zealand for killing rabbits and possums (NRA 2002: 11).

In Australia Pindone is normally mixed with either oats or carrots for rabbit-baiting. Both types can be purchased in pre-mixed, ready-to-use products, available without restriction over the counter. At least three outlets in Moruya sell the pre-mixed oats variety.

Alternatively, Pindone concentrate is also available but it is “supplied only to Government agencies and licensed contractors. The concentrate is used by these groups to freshly prepare oat or chopped carrot bait on site for larger programmes. One bottle is sufficient to prepare 20 kg of carrot or 10 kg of oat bait” (Animal Control Technologies 2010). A 2002 review of Pindone by the registration authority found that “special knowledge, skill or qualification is required when using the concentrate to prepare baits. If the concentrate is mixed incorrectly with oats, carrots or other carriers the product may have an unintended effect that would be harmful to non-target animals”. A particular problem is that “farmers generally lack access to carrot chopping or bait mixing equipment” (NRA 2002: 7, 21).

The plan outlined by the BRA Committee is for BRA members who have undertaken the LHPA training course to buy Pindone concentrate and mix it with carrots. The cost of the Pindone concentrate will be subsidized by BRA. The plan raises a lot of questions about quality control of the Pindone concentration in the home-mixed baits and about safety: “Using pindone in baits at higher concentrations than the recommended rate increases the risk of poisoning of native animals as a single exposure can be fatal.” (APVMA 2010) It is not apparent why BRA has chosen to sponsor a rabbit-baiting program using Pindone concentrate instead of the ready-mixed products.

The LHPA course, which will qualify Bingie residents to use Pindone concentrate, is only three hours long and doesn’t appear to cover any environmental aspects. An LHPA Media Release about 1080 and Pindone courses in the Mudgee area says: “The new training course covers topics such as baiting techniques, toxicity, storage, transport, legislation and OH&S. Those completing the course are issued a certification card and will remain accredited to use 1080 and Pindone for five years.” (LHPA 2010a)
On its website the LHPA outlines its mission: “Livestock Health and Pest Authorities deliver the frontline livestock health service in NSW. Working hand in hand with landholders we are committed to safeguarding agricultural production from the biosecurity risks posed by disease and pests. We also manage travelling stock reserves, stock movement and identification and assist with drought relief.” (LHPA 2010b)

There is little scope in the LHPA’s mission for concern about the humane treatment of rabbits and the well-being of wildlife. Nor is there much that touches on the real interests of Bingie residents. Although there is very little agricultural production in the Bingie area there is much wildlife to put at risk.

It has been suggested that a test program of Pindone baiting undertaken by the Eurobodalla Shire Council provides a precedent for BRA’s forthcoming program. The Council has issued three media releases over the last couple of years announcing its intention to lay Pindone baits on Council land in a number of areas including Congo, Tuross Head, Mystery Bay and Long Beach. However, these baiting operations appear to be very tightly controlled and to last for only a few weeks at a time. Unlike the BRA proposal they have been supervised by authorised officers using professional equipment.

Nevertheless, Eurobodalla Shire Council has been lucky so far not to have attracted the attention of animal rights activists. Gosford Shire Council and Warringah Shire Council have both been targeted by animal liberation protests in recent times when they have attempted to control rabbits using Pindone. (Morcombe 2009; Stewart 2009). Perhaps the BRA committee should consider the possibility of animal liberation protests in the Bingie area before they go any further with their project.

Cruel

The assessment of what is and what is not a cruel or inhumane way to treat animals is a contentious issue and there are varying opinions about what is correct. There are extreme views at either end of a spectrum of concern with animal liberationists at one end and defiant, animal abusers at the other end. Neither of these extremes has much support from the general Australian public. The institution with the most influence and established moral standing in Australia on matters relating to animal welfare is the Royal Society for the Prevention of Cruelty to Animals (RSPCA). It would be fair to say that the RSPCA represents Australia’s conscience when it comes to the ethical treatment of animals.

On its website the RSPCA has a page titled, “What is the most humane way to control rabbits” (RSPCA 2010a). Shooting and cage trapping are recommended as the most humane methods of control while 1080 is considered inhumane. However, the RSPCA seems a little equivocal about 1080 and is perhaps willing to tolerate its use for the time being because they “acknowledge that in many
circumstances there is currently no alternative effective control method” (RSPCA 2010b). But in regard to Pindone the RSPCA is unequivocal and says that it does not consider Pindone “an acceptable control method as affected rabbits take several days to die” (RSPCA 2010a).

The RSPCA goes on to say that people who want to learn about different rabbit control methods and their humaneness should read the Model Code of Practice for the Humane Control of Rabbits and associated Standard Operating Procedures published by the NSW Department of Primary Industries (DPI). The DPI is once again unequivocal in its assessment of Pindone as an inhumane method of rabbit control:

After ingestion of pindone, rabbits initially show signs of depression/lethargy and anorexia followed by manifestations of haemorrhage including anaemia, laboured breathing, pale mucous membranes and weakness. Bleeding may be visible around the nose, mouth, eyes and anus and animals may pass bloody faeces. Swollen tender joints are common as a result of bleeding into the confined joint space. Discomfort and pain from haemorrhages in internal organs, muscles and joints typically lasts for several days before death. The time to death is around 10 to 14 days after the initial dose. Because anticoagulant poisons take several days to kill, during which time they cause distress disability and/or pain, they are considered inhumane. The use of pindone can only be justified in situations where 1080 cannot be used i.e. in close proximity to urban areas where the risk of accidental poisoning to humans and companion animals is greatest. (Sharp and Saunders 2004b)

The DPI paper provides a table which rates 15 different methods of rabbit control for their humaneness. Only exclusion fencing and ground shooting are rated as unconditionally humane, although cage trapping is not rated in the table. For those who have heard stories about the cruelty of 1080, the DPI rates 1080 as “conditionally acceptable” whereas Pindone is rated “inhumane compared to 1080” (Sharp and Saunders 2004b).

Careless

Whereas the question of cruelty is mainly focused on rabbits the question of carelessness centres on the risk of collateral damage — the mistaken killing of non-target species. Non-target species include humans and pets, as well as wildlife. There is a great abundance of wildlife in the Bingie area. In fact, there is such a variety of wildlife in the area that it is impossible to discuss every species that might be at risk from primary and secondary poisoning.

The BRA Committee has discussed the possibility of using wire mesh canopies with rabbit-sized entrances to cover rabbit baits in the hope this will restrict access to rabbits only. But it is not known whether these canopies will be properly constructed or whether they will be used by all poisoners at all times.
Nor is it certain that wallabies and kangaroos won’t simply knock them over or lift them up to gain access to the carrots. What is certain is that animals small enough to fit through the entrances will have as much access as rabbits to the carrots.

At best the canopies only defend against primary poisoning of larger wildlife. They cannot prevent secondary poisoning. If the Pindone baiting program is successful there will be a constant supply of dead and dying rabbits around for scavengers to feed on. Pindone does not degrade in rabbit carcasses over time (NRA 2002: 23).

A list of common wildlife at risk of poisoning in the Bingie area includes swamp wallabies, redneck wallabies, kangaroos, possums, antechinus, bandicoots, a variety of birds species and goannas.

Swamp wallabies will be at risk of both primary and secondary poisoning. They are normally herbivores, and so will readily eat carrot baits, but as occasional omnivores they will also eat dead rabbits. (Sceptics can view a YouTube video of a wild swamp wallaby feeding on a rabbit carcass at: http://www.youtube.com/watch?v=furs1s92Sl0.)

Possums are also omnivorous and face the same primary and secondary risks as wallabies. Possums also vary in size and even if the canopies are properly constructed, routinely used and securely fastened to the ground, smaller possums will still get access to carrot baits. We have been conducting experiments to test which animals will eat carrots and which will gain access to carrots covered in a heavy wire mesh cage with a restricted entrance. We have found that wallabies and possums will readily eat carrots and both possums and swamp wallabies will squeeze through a confined entrance, forcing back the mesh, to get at carrots. Possum mothers carrying young on their backs also allow the infants to dismount and forage independently. (Some of these observations are recorded on a YouTube video at: http://www.youtube.com/watch?v=x6CtHfJDPkM.)

Sea eagles will certainly feed on sick rabbits and rabbit carcasses, as will goannas. There is some limited scientific evidence about the susceptibility of different native species but it is not definitive and a lot depends of how much an individual animal consumes. If there is a feast of dead and dying rabbits for carnivores then it might not mean much that some native species have greater resistance to Pindone than rabbits.

There is a surprising number of threatened species that are either known or predicted to be in the Bateman area, which covers Bingie. Amongst them are several species of owl (including the Barking Owl), the Spotted-tailed Quoll, the Little Eagle, the Southern Brown Bandicoot, and the Long-nosed Potoroo (DECCW 2010). Any individuals members of these species living in the Bingie area might be at risk of poisoning.
In 2002 the National Registration Authority for Agricultural and Veterinary Chemicals (NRA – now the APVMA) conducted a review of Pindone. The reason given for the review was that: “Poisoning during baiting operations of non-target animals using either form of pindone in baits were identified in WA and NSW in particular. States and some community groups have expressed concerns about poisonings of non-target animals, including both intentional and unintentional misuse.” (NRA 2002: 9)

Although the review found that “pindone poses a manageable risk to non-target species” throughout the report there are constant references to the limited availability of scientific data and in regard to the persistency of Pindone residues it says that its findings are “very tentative” and that “firm conclusions cannot be reached”. The report went on to say “few specific data are available to determine the likely toxicity of pindone to Australian native fauna, or even to standard test organisms. Available information indicates that a number of native species (macropods, bandicoots, dasyurids, raptors and a range of granivorous birds) are likely to share the high sensitivity of rabbits to pindone”. (NRA 2002: 6, 23-4, 39).

Quolls and antechinus were singled out as being among the most at risk and it has been reported that “western grey kangaroos, southern brown bandicoots and crested pigeons are confirmed casualties of pindone poisoning campaigns in WA, with poisoning strongly suspected in incidents involving Port Lincoln parrots and juvenile Brahminy kites. Swamp wallabies and young cattle have been killed in NSW. A variety of birds (plovers, quail, rails, wrybills, silvereyes, grey warbles, black-back gulls and Australian harriers) have been killed in New Zealand”. (NRA 2002: 31, 35)

The NRA conclusion that Pindone risks to non-target species are “manageable” is based on a number of superficial assumptions, some of which clearly don’t apply to the Bingie area. For instance, the reviewers assumed that: “Many species are likely to avoid open areas where rabbits feed and where pindone baits are laid.” (NRA 2002 p.7) This may be true in some places but around the Bingie area kangaroos and redneck wallabies feed in open areas and, at the same time, many properties where Pindone baits are likely to be laid remain largely bush covered. An intimate mixture of open fields, bush blocks, lakes, swampy areas and National Park provides the Bingie area with a range of fauna habitats and a wide variety of native species co-existing in close proximity.

At the time of the review it was thought that Pindone use was quite low but that “If product sales were to rise substantially then the potential exists that an increase in non-target impacts will occur”. It was observed that while various “native birds and mammals also appear to share a similar susceptibility to pindone” as rabbits the impact on native animal “populations is difficult to measure and has rarely been studied”. (NRA 2002: 7, 33).

Most importantly the review found that: “Where a significant risk of non-target
exposure is deemed to exist or identified via assessment, measures need to be taken to minimise this risk. Such measures should include the judicious use of bait stations or enclosures to restrict access to the baits by non-target animals, fencing to exclude larger species such as macropods, and avoidance of baiting near areas of native animal habitat that may harbour small non-target mammals (such as bandicoots).” (NRA 2002: 7).

Although BRA has discussed the possibility enclosing bait it is very doubtful that there will be insistence on exclusion fencing to keep kangaroos and wallabies away from baits. It also seems highly unlikely that baiting in the Bingie area could be confined to areas remote from small mammal habitat.

**Conclusion**

There is little doubt that Pindone rabbit-baiting is cruel and that the safety of wildlife may be put at risk by the use of this poison in the Bingie area.

The RSPCA and DPI recognize three methods of rabbit control that are acceptably humane; exclusion fencing, cage trapping, and ground shooting. These three methods would also appear to be amongst the safest for the protection of non-target species. BRA would perform a much greater service to the Bingie area if it chose to sponsor one or more of these methods than to continue with its plan to sponsor Pindone baiting.

Most Bingie residents find that exclusion fencing is necessary anyway to protect gardens and shrubs from wallabies and possums. If some people think they can avoid exclusion fencing by using Pindone it raises questions about whether wallabies and possums might be the real targets of the Pindone baiting. If that were true it would be totally unacceptable and illegal.

As it stands, the BRA plan seems to involve encouraging the use of wire mesh canopies to restrict access to Pindone baits. It is thereby hoped that only rabbits will be able to eat the baits. This is a fairly forlorn hope since wallabies and possums can force their way into, or reach under, or lift the canopies. Smaller animals will simply use the same entrance points as rabbits.

However, if rabbits have to be enticed to enter a caged area anyway, why not use cage traps and dispense with the Pindone? Cage trap prices begin under $50 on ebay. It is likely that properly constructed wire mesh canopies might cost as much as this. An alternative type of trap that is inserted into a rabbit burrow can be purchased via the internet in cartons of 5 for $85, including postage. This type of trap doesn’t even require baiting. It simply traps the rabbits, and holds them without hurting them, as they try to exit from the burrow. (The ‘Friendly’ Rabbit Trap 2010).

If the BRA wants to sponsor a rabbit control program it would make a lot more sense for it to explore the use of humane trapping methods, and the humane disposal of trapped rabbits, than to become involved in morally doubtful
program of Pindone poisoning.

References


RSPCA (2010a) What is the most humane way to control rabbits http://kb.rspca.org.au/What-is-the-most-humane-way-to-control-wild-rabbits_381.html


59 Ross Place, Bingie, NSW 2537
telephone: (02) 4474 0259
sharonb@uow.edu.au
rgosden1@gmail.com