

**A.C.T CODE OF PRACTICE FOR
THE HUMANE CONTROL OF THE FOX**

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1. INTRODUCTION

In the past, many people have had less regard for the welfare of vertebrate pest species than for wildlife and domesticated animals. Society is increasingly of the view that it is unacceptable to disregard the welfare of any vertebrate animal, no matter how great its pest status. An ethical approach requires attention to the welfare of all animals affected directly or indirectly by control programs. For example, the welfare of animals which are either harmed by, or whose survival or welfare may depend on the pest animal should be taken into account.

All those involved in pest animal control should familiarise themselves with relevant aspects of the appropriate ACT legislation, including the *Animal Welfare Act 1992*, the *Nature Conservation Act 1980*, the *Poisons Act 1933*, the *Pesticides Act 1989*, *Animal Diseases Act 1993*, the *Prohibited Weapons Act 1996*, and the *Firearms Act 1996*.

If any means of controlling a population to achieve the desired management outcomes is likely to prove fatal or cause suffering, it is desirable that it be used on a minimum number of individuals. In some cases a net improvement in the welfare of target animals can be achieved even if the means of reducing a pest population to low levels and keeping it there requires multiple techniques, some of which may be slightly less humane on an individual animal basis. It may be preferable on the other hand to affect a much greater number of individuals if a genuinely humane means of control is available.

Sustained effective control involves a large initial reduction in the population of the pest species to a level where the impact of the population is acceptable followed by frequent intervention to maintain it at that level on a sustained basis. In this way the number of animals exposed to control actions over a few years can be significantly fewer than the number affected if the pest population is allowed to build up again to pre-control levels before action is taken. Animal welfare principles, as well as conservation and economics, demand sustained control, rather than intermittent control triggered only by high levels of damage or high levels of pest abundance. Control needs to continue even while the population is reduced. Animal Welfare principles also demand that where possible pest animal populations should be eliminated rather than reduced.

2. THE FOX

The European red fox (the fox) is a significant predator of native wildlife and domestic animals. It is also a significant predator of rabbits which compete with both native wildlife and domestic animals. Successful fox control programs can lead to increased native wildlife populations and increased lambing percentages. Individual foxes or small groups of foxes also sometimes cause localised problems such as killing pets, taking poorly protected or free range poultry and denning under houses.

Foxes interact in many ways with native and introduced animals. There is much research on the biology of the fox and its impact on native species, including some studies on the consequences of their removal from the environment.

3. MANAGING FOX IMPACT

While this Code of Practice necessarily deals with methods of killing foxes, the real purpose of fox control is to reduce fox impact. In some cases fox impact can be reduced more effectively by means other than reducing the fox population. For example, it is almost always more effective to fox-proof the poultry run than attempt to catch the foxes that raid it. A more subtle example is to co-ordinate the timing of lambing in a district to minimise losses. Comprehensive information on controlling fox impact is to be found in "Managing Vertebrate Pests: Foxes" (Saunders et al 1995) which is available from Commonwealth bookshops and elsewhere.

3.1 Modifying the Environment

It is also important to control the fox population indirectly by changing the environment in which the fox lives. On grazing properties, conservation areas and in urban areas, fox control should start by reducing fox food supplies through effective rabbit control, denying foxes access to burial pits, food waste, pet food and poultry runs and minimising the amount of carrion available in the paddocks.

Paying attention to the environment of the fox population, and managing so as to reduce fox impact (rather than merely to reduce fox populations) is good animal welfare practice as well as being a more cost-effective approach.

3.2 Protective Dogs

Dogs such as the maremma can be bonded to sheep or chickens, etc from an early age, and will thereafter protect the animals from attack by foxes or other dogs.

3.3 Fencing

Fences can be designed to be fox proof, with or without the use of electric fencing. Advice can be sought from reputable fencing suppliers.

3.4 Ultrasonic Devices

There are commercial claims for the effectiveness of ultrasonic devices in preventing fox attack. The effectiveness of these devices has yet to be proven for use in fox control.

4. SHOOTING

Where foxes are already under control, shooting may be a useful technique or adjunct to other methods. It is very labour intensive. However, if carried out by skilled and responsible shooters, it is probably the most humane lethal control technique.

The firearm, projectile, loading, point of aim and proficiency of the shooter should be such as to ensure instantaneous loss of consciousness, rapidly followed by death. The projectile should enter the cranium to achieve this objective. Soft nose or hollow point ammunition is generally preferable to achieve maximum damage to the vital areas without the projectile passing right through the animal.

5. TRAPPING

Trapping is effective only for the removal of particular (nuisance) animals rather than for general control. The steel jaw trap is prohibited in the ACT. Traps which may be used legally in the ACT include rubber-jawed traps such as the *Victor® Soft Catch®*, treadle snare traps and cage traps. All traps should be checked each morning and more frequently if possible.

Trapped foxes should be killed humanely with a shot to the head at close range. All traps have the potential to cause some degree of suffering or stress so they should only be used when necessary and managed to minimise suffering or stress.

Research is underway into the use of a more convenient trap-transmitter system to alert the trapper when any one of many traps is sprung.

6. DEN FUMIGATION OR DESTRUCTION

Fox dens are notoriously difficult to locate, are occupied only very briefly, and many vixens move cubs to safety when dens are discovered. However, den fumigation or destruction may have application where other controls are not possible.

Before a den is fumigated, the person responsible should be certain that it is occupied by foxes, and not by wombats or other non-target species. Some signs that it is currently a fox den include a characteristic odour, footprints and, often, the presence of prey remains. If necessary, expert advice should be sought.

A humane carbon monoxide fumigant is commercially available. Phosphine or chloropicrin fumigants are considered inappropriate for fumigation of fox dens because of human health and animal welfare concerns.

7. FERTILITY CONTROL

The Vertebrate Biocontrol Centre in Canberra is researching the development of a biological control of foxes by immunocontraception.

Research has also been commenced at the Keith Turnbull Research Institute in Victoria on a chemical method of fertility control.

Fertility control methods, if and when successfully developed, represent a humane alternative or adjunct to existing control methods.

8. POISONING

Poisoning is the only currently available method of controlling fox impact which is effective over extensive areas such as conservation reserves and grazing lands. However, the toxin in widespread use for this purpose, sodium monofluoroacetate, or 1080, has frequently been questioned on environmental and animal welfare grounds.

Because of the natural occurrence of fluoroacetate in some native Australian vegetation, and co-evolution of Australian fauna, 1080 is more toxic to canids such as the fox than to Australian species (McIlroy 1986). Thus, 1080 is a specific vertebrate toxin for the selective control of foxes while minimising the risk to many native species.

The use of 1080 for control of foxes, wild dogs, rabbits and feral pigs in Australia, and brush-tailed possums in New Zealand, has led to a number of reviews and investigations of its environmental and animal welfare aspects. None of the alternative toxins currently available appear to address human safety, target specificity and animal welfare as well as 1080.

A number of scientific investigations have concluded that the perception of pain is lost before the onset of the apparently painful symptoms of 1080 poisoning. Nevertheless, based on their personal observations of poisoned animals, some veterinarians believe 1080 to be inhumane, as do some members of the community.

Poisoning programs should not therefore be undertaken when there is any more humane way of achieving the objective of preventing or reducing fox impact (see preceding Sections). If research proves the efficacy and safety of including analgesics in 1080 baits, then they could be routinely used so as to address concerns about the humaneness of 1080.

1080 is highly toxic to humans and in its concentrated form, it must be handled with extreme care. Access to 1080 is tightly controlled in all Australian jurisdictions. 1080 baits should only be used in a strategic manner as part of an approved and co-ordinated program to achieve sustained effective control.

All baits for foxes should be buried under at least 10 cm of soil.

9. EXOTIC DISEASE CONTROL

The control of an outbreak of exotic disease in wild animal populations is a special case of the reasonable balance that needs to be sought between the ethical and other principles applying to decisions about vertebrate pest management.

In such an event the risk is that if the disease is not controlled in a limited time and place, it will have a permanent effect on a large scale. Even though the same species of animals may be targeted, the precise vertebrate pest management objectives for an exotic animal disease control emergency differ from objectives applying when conservation or rural production is the aim of the control operations. A national plan, AUSVETPLAN, specifies the actions to be taken in the case of an exotic disease emergency. Different techniques and different applications of techniques may be required in the case of such an emergency than those advocated in this code of practice.

It is acknowledged that the community may tolerate less humane solutions in an emergency of this sort than at other times. Nevertheless, pest control in these circumstances should still be by the most humane means available given the time constraints and level of control required.