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DEER, FOX, WILD DOG, RABBIT and BIRD CONTROL

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In regards to fox control you have several options that can be completed by Central Coast Deer and Vermin Control.

- 1080 baiting
- Trapping (leg hold)
- Caging
- Den fumigation
- Shooting

Most Australians don't know that we've got the worst mammalian extinction rate in the world. we've lost over thirty species since Europeans arrived. Its not just the famous Tasmanian tiger, we've lost many more vitally important species. Currently, more than seventeen hundred species of fauna and flora are listed by the Australian government as 'at risk', which means there's a chance they'll go extinct unless we do something about it. The time to act for conservation is now(Bob Irwin and Amanda French 2016)

1080 baiting:

Although poisoning programs can be carried out year-round, baiting is most effective when alternative food is scarce.

Benefits: 100% of foxes that take baits will be exterminated and will typically die within burrows.

Dens don't need to be accessible.

99% specific to foxes.

Cameras can be used to identify animals present at bait station.

Drawbacks: Signage required, during and for 4 weeks after completion of baiting program.

Poison 1080 baits are required to be 150 metres from habitation and property needs to be 5ha or greater in size.

1% of domestic animals could be affected.



Dinner time with 1080



MMS cameras used to identify animals

Leg hold trapping:

Leg hold traps can be used within areas that are too small to bait with 1080.

At the twenty-sixth Vertebrate Pest Conference in Waikoloa- Hawaii 2014 leg hold traps were noted to be 100% safe/non harmful for the capture of foxes by the University of New England NSW Australia.

- Benefits:**
- No poison used.
 - No warning signs or notification required.
 - Padded jaws on traps

Drawbacks: Non targeted species can be caught.



Caging:

Caging may be useful for the control of nuisance animals but is not effective as a general fox control method. Cage traps are used to capture problem foxes in urban/residential areas and other areas where it is unacceptable or undesirable to use 1080 or leg-hold traps. Animals trapped in a cage can be transported away from the area for euthanasia. From an animal welfare perspective, cage traps are preferred over leg-hold traps as fewer injuries are sustained and non-target animals can be released unharmed.

Benefits: Most humane way of control

Drawbacks: Time consuming

Mainly effective on young foxes



Hollywood the fox

Fumigation:

Den fumigation can be successfully used after or with other methods of control, treating small isolated populations. Animal Control Technologies (Australia) PTY LTD Den-co-fume used

Benefits: 100% of foxes destroyed within den.

Drawbacks: Dens need to be accessible.



Shooting:



Rifle is equipped with silencer and Digital Night Vision with recorder.

Benefits: Dens don't need to be accessible.

Silenced and Night vision equipped rifle with video recorder.

Drawbacks: Foxes need to be sighted

CCD&VC has insurance covering \$20,000,000 Public Liability and \$20,000,000 Product Liability, licensed to shoot in council, crown, rural and non-rural (residential, golf courses, commercial, tourism, school and recreation) areas and certified/licensed to bait, fumigate and concussion.

Paul Meek, camera trapping: <https://youtu.be/osy6cd-cQgk>

The Fox:

Fox densities:

Red foxes are highly adaptable and are found almost anywhere in the Northern Hemisphere (and Australia). Their abundance is restricted by food availability (McDonalds, Residential feeding and Native wildlife, such as Potoroos, Bandicoots, Quolls). When food is superabundant, densities can be as high as 30 foxes per km². In farmland one family can occupy 1 km², whereas in suburbs this can range from 0.2-5 families per km². In barren uplands, density can be as low as one family per 10 km² (IUCN, 2008). In Central Victoria (Australia), the average fox abundance is 4 foxes per km² on farmland (DEPI).

Home range:

First of all, foxes need to find the bait. For that to happen, the bait needs to be in the fox's home range at a place where it is likely to come across it. The average home range of a fox is around 12 km², but can vary widely and can overlap a lot, especially in sub-adults. Each night, foxes travel 9.4 km on average within their home range (Carter et al. 2012).

Natural occurrence of 1080

Fluoroacetate, the active ingredient of 1080, occurs naturally in several toxic plants in Australia, South Africa, and South America. At least 40 such species occur in Australia, with most confined to the southwest of Western Australia. All of these species are legumes but most are from the genus *Gastrolobium*, with one *Acacia*, and two species of *Nemcia*. Some of the *Gastrolobium*s can produce considerable amounts of 1080 (e.g. *G. bilobum*, *G. parviflorum*; >2500 mg per kg dry weight of leaves). Fluoroacetate also occurs at very low concentrations in tea leaves, and guar gum, a common constituent of a variety of foodstuffs.



Prickly poison (*Gastrolobium spinosum*) is native to Western Australia

1080 is water-soluble and is readily broken down by naturally occurring bacteria and fungi. It therefore does not cause a build-up of toxic residues in soil, water or plants, nor does it bioaccumulate in organisms (The State of Queensland, Department of Agriculture, Fisheries and Forestry, 2014).

What if another species eats a 1080 bait?:

There is a small chance that other species will eat the bait before a fox finds it. To decrease the chance that this happens, baits are buried at certain depths. The poison in baits, sodium fluoracetate or 1080, is found in Australian plants. Therefore, native species have a higher tolerance to 1080, especially on the west coast where plants with 1080 are more abundant. Most baits contain 3 mg 1080, which is highly lethal to an adult fox but usually not to native species (see table below for information on lethal dose for different species).

	No. of baits for a lethal dose (based on LD ₅₀)	Comments
Eagle	13	Unlikely to come across or eat this many baits
Western grey kangaroo	300	Not attracted to meat
Eastern grey kangaroo	5	Not attracted to meat
Emu	>2000	Impossible to find and eat this many baits
Goanna	33	Unlikely to come across this many baits, couldn't eat them anyway
Fox	0.2	Very susceptible
Wild Dog/dog	0.7	Very susceptible
Feral cat/cat	0.5	Very susceptible
Cow	67	Couldn't find this many baits, not attracted to meat or buried food
Sheep	8	Unlikely to come across this many baits, not attracted to meat or buried food

Lethal dose of 1080 for different native and introduced species. 1080 is not cumulative. And a human would have to eat 40 to 80 baits depending on their weight (Animal Control Technologies Australia).

Here are some interesting examples of calculations detailing the risks to humans and wildlife:

- One of the risks of 1080 use is the leaching of the 1080 from the impregnated baits due to rainfall. If an area were heavily poisoned using 8 kg of 6 mg wild dog baits per hectare (containing 48 mg of 1080 per kg of bait), and all of this was leached out due to 50 mm of rain, an individual person would need to drink 169 271 L of contaminated water before receiving a lethal dose.
- If a hunter shot a 60 kg feral pig that was in the latent period following ingestion of 3 kg of 1080 bait (at a rate of 1152 mg 1080/kg), and based on the unlikely assumption that half the ingested poison has become evenly distributed through the carcass, that hunter would need to eat 36.1 kg in one sitting before being at risk (Department of Agriculture, Fisheries and Forestry, Biosecurity Queensland).

Territories:

When a fox dies, his territory becomes available to nearby foxes. This is why a once-off baiting campaign doesn't work: neighbouring foxes will quickly move into the newly available territory. To avoid this, fox baiting has to be done at high intensity for a long period of time in an extensive, coherent area (Bengsen 2014).

Environment:

Bandicoots; like many of the small to medium-sized marsupials of Australia, have undergone several species extinctions and significant contractions in distribution since European settlement because of the

introduction of predators (foxes, dogs and cats). Of the estimated 12 species of bandicoot in Australia, approximately half are now extinct, threatened with extinction or extremely rare. Very few native animals prey on bandicoots. Owls, quolls and dingoes are their only significant natural predators. However, introduced animals such as feral and domestic cats, dogs and foxes pose a significant threat to the future of bandicoots(NSW Environment & Heritage 2016).

Quolls; since 1770, all four species have declined dramatically in numbers. This is mainly because of habitat loss or change across Australia, and introduced predators such as foxes and cats.

Making a Killing: Which is the Most Humane Method of Execution?:

Death by firing squad(shooting) has been reported to be **quicker than lethal injection**. In his book 'Elephants on Acid: And Other Bizarre Experiments', Alex Boese states that in the 1938 execution of John Deering, the prison physician monitoring the inmate's heartbeat reported that the time between the shots and complete cessation of rhythm was a mere 15 seconds.

The lethal injection system is set-up under the principle of 'toxic-redundancy', so that each drug in isolation is sufficient to bring on death. Bizarrely, the dosage remains constant irrespective of weight, height or build. As a result, **scientists have recorded instances** in which breathing and cardiovascular activity have been sustained following the injections to humans(Unpopular science 2016).

The following quote is from Bob Irwin's book The Last Crocodile Hunter. ("But Bob I'm only one person. I can't do anything." Well let me start off by saying that those people are wrong. Because it is up to every individual to do their little bit too. We cant blame the government for everything thats happened because every single person is responsible, in some way, for the health of our planet. When i was a kid some species of animals were regarded as common, garden variety. Those animals are now considered threatened or endangered. This is happening before our eyes, in our lifetime. Europeans have only been on this continent for around two hundred years. We've done all this damage in the blink of an eye. Most Australians don't know that we've got the worst mammalian extinction rate in the world. we've lost over thirty species since Europeans arrived. Its not just the famous Tasmanian tiger, we've lost many more vitally important species. Even as i write this, more than seventeen hundred species of fauna and flora are listed by the Australian government as 'at risk', which means theres a chance they'll go extinct unless we do something about it. The time to act for conservation is now So when people ask,'what can one person do, Bob?', my answer is that one person can do a hell of a lot. Bob Irwin and Amanda French 2016).

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