



## Tools and strategies for wild dog management

### Tools to control wild dogs

There are several different lethal and non-lethal tools available to control wild dogs. These include poison baits, traps, shooting, fencing, guard animals and aversion techniques (such as lights, alarms, and flagging). Not all tools are useful for a given area; each tool varies in its effectiveness, depending on a range of factors specific to the local situation. The use of many control tools is also subject to various laws and regulations. Wild dog control officers are familiar with these and are able to advise people on what is and is not permitted in your local area.

**Poison baiting:** Poison baits can be made from chunks of meat or offal (such as kangaroo, cattle or horse meat). Manufactured baits (such as DOGGONE® or De-K9®) can also be bought. Sodium fluoroacetate (or '1080') is currently the only legal poison used to control wild dogs. A new toxin called 'PAPP' (para-aminopropiophenone) has been developed and is currently being assessed for registration. PAPP baits are likely to be commercially available during 2013 for the control of wild dogs and foxes. Both 1080 and PAPP are expected to be available into the future. Strychnine is no longer permitted for use in poison baits in Australia.

“ Effective wild dog management usually involves a combination of control methods and strategies ”

**Ejectors:** An ejector is a small cylindrical device that is buried in the ground, leaving only a 'bait head' exposed on the surface. The bait head contains a replaceable capsule of poison and is about the size of



Image: Invasive Animals CRC

a cylindrical golf ball. When an animal puts its mouth over the bait head and pulls it, the poison is ejected into the mouth in a quick puff or spurt. Ejectors are similar to a permanent one-shot bait station.

**Trapping:** Leghold traps may be used to capture live animals for later euthanasia, usually by shooting. A range of different trap types are available, but not all trap types are permitted for use in each jurisdiction. The most humane and efficient traps are called 'soft-catch' traps, including Jakes, Victors, or Bridgers. Each has slightly different design features for use in various situations. Professional wild dog trappers are also available to contract in many areas.

**Shooting:** Firearms may be used by landholders, professional wild dog controllers, or hunting groups to shoot wild dogs in a safe and humane manner, in accordance with the relevant laws and guidelines.

**Fencing:** Fencing is perhaps the best method of excluding wild dogs from an area, but a high level of maintenance is needed to keep fences dog proof. Netting or electric fencing can both be effective barriers, but it is often necessary to eradicate dogs from inside fenced areas. Well-maintained fences can stop wild dogs from crossing over, but they can't stop dogs from going around them, and might also prevent wild dogs from leaving once they have got in.

**Guard animals:** A variety of guard animals are used all around the world to protect livestock from predators. In Australia, guard dogs (such as maremmas), llamas and alpacas, or donkeys are sometimes used with varying degrees of success. Using guard animals is designed to prevent livestock attacks, but they might not exclude wild dogs from a given area.

**Aversion techniques:** A range of different aversion techniques and devices can be used. Features often include flashing lights, sounding alarms or objects flapping in the wind, such as coloured flags.

“ Effective wild dog control depends on a little bit of work from a lot of people, not a lot of work from just a few ”

## Strategies to control wild dogs

**Working with nature:** The ecology and behaviour of wild dogs follows a seasonal and cyclical pattern each year as dogs transition from breeding season, to whelping, to dispersal and back to breeding season again. Wild dog management strategies can be optimised if the biology and nature of wild dog populations are carefully considered. For example, many control programs are run in autumn to try and target mature dogs before they have a chance to breed. Alternatively, control programs can be run in spring in attempts to target juvenile dogs before they disperse. Control programs run over the summer try and target migrating dogs. The best time to control wild dogs will depend on your local situation.

**Working with people:** Wild dog management strategies are most successful when people work together. Because wild dogs do not respect tenure boundaries such as fences, borders or land uses, wild dog managers in one area are likely to be affected by the actions or inaction of people in surrounding areas. Working together ensures that all stakeholders have input into a management approach that covers the views of each interest group. This typically requires a little bit of work from a lot of people, rather than a lot of work from a few people.

**Adaptive management:** An adaptive approach to managing wild dogs broadly involves: defining the issue, developing a plan of action with achievable and measurable goals, putting the plan into action, monitoring progress, evaluating the plan, and making adjustments and improvements before trying it again. Defining the issue is usually the most difficult and time-consuming part, but is critical for success. It must take into account all the socio-ecological components and current knowledge before further planning or further action can proceed successfully. Compromise might be needed to progress, and new information might mean that changes to working plans need to be made along the way.



Image: Ben Allen



## Choosing the right control tool

The destruction of wild dogs may not always be needed to resolve the problems you face. However, when the control of wild dogs is required, both lethal and non-lethal control tools can be used inside an adaptive management framework that incorporates the views of each stakeholder. There are limited control tools available, but each has advantages and disadvantages – not all tools will be useful in every situation.

The most effective approach usually involves using a range of tools (an ‘integrated’ approach), and not relying on just one tool. The table below shows some of the basic pros and cons of common control strategies. The advantages and disadvantages described may be different for each situation, and local knowledge and consultation can help determine the best tools to use for a given situation. Note that some control tools might not be allowed in certain areas.

Control tool	Advantages	Disadvantages	Common uses
1080 baiting	<ul style="list-style-type: none"> <li>• can be applied on a broad scale by vehicle, plane or helicopter</li> <li>• can be flexible with bait type, using manufactured products or meat from various animals</li> <li>• is relatively cheap</li> <li>• requires relatively little time</li> </ul>	<ul style="list-style-type: none"> <li>• has restricted use in peri-urban areas</li> <li>• is dangerous to pet dogs and some other non-target animals</li> <li>• results in a relatively slow death to poisoned animals</li> </ul>	<ul style="list-style-type: none"> <li>• most commonly used to protect livestock across broad areas in less-populated regions</li> <li>• small-scale campaigns can sometimes be run in peri-urban areas, but they usually need a high level of preparation</li> </ul>
PAPP baiting	<ul style="list-style-type: none"> <li>• can be applied on a broad scale by vehicle, plane or helicopter</li> <li>• may be used more safely than 1080 around peri-urban areas and other places where domestic or working dogs are at risk</li> <li>• has an antidote</li> <li>• provides a relatively quick and humane death</li> <li>• is relatively cheap</li> <li>• requires relatively little time</li> </ul>	<ul style="list-style-type: none"> <li>• is expected to be limited to only manufactured bait types</li> <li>• presents risks to some non-target species</li> <li>• antidote is currently only available from a vet</li> </ul>	<ul style="list-style-type: none"> <li>• currently under development, so not yet available for general use</li> </ul>
trapping	<ul style="list-style-type: none"> <li>• can be selective and target specific</li> <li>• can be done in peri-urban and other areas where poison baiting is not suitable</li> <li>• can confirm the control of specific individual animals</li> <li>• enables a relatively quick and humane death</li> <li>• is relatively cheap</li> </ul>	<ul style="list-style-type: none"> <li>• has limited broadscale application</li> <li>• requires a high level of technical ability and local knowledge</li> <li>• captured animals may be distressed for some time</li> <li>• requires relatively high time inputs</li> </ul>	<ul style="list-style-type: none"> <li>• commonly used in areas with high risks to people, working dogs and other non-target species</li> <li>• is used to capture specific individuals</li> </ul>
shooting	<ul style="list-style-type: none"> <li>• is selective and target specific</li> <li>• can be done in areas where poison baiting is not suitable</li> <li>• can confirm the control of specific individual animals</li> <li>• enables a relatively quick and humane death</li> <li>• is relatively cheap</li> </ul>	<ul style="list-style-type: none"> <li>• has limited broadscale application</li> <li>• requires a high level of technical ability and local knowledge</li> <li>• requires relatively high time inputs</li> </ul>	<ul style="list-style-type: none"> <li>• commonly used together with trapping programs</li> <li>• is used to target specific individuals</li> </ul>

Control tool	Advantages	Disadvantages	Common uses
ejectors	<ul style="list-style-type: none"> <li>• is highly target specific</li> <li>• can be used with either cyanide, 1080, or PAPP</li> <li>• is relatively cheap</li> <li>• requires relatively little time</li> </ul>	<ul style="list-style-type: none"> <li>• has limited broadscale application</li> <li>• requires a moderate level of technical ability and local knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• currently under development, and only available for use on crown lands in NSW</li> </ul>
fencing	<ul style="list-style-type: none"> <li>• is capable of completely excluding wild dogs from an area</li> <li>• removes the need for additional live-stock fencing</li> <li>• probably involves relatively little on-going time inputs once constructed in some places</li> </ul>	<ul style="list-style-type: none"> <li>• is relatively expensive to construct and maintain in a dog-proof condition</li> <li>• limits movements of other wildlife</li> <li>• does not remove wild dogs already present in the exclusion zone</li> </ul>	<ul style="list-style-type: none"> <li>• most frequently used in local areas to protect high-value assets, such as live-stock studs and threatened wildlife reserves</li> </ul>
guard animals	<ul style="list-style-type: none"> <li>• may be able to provide ongoing control of wild dogs</li> <li>• does not require the killing of wild dogs</li> <li>• has limited non-target impacts</li> </ul>	<ul style="list-style-type: none"> <li>• often requires significant investment in time and training</li> <li>• is relatively expensive</li> <li>• has limited broadscale use</li> </ul>	<ul style="list-style-type: none"> <li>• most frequently used in restricted areas to protect high-value livestock</li> </ul>
aversion techniques	<ul style="list-style-type: none"> <li>• does not require the killing of wild dogs</li> <li>• has limited non-target impacts</li> <li>• is relatively cheap</li> <li>• requires relatively little time</li> </ul>	<ul style="list-style-type: none"> <li>• typically provides only very short-term control</li> <li>• has limited broadscale use</li> </ul>	<ul style="list-style-type: none"> <li>• most frequently used in association with fencing</li> </ul>

Choosing the right control tool is an important step towards succeeding with a wild dog control program. No one tool is best overall and a variety of control tools are often used together in a community control program. Reducing wild dog numbers is best achieved when control is applied across broad areas at the same time, and repeated on a regular basis, leaving no gaps in space or time.

It is most important to remember that reducing wild dog numbers might not actually reduce wild dog impacts, so control programs should only be considered successful when wild dog problems have ceased or been reduced to an acceptable level.



Soft catch trap with lethal trap device. Image: Lee Allen

### More information:

The PestSmart Toolkit for wild dogs is available at <http://www.feral.org.au/pestsmart/wild-dogs/>.

Detailed instructions on how to develop a wild dog management plan can be found at this website, where you can download a copy of *Working Plan to Manage Wild Dogs* (Green Book) and the *Guidelines for Preparing a Working Plan to Manage Wild Dogs* (Brown Book).

Further information can also be found in the book *Managing the Impacts of Dingoes and Other Wild Dogs* (2001), by Peter Fleming, Laurie Corbett, Robert Harden and Peter Thomson.

The book *Guardian Dogs: Best Practice Manual for the Use of Livestock Guardian Dogs* (2011), by Linda van Bommel, is also available from the [www.feral.org.au](http://www.feral.org.au) website.