5. Traps and trapping techniques

This information will provide guidance in the use of traps and trapping techniques, including animal welfare guidelines supported by the Department of Natural Resources, Mines and Water. It is strongly advised that these guidelines are strictly adhered to, to ensure unnecessary pain and stress is not inflicted on the animal.

5.1 Trap types

THE COLLARUM™

Advantages	Disadvantages
Relatively target specific	Labour intensive
Non-targets can be released	Animals need to euthanased

The Collarum™ is a relatively new device that is proving popular with many local governments for trapping wild dogs and foxes. The device is essentially a cable loop, which is thrown over the head and around the neck of the canine by a spring when set off by a trigger. The end of the loop, which is anchored to the ground when the trap is set, enables the canine to be held as if on a leash.

The device is target specific, in that the trigger (coated with an attractant) requires a pulling action rather than a weigh bearing one, as is the case with indiscriminate foot-hold traps.

The Collarum trap device

FOOT-HOLD AND LEG-HOLD TRAPS

Advantages	Disadvantages
Target specific by placement	High labour and skill requirements
Species specific by placement	Foot-hold—some animal welfare concerns
Non-targets can be released	Leg-hold—high level of animal welfare concerns; not recommended
Certain of control/capture	Animal welfare concerns

Animal welfare concerns

There has been much controversy, both in Australia and overseas, about the use of foot-hold and leg-hold traps for animal management. Although there are no stringent guidelines governing the use of these traps in Queensland, it should be noted that the practice of foot-hold and leg-hold trapping is an area of increased animal welfare sensitivity.

Old style serrated steel-jaw trap

Most criticism concerns older style, serrated, steel-jawed leg-hold traps that are no longer used or recommended. Trapping operations now utilise the more humane padded, rubber-jawed, offset or laminated foot-hold traps, which minimise trauma to the target animal. The older style leg-hold traps often had a toothed leading edge that was designed to bite into the flesh of the animal, often breaking the leg bone. For animal welfare reasons, NRMW does not condone the use of older style, serrated, steel-jawed leg-hold traps.

Common sense and an honest respect for animal welfare should enable this method of trapping to be undertaken without major conflict.

Rubber-jawed foot-hold trap

Foot-hold trap (rubber jawed)

Rubber-jawed foot-hold traps have a piece of rubber attached to the inner surface of the leading edge. The objective of these traps is to hold the animal firmly at the foot, but prevent damage to the underlying tissue. Other foot-hold trap designs are padded, laminated and offset.

Although foot-hold traps are not widely used in Queensland, they can be effective in dealing with problem animals, and may be useful in situations that limit the use of other control techniques.

Leg-hold trap (padded, laminated or offset)

The use of rubber-jawed foot-hold traps is encouraged; however, if traps cannot be checked daily (preferably in the early hours of daylight), it is more humane to use leg-hold traps laced with a small portion of strychnine. When caught, the animal bites at the trap and ingests a fatal dose of strychnine. This method of trapping ensures that the animal has a fast and less painful death, and also lessens the chance of it escaping and becoming a rogue animal. A small portion of strychnine (about half a teaspoon), wrapped in hessian and then either wrapped or wired to the inside edge of the trap jaw, is usually more than adequate for this task.

5.2 Identifying a trap site

Trap sites for wild dogs are best located where territorial boundaries are marked. Territorial markings are generally found around the base of trees, or around other prominent sites at the territorial boundary.

Careful observation will reveal dog scent-marking sites and other signs such as:

- Traces of dirt at the base of trees. Dogs normally scent-mark a tree and scratch dirt up to cover the mark.
- Scratch sites and faecal deposits around the base of trees or rocks.
- Dog tracks along property roads. Dogs often pad along property roads, so look for signs where they have left the road, and investigate for scent-marking sites.

The best place to set a trap is in a location where the dog is most likely to find the decoy (unfamiliar odour) and investigate it. In the case of a ‘blind’ set, the best place is where the dog is most likely to ‘stumble’ into it. In each case, the dog’s boundary pad is the most likely place.

Each dog regularly patrols a boundary, along which it urinates, scratches and defecates. These are known as scent-posts. An important function of this activity is to advertise ‘ownership’ of the range to other would-be occupiers. The fact that dogs will investigate any unfamiliar odour that is deposited along these boundaries is no strange coincidence.

Scent-posts are ideal sites for traps, as long as the sites do not require any major interference. Most wild dogs are quick to notice disturbances, or anything that is out of the ordinary on their beat. When selecting a site, pick a situation that is or looks to be natural, and that is either on or only a few metres off the dog’s pad.
If there are kangaroos or domestic stock in the area, it is important to set traps in situations that are less likely to catch these animals. Avoid setting traps close to waterholes or any other areas where stock and macropod activity is likely to be high.

An excellent technique for locating a wild dog’s scent-post is to walk along a known pad with a domestic dog on a lead and study the dog’s behaviour as it approaches a typical ‘scent-post’. Careful note should be taken of: the distance from each bush the dog stands when sniffing; where on the bush it smells; the placement of its feet while urinating/defecating; and how it approaches, and where it scratches in relation to the pad and the scent-post.

After several sessions of carefully observing the dog's behaviour at scent-posts, a control operator will develop a mental picture of the likely sites for scent-posts, and of how and where traps may be placed to capture wild dogs at these sites.

If a decoy set (artificial scent-post) is to be manufactured, there are several attributes peculiar to wild dog scent-posts that need to be duplicated. For example, wild dogs commonly urinate and defecate on slightly elevated rocks, sticks or bushes that are either on, or within a few metres of, their pad. Even if a decoy is only slightly different in colour from the natural surroundings, it will cause suspicion in a dog's mind and deter them from investigating.

All sorts of attractants can be used, such as fish oil or dog urine; however, a well-placed trap does not always need an attractant, as different wild dog populations are attracted to different materials.

5.3 Placement of foot-hold and leg-hold traps

When signs of the target animal's presence are found, the site should be disturbed as little as possible. First, carefully observe the site. Try to determine where the animal would most likely approach the site from, and where the best place to lay the trap may be.

Look for:

- sticks or objects that the animal may have to step over
- tracks leading into, and around, the site
- small, flat areas where the trap could best lie
- a site where the natural lie of objects will lead the animal to place its paw.

Leave as little human scent at the site as possible. Move in, place the trap and move out in a single operation.

5.4 Trap site preparation tools

To minimise scent contamination, the tools used for setting traps should not be used for any other purpose. Gloves should be worn while setting the trap, as they help to keep human scent off the trap itself, and prevent the soil becoming contaminated when digging. It is also important to take a piece of canvas (or similar material) to the site to kneel on while setting the trap, to keep human scent off the ground and minimise ground disturbance. The other tools required are:

- dustpan brush
- small mattock with hammerhead
- sieve

5.5 Setting of foot-hold and leg-hold traps

The process for setting a foot-hold or leg-hold trap is always the same, regardless of its size. Traps are secured either by a metal stake and chain, or by a drag connected to the trap by a long length of chain. A drag set is generally used when the soil is sandy and incapable of securely holding a steel stake.

1. Dig a hole approximately 23 cm (9 inches) from the approach side of the attractant. This is where a wild dog would usually place its front paw. The hole should be just big enough to accommodate the trap, and deep enough so that when the trap is covered lightly with soil, it remains level with the existing terrain.
2. Hit the securing peg into the ground with the hammer end of the mattock, or place the drag and chain away from your work area.

3. Depress the spring handle with the foot, until both of the trap jaws lie flat.
4. Flip the retaining hinge-pin over the leading edge of the jaw (usually to the right).
5. Reach beneath the leading edge and lift the pressure plate (pan) with your fingertips, so that it meets the hinge-pin.
6. From beneath, work to secure the hinge-pin to the holding notch on the pan.
7. Gradually ease the foot pressure on the spring, and allow the jaw tension to be taken by the pan and securing hinge pin. When the trap is set, the pan must always be horizontal with the leading edges of the jaws. Final adjustment of the pan can be carefully made from beneath the jaws when the trap is in a set position.
8. Place a piece of sponge, or a small twig, under the pan This is so when it is covered with soil, the pan can still be easily depressed by the wild dog.
9. Carefully lower the set trap into the depression, and check that it lies flat and that the mechanism is not restricted in any way. Tuck the excess chain into the excavation, making sure that it does not impede the trap action.
10. When the trap is in place, sift the soil over the top, and brush away some of the dirt lying directly on the top of the pan with the dustpan brush. This creates a small depression that is similar in appearance to depressions that dogs are accustomed to placing their leading foot into when treading lightly, hence creating a chance for a direct hit on the plate.
11. Have one last look at the site and arrange any leaf litter, small sticks and pebbles so that the covered pan area is left clear. Larger sticks can be positioned so that the dog is naturally led to step over the obstacle and place its paw on the clear site concealing the pan. Use some thought and creativity in finishing the site before backing out with all the equipment.
12. Remove the kneeling pad and exit the site. There should be no sign of human presence, and the site should appear clean and attractive to wild dogs.

5.6 Foot-hold and leg-hold trap maintenance

Before being used for the first time, traps should be treated through a tanning process to remove any scent and give the traps a protective coating of wax.

Setting a foot-hold trap for wild dogs

1. Using a container deep enough to immerse the traps into, boil water and wattle bark sufficient to produce a dark ‘tea’ colour.
2. Leave traps to soak in the solution until it cools, then allow the traps to stand in the solution for 24–48 hours.
3. Reheat the solution (with traps still in container) and bring to the boil.
4. Heat paraffin in a separate container.
5. Remove traps from the heated tanning solution one by one, using a long, hooked wire. While the traps are hot, dip them into the hot paraffin and hang them up to dry. The tanning solution and paraffin will evaporate almost immediately.

Depending on usage, traps may become contaminated with fur, blood and saliva and may need additional tanning treatment.

6. Other relevant information

6.1 Animal welfare responsibilities

Animal welfare is an important and growing issue, and one which applies to any circumstance where there is an interaction between a human and an animal. For this reason, anyone who deals with animals needs to be aware of their animal welfare responsibilities.

Individuals undertaking vertebrate pest control in Queensland have a responsibility to comply with a range of legislation, including the *Animal Care and Protection Act 2001* (Qld), *Land Protection (Pest and Stock Route Management) Act 2002* (Qld), Health (Drugs and Poisons) Regulation 1996 (Qld), and the *Weapons Act 1990* (Qld).

Of particular relevance is the exemption for the control of pest animals given under section 42 of the *Animal Care and Protection Act 2001* (Qld). This section means that vertebrate pest control must be conducted in a manner that ensures animals suffer as little pain as is 'reasonable' and, to ensure other general offences do not occur, other conditions and legislation must be met. For more information on this legislation, contact your local NRMW Land Protection Officer.

Traps and animal welfare

Traps, if used incorrectly, have the potential to cause significant physical damage and stress to the animal. As noted above, it is important to check traps regularly and ensure an appropriate type of trap is used. Many of the old steel-jawed leg hold traps cause an unacceptable level of damage to the animal, often severely cutting the animal's leg or breaking the bone. For this reason, the Department of Natural Resources, Mines and Water does not condone the use of these types of traps. Instead, opt for rubber-jawed foot-hold traps (refer to above trapping section for more details) to ensure you do not break your animal welfare responsibilities.

Humane destruction

The humane destruction of the animals you've caught in traps forms a large portion of the responsibility vested in you by the *Animal Care and Protection Act 2001* (Qld). Under field conditions, the best way to destroy an animal you have trapped is to shoot it.

To produce a humane, fast kill, the bullet must disrupt tissue that is immediately vital to life.

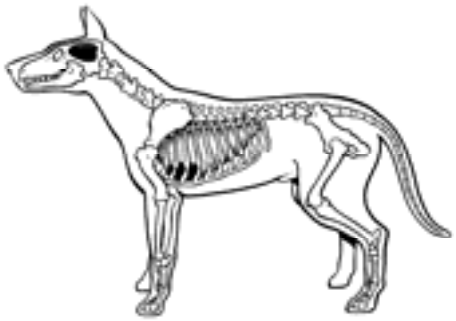
Shots should be aimed to destroy the brain, or the heart/great vessels of the target animal.

- **Frontal method**: Aim horizontally at the point of intersection of lines taken from the base of each ear to the opposite eye. This method is preferred for younger animals.
- **Temporal method**: Aim horizontally from the side of the head at the point midway between the eye and the base of the ear. This approach is preferred for mature or older animals.
- **Poll method**: Aim behind the head at a point midway along a line drawn from the base of each ear.

Vital points for dogs, foxes and cats are the same (see black areas on dog illustration below).

According to the Queensland Department of Environment's fire arms safety manual, the suggested cartridges and bullet weights for dogs, foxes and cats caught in traps is:

.22 Long rifle (high velocity)
.22 Magnum



6.2 Incentive programs

For many years bounties were provided by the State government and annual reports show that over 1.5 million dingo scalps were presented for bounty payment in Queensland between 1885-1995. Most local governments still provide this incentive, although the payment amount differs from shire to shire and there is some debate over their effectiveness in encouraging good practice wild dog management.

Some local governments also provide free or subsidised meat and plane hire for baiting activities. For more information, contact your local shire council.

6.3 Research

While we already know a great deal about theses animals, there is still much to learn in order to refine our management techniques. The ultimate aim is to develop management techniques that protect populations of pure dingoes, but ensures there are no negative impacts on primary industries. While this is a difficult balancing act, current research, including the use of satellite tracking collars, will continue to uncover the secrets of Australia's wild dog populations and provide us with an insight into their complex behaviours.

Research programs like the 'Blackall Project' are continuing to assess the positives and negatives of our current coordinated baiting programs. In addition, researchers are exploring the deliver of poisons through other means, for example cyanide injectors and protective collars with 1080-filled bladders to be placed around the neck of valuable stock.

For further information on research developments, you can receive the biannual *Beefy and the Beast* publication. This newsletter provides a snapshot of current research progress and contacts for research enquiries. To have your name added to the mailing list, contact:

The South West Regional Extension Officer,
Natural Resources, Mines and Water
PO Box 318
Toowoomba Qld 4350
Ph: (07) 4688 1264

6.4 Contacts

NRMW Wild Dog MOU Coordinator:

Rob Cobon (NRMW Charleville

Phone: (07) 4654 4208
Email: Rob.Cobon@nrm.qld.gov.au

Contacts for local government wild dog management committees:

Council	Name	Phone
Balonne Shire Council	Robert Lindores	0429 208 861
Booringa Shire Council	Kay Crosby	(07) 4623 8111
Murweh Shire Council	John Hodgen	(07) 4654 0313
Paroo Shire Council	Peter Lucus	(07) 4654 0231
Quilpie Shire Council	Stewart McKenzie	(07) 4656 4771
Tambo Shire Council	Shane Moon	0427 128 816

7. References

1. Corbett, L., 1995. *The dingo in Australia and Asia.* Australian Natural History Series, University of New South Wales Press, Sydney. 196p.
2. Meggitt, M.J. 1965. The association between Australian Aborigines and dingoes. In *Man, Culture and Animals.* Eds A. Leeds and A. Vayde. pp 7-26 . (American Association for the Advancement of Science: Washington).
3. Hamilton, A. 1972. Aboriginal man's best friend? *Mankind* **8**, 287-295.
4. Pickering, M. 1992. Garawa methods of game hunting, preparation and cooking. *Records of the South Australian Museum* **26**, 9-23.
5. Allen, L.R. 2002. *The role and impact of dingo predation to the beef industry in northern Australia.* Doctoral Thesis.
6. Dubey, J. P., 2003. Review of *Neospora caninum and* neosporosis in animals, *The Korean Journal of Parasitology* **41**, 1-16.
7. Thomson, P.C. 1992. The behavioural ecology of dingoes in north-western Australia. I. The Fortescue River study area and details of captured dingoes, *Wildlife Research* **19**, 509-18.
8. Allen, L.R. and Gonzalez, A. 1998. Baiting reduces dingo number, changes age structures yet often incrases calf losses. *Australian Vertebrate Pest Control Conference* **11**, 421-428, Bunbury W.A.
9. Allen, L.R. (2005-6). *Beefy and the Beast Newsletter* **13, 14 & 15**, The Queensland Department of Natural Resources, Mines and Water.
10. Allen, L.R. 2000. Measuring predator control effictiveness: reducing numbers may not reduce predator impact. eds T.P. Salmon & A.C. Crabb, *Proceedings Nineteenth Vertebrate Pest Control Conference, Published at University of California, Davis, pp. 284-89.*
11. Corbett, L. and Newsome, A.E. 1987. The feeding ecology of the dingo III Dietary relationships with widely fluctuating prey populations in arid Australia: an hypothesis of alternation of predation. *Oecologia* **74**, 215-227.
12. Green, B.F. and Catling, P.C., 1977. The biology of the dingo. In *Australian Animals and their Environment,* eds, H. Messell, and S.T. Butler, Shakespear Head Press. Sydney. Chapter 3. pp 49-61
13. Thomson, P.C. 1992. The behavioural ecology of dingoes in north-western Australia II. Activity patterns, breeding season and pup rearing, *Wildlife Research* **19**, 519-30.
14. Thomson, P.C. 1992. The behavioural ecology of dingoes in north-western Australia. IV. Social and spatial organisation, and movements, *Wildlife Research* **19**, 543-63.
15. Corbett, L. 1988. Social dynamics of a captive dingo pack: population regulation by dominant female infanticide. *Ethology* **78**, 177-98.
16. Thomson, P.C., Rose, K. and Kok, N.E. 1992. The behavioural ecology of dingoes in north-western Australia. VI. Temporary extraterritorial movements and dispersal. *Wildlife Research* **19**, 585-95.
17. Cross, J. 2005. *Vertebrate pest manual: A guide to pest animal management in Queensland.* The Queensland Department of Natural Resources and Mines.
18. Triggs, B. 2003 *Tracks, scats and other traces: A field guide to Australian mammals.* Oxford University Press, Victoria.